

2015

H1 & H2 Economics

JC2 Prelim Exams

All JCs except MJC & RI.

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ANDERSON JUNIOR COLLEGE

**JC2 PRELIMINARY EXAMINATION 2015
Higher 1**

ECONOMICS

8819/01

Paper 1

15 September 2015

Additional Materials: Answer paper

3 hours

READ THESE INSTRUCTIONS FIRST

Write your name, PDG and index number in the spaces provided on all the work you hand in.

Write in dark blue or black ink.

You may use a soft pencil for any diagrams, graphs or rough working.

Do not use staples, paper clips, highlighters, glue or correction fluid.

Section A

Answer **all** questions.

Section B

Answer **one** question.

Start each question on a **fresh sheet of paper**

Fasten your answer to each question **separately**.

Fasten **this cover page** in front of your answers to **Question 1**.

The number of marks is given in brackets [] at the end of each question or part question.

Name _____ ()

PDG _____/14

Question Number	Marks Awarded
1	/ 30
2	/ 30
3/4	/ 25
Total Marks	

This document consists of **8** printed pages and **1** blank page, including this cover page.

[Turn over]

Section A

Answer **all** questions in this section.

Question 1

Changes in Higher Education

Extract 1: Reduction in subsidies for university education in the UK

A generation ago, students paid nothing for university education. Tony Blair then charged £3,000 in 2006 and David Cameron raised it to £9,000 in 2012. A spokesman for the government said: "We believe the £9,000 fee allows universities to deliver high-quality teaching, with many institutions now planning to invest more in improved teaching facilities for students." There is also more competition, with new universities offering robust, no-frills degrees.

It seemed to stand to reason that the fees would deter all but the wealthiest families but now, four years on, 592,000 students have applied for university, the highest ever. And not just the offspring of the well-heeled: the number of teenagers from deprived backgrounds has also jumped to a record high. Strikingly, 22% of deprived children in England have applied.

Sir Howard Newby, vice-chancellor of the University of Liverpool, said that the next step could see universities able to charge as much as they want for courses, provided they subsidise the costs incurred by students from poorer backgrounds. "The most rational way to deal with the financing of higher education is to have fees which are uncontrolled, with no cap, but in return universities have to make adequate provision for looking after students who can't afford to pay that fee," Sir Howard said.

In this way, the English system is moving a step closer towards that of America, home to 22 of the world's top 30 universities. Ivy League members are entirely independent of the US government, yet operate a system of social outreach that no government could rival. Their admission system is needs blind. Only once admitted is a student's ability to pay considered: if students are rich, they'll pay sky-high fees. But if they're poor, they'll be given what help they need to graduate. Using ingenious fundraising techniques, US universities are now rolling in resources, with which they can poach Britain's best academics in what is becoming a global marketplace.

Sir Christopher Snowden, vice-chancellor of the University of Surrey and president of Universities UK concurred that the £9,000 fee cap was not sustainable and should rise in line with inflation. His comments follow a recent call from the vice-chancellor of Oxford University, Andrew Hamilton, for undergraduate fees to be "more closely related to the true cost" of a degree at Oxford, £16,000. Last month Prof Hamilton said the funding shortfall meant Oxford faced an annual funding gap of £70m.

Universities UK will publish a report next week on the future of university financing. This is expected to look at how universities will fund a predicted 26% rise in demand for university places within the next 20 years. Universities Minister David Willetts has said a rising birth rate will mean the number of university places needed will grow from 368,000 to 460,000.

Adapted from: www.timeshighereducation.co.uk; www.telegraph.co.uk; and www.bbc.co.uk, accessed 3 August 2015

Extract 2: Singapore Government's subsidies to universities

The Government will continue to subsidise substantially the cost of university education to ensure that it remains affordable to Singaporeans. Currently, the Government generally subsidises 75% or more of the cost of education for general courses such as Engineering, Humanities and Social Sciences provided by the autonomous universities, or about \$76,000 to \$105,600 for a four-year course per student. Students are expected to bear their fair share of the cost of education as they are the prime beneficiaries who would benefit from higher starting pay and successful careers after graduation. Specialised courses such as Medicine and Dentistry cost much more than general courses and students within these courses should therefore be prepared to pay higher fees.

However, MOE and the universities will ensure that no deserving student will be denied a place due to financial difficulties. There is a wide range of financial assistance schemes — loans, bursaries, and work-study schemes — offered by the Government, universities, foundations, community groups, etc. As such, a Singaporean student can obtain up to 100% of funding for fees and living expenses through a combination of loans and bursaries.

University fee increases have been modest over the years. For example, this year's fee increase (AY2010) for most undergraduate programmes is under 2% on an annualised basis. This is below the average annual inflation rate of about 3% for the past three years. When economic conditions require it, the universities have also chosen to defer fee increases, such as in AY2009 due to the global economic crisis.

Source: www.moe.edu.sg, accessed 3 Aug 2015

Extract 3: "Brexit" would harm higher education and research

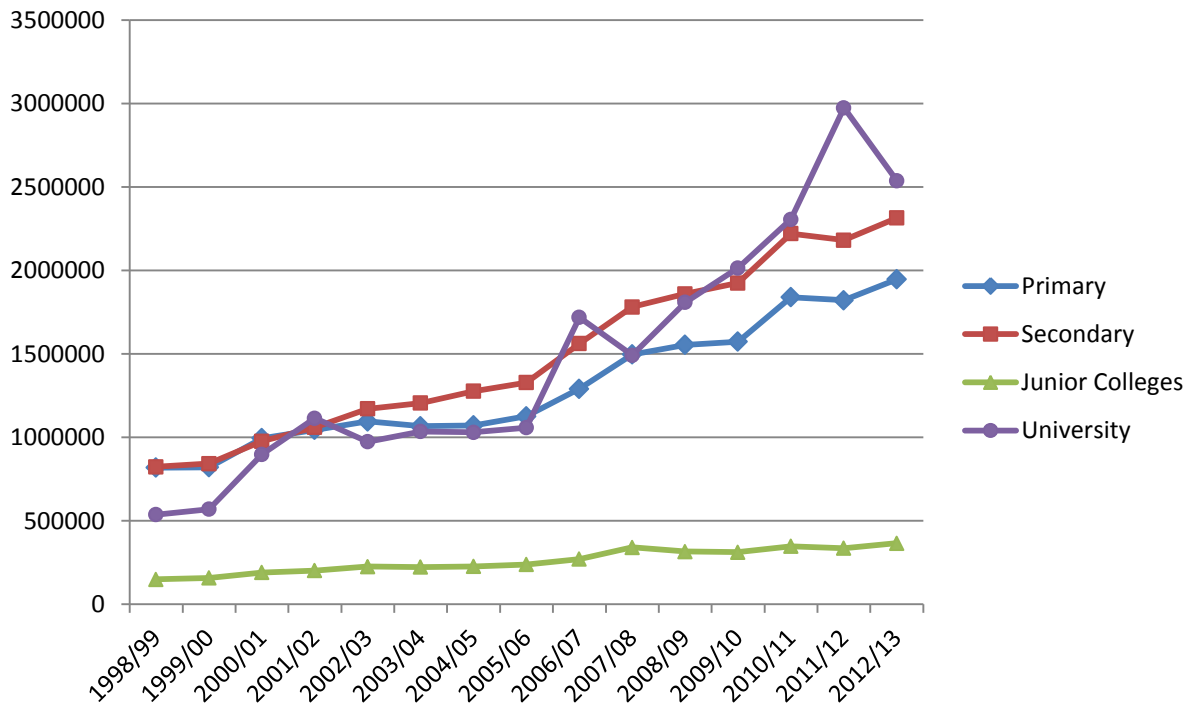
Leaving the European Union (EU) would hit the economy, harm scientific research and damage graduates' job prospects, university vice-chancellors warn as they launch a drive to rally support behind Britain remaining in the EU. They insist that membership of the 28-nation bloc has had an "overwhelmingly positive" impact on the standard of higher education and has helped to cement the strong global reputation of Britain's universities. Universities UK argues that there are 125,000 EU students at British universities, generating more than £2.2bn for the economy and creating 19,000 jobs, while 14% of academic staff come from other EU nations, contributing to greater collaboration across borders. Academics warn that "Brexit" would have a serious impact on student numbers as EU nationals would have to submit to tougher visa checks to obtain a place. Universities have already protested that existing rules deter bright young adults from countries such as China and India from taking degrees in Britain.

Universities UK's president-elect, Dame Julia Goodfellow said, "The UK's membership of the EU makes the UK's outstanding universities stronger, contributing to economic growth, employable graduates and cutting-edge research discoveries. The European Union supports research, knowledge, innovation and technology – the factors that will decide future economic growth, productivity and human progress."

Campaigners point to the development of graphene as an instance of Britain reaping the benefits of EU investment. Research on the super-strong material at the University of Manchester received start-up funding from Brussels in 2007 – three years before the team behind it was awarded a Nobel Prize. The global market for graphene is expected to be more than £250m by the middle of the next decade.

Source: Nigel Morris, *The Independent*, 27 July 2015

Figure 1: Government recurrent expenditure on education ('000 SGD)



Source: Ministry of Education (MOE), 2014

Questions

- (a) (i) With reference to Figure 1, compare the trend in government expenditure on primary and university education in Singapore between 1998 and 2013. [2]
- (ii) Explain **one** possible reason for the difference observed in (a)(i). [2]
- (b) Using evidence from the extracts where possible, explain two reasons why there was a considerable increase in university undergraduates in the UK, despite the rise in university fees. [4]
- (c) With reference to extract 3 where applicable, comment on the validity of the concerns of UK leaving the European Union from the perspective of the UK government. [4]
- (d) (i) With reference to the extracts provided, explain why governments subsidise university education. [4]
- (ii) 'A generation ago, students paid nothing for university education'. Comment on the advantages of this approach. [6]
- (e) Discuss if you would recommend UK's policy approach to reduce subsidies to university education for Singapore. [8]

[Total: 30]

Question 2

Uncertain US Economic Recovery

Extract 4: The US recovery is frustrating — but it's the envy of the advanced world

The notion of the United States as a global engine is a reminder of what may now seem like an ancient era. In the aftermath of the Great Recession, emerging economies like Brazil and China took the lead role, but growth in those countries slowed as well. Economists caution that the US economy remains fragile. And it's unclear if the US can lift up other struggling economies -- or will be pulled down by them.

The optimists say the US can persist as an island of growth, in large part because of healthy homegrown consumer demand. If consumer confidence remains high, the country can weather global shocks — as it did during the Asian Financial Crisis in the late-1990s. Strong consumer demand at home can even give a boost to other export-driven nations.

The US economy has been coming out of the recession by reliable consumer spending. But Thursday's data also came with an unexpected boost: The government, a negative drag in recent years, is again lending a hand. In the latest quarter, it was a spike in defence spending that provided the greatest lift. But more important, state and local governments — after a long period of austerity — are now injecting significantly more money into the economy.

“The US is pretty well-insulated, mostly because exports play a fairly small role,” said Nariman Behravesh, a chief economist at IHS. “By far, consumers are the most important factor, and the good news is, US consumers are in pretty good shape as gas prices are down, home values are on the rise, and there is an increasingly healthy debt-to-income ratio.”

Others say that the story of the economic recovery in the US is underway, yet uncertain. The US is still vulnerable to unexpected global fluctuations — say, a larger-than-expected slowdown in China and declining demand everywhere from France to Japan will trim US economic growth in the coming quarters. Jobs are coming back, but millions are reluctantly accepting part-time work.

Adapted from www.washingtonpost.com, accessed on 23 Jul 2015

Extract 5: Federal Reserve still uncertain on when to raise interest rates

Total US job creation for 2014 hit 2.95m, the Labor Department figures showed. The strong job growth data reinforce the growing evidence that the US is powering ahead of other large economies and is likely to increase the gap in growth rates in the first half of this year.

Investors are betting that the US Federal Reserve will raise interest rates this summer. The figures showed a better than expected fall in the US unemployment rate from 5.8% to 5.6%, ahead of predictions of 5.7%. Economists have warned that as unemployment continues to fall to the rate the Fed considers normal — between 5.2% and 5.5% — pressure will build for interest rates to rise sooner rather than later.

However, the low level of inflation, which remains below the Fed's target of 2%, is still an area of concern for the Fed.

Source: www.ft.com, accessed on 20 Jul 2015

Table 1: Selected US economic indicators from 2009 – 2014

	2009	2010	2011	2012	2013	2014
Real GDP (% change)	-2.8	2.5	1.6	2.3	2.2	2.4
Unemployment rate (%)	9.3	9.6	8.9	8.1	7.4	6.2
Labour Force (Millions)	154.2	153.8	153.6	154.9	155.4	155.9
Inflation rate (%)	-0.4	1.6	3.2	2.1	1.5	1.6

Source: World Bank, US Bureau of Labour Statistics

Table 2: Trade Data between US and Rest of the World (Selected Countries) in 2014

Country	Exports to US (in billions of USD)	% of country's GDP	Imports from US (in billions of USD)	% of country's GDP
Vietnam	30.6	16.5	5.7	3.1
Russia	23.6	1.2	10.7	0.5
UK	54.4	1.8	53.8	1.9
Singapore	16.4	5.3	30.5	9.9
Japan	133.9	2.9	67.0	1.5

Source: US Census Board & World Bank

Table 3: Russia: selected economic indicators 2010 – 2013

	2010	2011	2012	2013
GDP growth (annual %)	4.5	4.3	3.4	1.3
Inflation, consumer prices (annual %)	6.9	8.4	5.1	6.8
Unemployment, total (% of total labour force)	7.3	6.5	5.5	5.6
Current account balance (BoP, current US\$ billion)	67.5	97.3	71.3	34.1

Source: The World Bank

Extract 6: Russia's economy

Russia is one of the world's leading producers of oil and natural gas and is also a top exporter of metals such as steel and primary aluminium. Russia's manufacturing sector is generally uncompetitive on world markets and is geared toward domestic consumption. Russia's reliance on commodity exports makes it vulnerable to boom and bust cycles that follow the volatile swings in global prices.

The economy, which had averaged 7% growth during 1998-2008 as oil prices rose rapidly, was one of the hardest hit by the 2008-09 global economic crisis as oil prices plummeted and the foreign credits that Russian banks and firms relied on dried up. Slowly declining oil prices over the past few

years and difficulty attracting foreign direct investment have contributed to a noticeable slowdown in GDP growth rates.

In late 2013, the Russian Economic Development Ministry reduced its growth forecast through 2030 to an average of only 2.5% per year, down from its previous forecast of 4.0% to 4.2%. In 2014, following Russia's military intervention in Ukraine, prospects for economic growth declined further, with expectations that GDP growth could drop as low as zero.

Faced with mounting uncertainty over the immediate future of the Russian economy, investors have been piling out of the rouble. As a result, the rouble has fallen sharply against the dollar, hitting record lows against the US currency.

In a drastic attempt to stem the rouble sell-off, Russia's central bank raised interest rates to 17.5% from 10.5%. It was the biggest one-day increase since the 1998 financial crisis that plunged Russia into recession and shook stock markets around the world.

Source: CIA-The World Fact Book, The Guardian, 2015

Questions

- (a) (i) Compare the trend of unemployment rate and inflation rate in the US from 2011 to 2014. [2]
- (ii) Explain one possible reason for the US wanting to raise interest rates. [2]
- (b) Explain the economic rationale for specialisation and exchange between US and its trading partners. [4]
- (c) (i) Explain how an increase in interest rate will cause the external value of the US dollar to increase. [2]
- (ii) With reference to Table 2, assess the extent to which standard of living in different countries will improve with an increase in interest rate in the US. [8]
- (d) (i) Explain why "the economic recovery in the US is underway, yet uncertain". [4]
- (ii) Discuss the relevance of the US economic recovery on whether the Russian government should focus on lowering inflation. [8]

[Total: 30]

Section B

Answer **one** question from this section.

3. In Singapore, the retail price of a pack of 20 cigarettes has gone up from \$2.80 in 1987 to \$11.00 in 2012 – almost a 300% increase.

Source: ASEAN Tobacco Tax Report Card, May 2013

- (a) Using demand and supply analysis, explain the possible reasons for this significant increase in price. [10]
- (b) Discuss the effectiveness of the policies the Singapore government currently adopts to improve resource allocation in the market for cigarettes. [15]
4. (a) Explain the key determinants of sustained growth in Singapore. [10]
- (b) With reference to Singapore, evaluate the current policies to maintain sustained economic growth. [15]

End of Paper



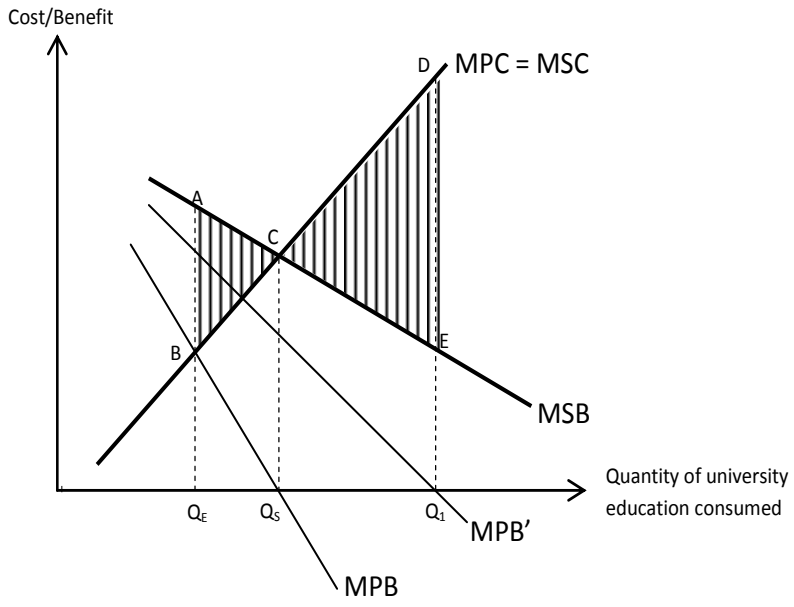
**Anderson Junior College
JC2 2015 H1 Economics
Preliminary Examinations**

Suggested Answer for AJC H1 Prelims 2015

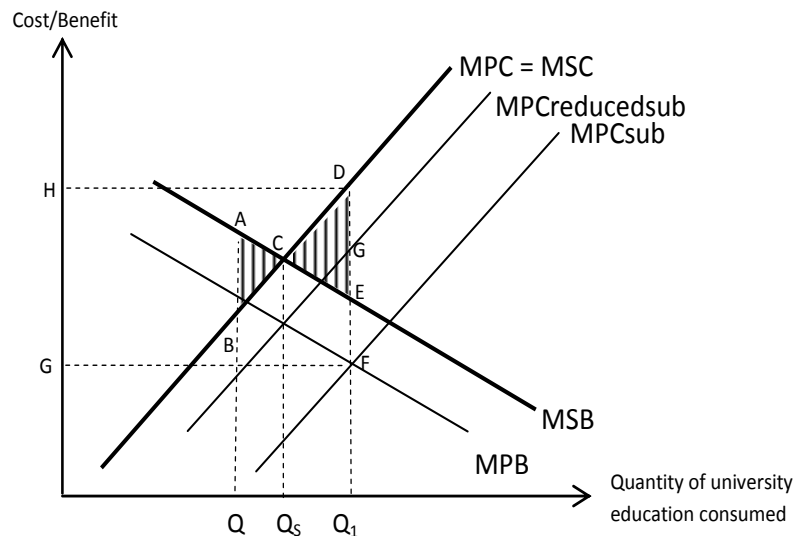
CSQ 1 Changes in Higher Education

(a)	<p>i. With reference to Figure 1, compare the trend in government expenditure on primary and university education in Singapore between 1998 and 2013.</p>	[2]
	<ul style="list-style-type: none"> • Similarity: Both government expenditure on primary and university education in Singapore increased between 1998 and 2013. (1m) • Difference: The increase in government expenditure on university education was greater than that on primary education. (1m) <p><u>Other possible answers:</u></p> <ul style="list-style-type: none"> • Increase in expenditure on primary education was gradual while increase in expenditure on university education saw more fluctuations. 	
	<p>ii. Explain one possible reason for the difference observed in (a)(i).</p>	[2]
	<p>The number of students entering university in Singapore has increased more than the number of students entering primary school which has remained relatively stable due to the low birth rate. In contrast, the proportion of students who qualify for a place at the local universities has increased significantly over the years.</p> <p><u>Other possible answers:</u> The expenditure on university education on a per student basis has increased more than that for primary education due to the significant increase in expenditure on creating the new universities as well as on research and other facilities in the universities.</p>	
(b)	<p>Using evidence from the extracts where possible, explain two reasons why there was a considerable increase in university undergraduates in the UK, despite the rise in university fees.</p>	[4]
	<p>The increase in university undergraduates in UK, despite the rise in university fees is likely due to a change in the non-price determinant of demand for university education in UK.</p> <p>Increase in demand for university education due to “high-quality teaching” (extract 1) would likely cause a change in taste and preference for it. Due to such improvement in the quality, there would be an increase in the willingness to enroll for university.</p> <p>“rising birth rate” (extract 1) would likely lead to an increase in population size. Due to a larger population, there would likely be an increase in the demand for university education.</p> <p>Price elasticity for supply for university education is likely to be relatively price elastic, due to low marginal cost required to expand the enrollment.</p> <p>Thus, the significant increase in demand due to changes in population and taste and preference would likely lead to considerable increase in university undergraduates in UK, despite the rise in university fees.</p>	

(c)	<p>With reference to extract 3 where applicable, comment on the validity of the concerns of UK leaving the European Union from the perspective of the UK government</p>	[4]
<p>UK leaving the European Union would likely lead to an increase in unemployment, as “EU students currently generate more than £2.2bn for the economy and create 19,000 jobs” (Extract 3). This would lead to a fall in the export revenue of UK as there would be a decrease in the EU students due to tougher visa checks on them. The likely fall in export revenue would cause a fall in AD. The fall would lead to an increase in the level of unemployment in UK and fall in actual growth.</p> <p>In addition, there could also be a fall in potential growth if UK leaves the EU since “the European Union supports research, knowledge, innovation and technology”. Leaving the EU might lead to a fall in EU support and funding in these areas, thereby leading to a fall in the quality of factors of production in the long run. This will reduce the productive capacity of the economy.</p> <p>On the other hand, UK leaving the EU would mean that UK does not have to contribute to the EU budget anymore and it could have more to spend on boosting government expenditure within its own economy. UK could also sign more unilateral free trade agreements on its own without being restricted by the pace of EU in terms of opening up to global trade. These can possibly boost AD more, leading to an increase in actual growth employment, especially in the long term, compared to staying in the EU.</p>		
(d)	<p>i. With reference to the extracts provided, explain why governments subsidise university education.</p>	[4]
<p>Governments should intervene in the market for university education as there is market failure due to the presence of positive externalities</p> <p>Consumers of university education only consider the private benefits of consuming university education, such as “higher starting pay and successful careers after graduation”(extract 2). They also consider the private costs of university education, which includes the price of university education. However, they do not take into account the positive externalities, such as university education leading to cutting-edge research discoveries, contributing to economic growth (Extract 3), thus improving the purchasing power of those who do not consume university education.</p> <p>As consumers of university education are self-interested, they only consume university education up to the point where private marginal benefit is equal to private marginal cost so as to maximise their net benefit. However, at the free market equilibrium, due to the presence of the positive externalities, society values each additional unit of university education more than what it would cost society to consume. This results in a deadweight loss to society, which could have been better off if more university education were consumed.</p> <p>Resources are thus under allocated to the consumption of university education and thus</p>		

	governments should subsidise university education.	
	ii. 'A generation ago, students paid nothing for university education'. Comment on the advantages of this approach.	[6]
	<p>When students paid nothing for university education, this suggests that there was a subsidy provided by the government. This full subsidy provided by the government can be evaluated on grounds of efficiency and equity.</p> <p>A key advantage of this approach is that the access to university education is no longer subjected to the ability of students to pay. It is inevitable that income inequality will exist in the market for university education. By providing university education for free, willing students from poorer backgrounds are also able to enjoy the benefits of university education, such as the opportunity to gain employment with higher wage rates. Hence, this would result in a more equitable distribution of university places and an equitable distribution of income as these students earn higher incomes in the future.</p>  <p>Another advantage of such an approach is that there is a more efficient allocation of resources towards the attainment of university education. As explain in d(i), positive externalities from higher education result in the under-allocation of resources to university education and subsidies are thus required. As illustrated in figure 1, if the $MPB=MPC=0$ at Q_s, the amount of subsidies required would be equivalent to the full amount of positive externality at Q_s and education should cost nothing to achieve allocative efficiency.</p> <p>However, if the level of MPB was at MPB' and university education was provided for free, there will be an over-consumption of university education beyond the social optimal level of consumption (consumption will be at $Q_1 > Q_s$). As such, providing university education for free would lead to an over-allocation of resources to the attainment of university education and a resultant net cost to society by the triangle CDE.</p>	

	<p>Furthermore, the government provision of a full subsidy has led to a case of government failure where the government's efforts in correcting the under-consumption of university education, has led to a larger deadweight loss to society than before. For example, resources that could have been diverted to other markets in the economy to support the consumers from low income backgrounds are now over-allocated to the market for university education. Hence, this may lead to worsening equity as well as inefficiencies on the economy level.</p> <p>Moreover, since university education is free for consumers, universities may not have the ability to deliver higher quality teaching or improve teaching facilities for students. For instance, by levying a £9000 fee would allow universities to deliver high-quality teaching, with many institutions now planning to invest more in improved teaching facilities. Hence, providing university education for free may result in a loss of students' welfare due to the sluggish development.</p>	
(e)	Discuss if you would recommend UK's policy approach to reduce subsidies to university education for Singapore.	[8]
	<p>As explained in (d) (ii), subsidies are provided to reach the socially optimal level of university education. In Singapore, the Government continues to provide a high level of subsidies (75% or more of the cost of education for general courses) whereas the UK Government has been reducing subsidies and increasing fees from zero to £9,000 in 2012.</p> <p>UK's policy approach may be recommended as significant benefits of a university degree accrue to the individual in terms of "higher starting pay and successful careers after graduation" while the positive externalities are smaller. In other words, PMB is large while the extent of the EMB is small. In such a case, the Singapore government may have overvalued the amount of positive externalities and over-subsidised university education. This will lead to over-consumption of university education at Q_1 beyond the socially optimal level of consumption Q_s, resulting in net cost to society by the triangle CDE.</p> <p>Furthermore, overconsumption of university education can result in dilution of the value of university degrees and even future under- and unemployment of university graduates. Therefore, to achieve efficiency both in the short-term and in the long-term, the Singapore government should reduce subsidies by the amount GF to reach socially optimal level of university education.</p>	



Also, given that university fee increases have generally been “below the average annual inflation rate in Singapore”, the subsidy (area HDFG) that has to be provided by the government “may not be sustainable in the long term and should rise in line with inflation”. Furthermore, the ageing population in Singapore would require increasing healthcare expenditure and to maintain fiscal sustainability, it is recommended that Singapore reduces subsidies for university education.

Nevertheless, the positive externalities in Singapore from higher education may be larger than other countries. Increased knowledge capital of university graduates help to drive productivity gains which spill over and raise wages even for non-university graduates. In a resource-scarce, knowledge-based economy like Singapore, university education is crucial in driving economic competitiveness, allowing it to compete on the frontier of innovation in an increasingly dynamic global environment. Thus, if the positive externalities are indeed high in Singapore’s case and the current subsidy levels are equivalent to the amount of positive externalities, UK’s policy approach to reduce subsidies would not be recommended as it is inappropriate to the context of Singapore and would instead lead to welfare loss.

In addition, if subsidies were reduced, lower-income groups may not be able to afford university education or may decide not to pursue university education as they have heavy financial responsibilities that compel them to enter the labour market as soon as possible. With the rich students receiving university education and thus higher pay and successful careers in future while the poor students continue to only be engaged in low-wage jobs, the income inequity in Singapore will worsen. Reducing subsidies is thus not recommended.

However, “Ivy League members are entirely independent of the US government, yet operate a system of social outreach that no government could rival”. Thus, it is still possible for Singapore to reduce subsidies and leave universities to “use ingenious fundraising techniques to roll in resources” like in the US while working with the various institutions to publicise existing “financial assistance schemes”, and to encourage more students from low-income families to take them up. This would ensure that eligible students are receiving the available support and not unduly burdened by the financing of their education.

<p>On balance, it is still recommended that Singapore reduces across-the-board subsidies to everyone and provide more targetted assistance instead where “bursaries and loans are given to low-income families that require them while rich students pay the full cost of education”. This will not only help to reduce the government spending on subsidies which can then be diverted to funding other social expenditure with higher net benefit but also reap greater “value relative to investment” as the positive externalities from allowing talented and motivated low-income students to earn university degrees before joining the labour market may be larger than that for a well-off student. Such an option would be more equitable, efficient and make better use of taxpayers’ money.</p>	
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CSQ 2: Uncertain US Economic Recovery

(a)	(i)	Compare the trend of unemployment rate and inflation rate in the US from 2011 to 2014.	[2]
<p>From Table 1 (S): Both unemployment rate and inflation rate generally decreased. (D): Unemployment rate has been consistently decreasing while inflation rate experienced an increase from 2013-2014</p>			
	(ii)	Explain one possible reason for the US wanting to raise interest rates.	[2]
<p>Either one will do</p> <p>Reason 1: Raising i/r will help to prevent C and I from increasing too rapidly, thereby preventing inflationary pressures</p> <p>Reason 2: Raising i/r will cause the USD to appreciate, thereby preventing imported inflation as import prices will now be lower with a stronger USD.</p>			
(b)	Explain the economic rationale for specialisation and exchange between US and its trading partners.		[4]
<p>Specialisation and exchange occurs between US and its trading partners because there are economic gains which can be explained by the theory of comparative advantage.</p> <p>The theory of CA states that if there are differences in comparative costs of production between countries, specialisation and exchange will result in higher world output and a greater consumption for both countries. For US, they have comparative advantage in the production of high technology goods such as computers, microchips as they incur lower opportunity costs in production to a more skilled workforce. On the other hand, countries such as Vietnam have comparative advantage in the production of agricultural products such as rice due to a favourable climate. Thus, US will specialize in the production of high technology goods while Vietnam will specialize in the production of agricultural products. After specialisation, both countries will then exchange their goods, with terms of trade between the opportunity costs of production of both countries. After exchange, both countries will be able to consume outside their PPC and enjoy a higher material standard of living.</p>			
(c)	(i)	Explain how an increase in interest rate will cause the external value of the US dollar to increase.	[2]
<p>Increase in interest rate will lead to an increase in short term capital inflows which will result in rise in demand for US currency. Thus, the external value of the US dollar will rise/ appreciate.</p>			
	(ii)	With reference to Table 2, assess the extent to which standard of living in different countries will improve with an increase in interest rate in the US.	[8]
<p>Standard of living (SOL) refers to the level of subsistence and comfort in everyday life enjoyed by a community. To ascertain standard of living, there's a need to look at both the material as well as non-material aspects. Material standard of living looks at material comfort as measured by the</p>			

goods and services available to the population while non-material standard of living looks at the intangible aspects that make up human life, such as leisure, safety, physical health, environmental quality issues, etc.

An increase in interest rate in the US will lead to an appreciation of US dollar as explained in part (i). Hence, the foreign price of US exports rises and domestic price of imports into US falls.

P1: SOL in some countries will improve to a greater extent

As the domestic price of imports into US is lower, US consumers will switch to purchasing imports. This result in an increase in US's import expenditure which will mean an increase in export revenue of US's trading partners.

From Table 2, Vietnam's export to US takes up 16.5% of GDP which is relatively significant as compared to other countries. Hence export revenue for Vietnam will increase by a greater extent as compared to other countries. Thus, net exports increase, *ceteris paribus*. Real national income increases, leading to an increase in **material SOL** by a greater extent as they are able to consume more goods and services.

With economic growth in Vietnam, more resources are likely to be allocated to improve the healthcare facilities and education services. This would lead to longer life expectancy, lower mortality rate and higher literacy rate, hence improving the **non-material SOL** significantly.

However, with increased production in the economy, this may lead to more pollution which will worsen the quality of life for the people, thus lowering **non-material SOL**.

P2: SOL in other countries will improve to a smaller extent

However, if the export takes up a relatively insignificant percentage of GDP, the impact of increase in export revenue on GDP is minimal.

From Table 2, Russia's export to US takes up 1.2% of GDP which is the least as compared to other countries. Hence export revenue for Russia will increase by a smaller extent, hence increasing real national income and thus **material SOL** by a smaller extent.

Alternative P2: SOL in other countries will not improve

However, SOL may fall due to increase in interest rate in US. Appreciation of USD means that foreign price of exports increases. This means that for countries which imports from US, they will face a higher imported price.

From Table 2, Singapore's import from US takes up 9.9% of GDP which is the most as compared to other countries. Higher price of US's imports into Singapore will increase cost of production in Singapore, resulting in a fall in SRAS and hence real national income. Thus, **material SOL** decreases in Singapore.

With a fall in real national income, there may be lesser resources allocated to improve healthcare facilities and education services, hence leading to lower life expectancy and literacy rate and thus **non-material SOL**.

Evaluation:

	<p>On the whole, it is difficult to assess the overall effect on the SOL in different countries due to missing information in Table 2. More information will be required to have a comprehensive assessment of the SOL. Information such as the income distribution for the trade between the affected countries and US is required. If the gain from the export revenue is only limited to those in the export industry which is not distributed across the economy, the SOL of each person may not increase at all. Hence it is difficult to assess if the SOL has actually improved. Comprehensive measures such as GINI coefficient and Human Development Index could be included for better assessment of SOL in the countries.</p> <p>In addition, whether SOL improves in different countries depends on the existing policies in the countries. If the countries already have existing policies to address the various issues in the country such as pollution, the non-material SOL may not deteriorate as much.</p>	
(d)	(i) Explain why “the economic recovery in the US is underway, yet uncertain”.	[4]
	<p>As shown in extract 4, there was an increase in consumption expenditure due to higher consumer confidence as well as an increase in government defence spending. This leads to an increase in AD and hence real national income, indicating a US economic recovery is underway.</p> <p>However, the recovery is uncertain as the US is still vulnerable to external shocks. For example, as stated in extract 4, a slowdown in its trading partners will mean that there will be a fall in demand for US exports, which will reduce AD and result in a fall or even negative growth.</p>	
	(ii) Discuss the relevance of the US economic recovery on whether the Russian government should focus on lowering inflation.	[8]
	<p>Russia is suffering from falling economic growth rates, a high inflation rate as well as a worsening current account, as shown in Table 3. Thus, Russia has to make a choice on whether to focus on lowering, or to focus on other issues. Russia may choose to focus on lowering inflation as a high inflation rate can lead to fall in purchasing power and a fall in the standard of living in Russia. In addition a high inflation leads to unstable prices and profits for investments and will worsen the outflow of FDI from Russia.</p> <p><i>(Note: It is possible to argue that Russia should not focus on lowering inflation and use this as a basis for further discussion.)</i></p> <p>P1: US economic recovery is a relevant factor</p> <p>US economic recovery will bring about an increase in demand for Russian exports, thereby increasing AD and if the increase is substantial, this will create upward pressure on GPL. Even though US may not a main trading partner of Russia, the recovery of US will also bring about recoveries in other world economies who may be bigger trading partners of Russia, such as China. The recoveries of these economies will thus bring about higher export demand, which may translate to higher demand pull inflation in Russia. Thus, Russia should focus on reducing inflation</p> <p><i>(For students whose premise is that Russia should not focus on inflation, they could argue for the following under P1</i></p>	

A US recovery will have little direct impact on Russia since Russia's exports to US takes up only 1.2% of country's GDP as shown in Table 2. Hence, even if US were to recover and import more from other countries, Russia's AD is unlikely be affected much. Thus, there is no need for the Russia government to focus on inflation)

P2: US economic recovery is not a relevant factor

As stated in extract 4, the US economic recovery is uncertain. Thus, it may be too risky for Russia to base its economic decision on a US economic recovery when it cannot be sure if the economic recovery is going to happen. Thus, the US economic recovery will not be a relevant factor on whether the Russian government should focus on inflation.

P3: Other factors are more relevant

Conflict in macroeconomic objective: If they focus on addressing inflation → result in conflicts with other goals: growth. This will exacerbate the situation in Russia which is already experiencing falling growth rate.

Relative severity of the problem: Although growth is declining in Russia, it is still positive. On the other hand, the inflation rate is high and continues to increase. Thus there may be a more urgent need to reduce inflationary pressures in the country.

Expectations of future commodity prices: As Russia is a leading producer of commodities (Extract 6), the fall in commodity prices is one of the major factor why Russia is suffering a fall in economic growth. If commodity prices are expected to increase in the future, the Russian economy should recover without government intervention. Thus, the Russian government could focus on reducing inflation rather than growth, which will worsen if commodity prices increases.

EV: As a major world economy, the US economic recovery will affect many countries, either directly or indirectly. The interconnectedness of the world economies will surely mean that Russia must take into account the state of the US recovery. However, it will be difficult to decide which the most relevant factor is as some of the factors discussed above are interconnected. For example, A US economic recovery will increase the demand for commodities, leading to an increase in prices. Thus, even though the expectation of future commodity prices may be an important factor, this expectation is also dependent on the US economic recovery.

3. In Singapore, the retail price of a pack of 20 cigarettes has gone up from \$2.80 in 1987 to \$11.00 in 2012 – almost a 300% increase.

Source: ASEAN Tobacco Tax Report Card, May 2013

- (a) Using demand and supply analysis, explain the possible reasons for this significant increase in price. [10]
- (b) Discuss the effectiveness of the policies the Singapore government currently adopts to improve resource allocation in the market for cigarettes. [15]

Suggested Answer 3(a)

Over a span of 25 years, the price of cigarettes has risen drastically. The equilibrium price of cigarettes is determined by market forces of demand and supply and changes in either one or both factors can cause the price of cigarettes to increase. Demand refers to the quantity which a consumer is able and willing to buy at each and every price level, in a specified time period, *ceteris paribus*. Supply refers to the quantity which a producer is able and willing to sell at each and every price level, in a specified time period, *ceteris paribus*. When the price of cigarettes increased three-fold, this can be explained by a **fall in supply** of cigarettes and a **rise in demand** for cigarettes.

The rise in demand for cigarettes could be due to a myriad of reasons, one of which being the **increase in income levels of consumers in Singapore over the years**. Assuming that cigarettes, like many other goods, are normal goods, when an individual's income goes up, his ability to purchase goods and services, including cigarettes, increases. Even young people who do not yet earn an income are receiving more pocket money from their parents these days, so they can better afford the habit of smoking.

Another likely reason for the rise in demand for cigarettes is the shifting **preference towards smoking**, especially amongst young people. More and more youths are influenced or pressured by their peers to begin smoking so as to gain social acceptance and affirmation. This is shown by the increase in the number of daily smokers among young adults aged 18 to 29 from 12.3% in 2004 to 16.3% in 2011. There can also be an increase in the number of older adults turning to smoking because of the increase in stress and personal problems faced over the years.

Finally, the demand for cigarettes could increase simply because the **population size has increased** in Singapore. From about 2.8 million in 1987, the population size in Singapore has since grown to 5.3 million in 2012. With more people living and working in Singapore, it is natural that the demand for cigarettes will increase.

In summary, the above reasons supporting the rise in demand will cause a rightward shift in the demand curve.

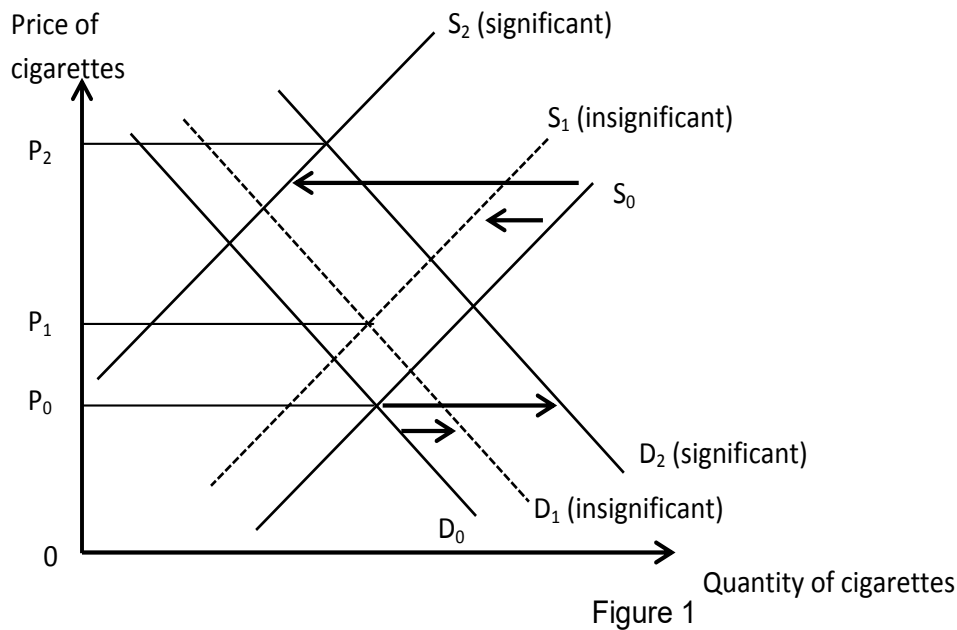
The primary reason for the fall in supply of cigarettes is the **increase in excise tax levied on tobacco products by the Singapore government** over the years. An excise tax is an indirect tax that is levied on the sale of specific goods and services, such as alcohol and tobacco, because of the harmful effects that can arise from excessive consumption or indulgence. It is typically a per unit tax, costing a specific amount for a volume or unit of the item purchased. Singapore's excise tax has increased considerably from \$34 per kg of cigarettes in 1987 to \$255 per kg of cigarettes in 2003. To make the excise tax even more impactful and onerous to bear, this was subsequently levied on a per

Suggested Answer for AJC H1 Prelims 2015

gram basis reaching \$0.35 cents per gram of cigarettes in 2012.

Other possible reasons behind the fall in supply of cigarettes could be an **increase in costs of production** attributable to higher labour and rental costs.

In summary, the above reasons supporting the fall in supply will cause a leftward shift in the supply curve. However, to account for the very significant increase in the price of cigarettes, the rise in demand and fall in supply need to be very large as well.



With reference to Figure 1, the larger the extent of the shifts of the demand and supply curves, the more significant the price increase will be (i.e. $0P_2$ versus $0P_1$). While it is hard to ascertain if the rightward shift of the demand curve is by a large or small extent, more certainty can be said for the supply of cigarettes. Given the substantial rise in excise duty on cigarettes over these 25 years, the fall in supply can be said to be very significant and this forms a strong contributing factor for the significant increase in price of cigarettes.

Alternatively, the concept of **price elasticity of demand** can be used to explain for the significant increase in cigarette price. Price elasticity of demand measures the responsiveness of the quantity demanded of a good to a change in the price of the good itself, *ceteris paribus*. Demand for cigarettes is likely to be price inelastic due to its addictive nature. Once a person picks up smoking, it becomes a habit that is very difficult to break.

With reference to Figure 2, assuming no change to demand yet, a fall in supply results in a more steep increase to price $0P_2$ as compared to the case where demand for cigarettes is price elastic which results in a less steep increase to price $0P_3$.

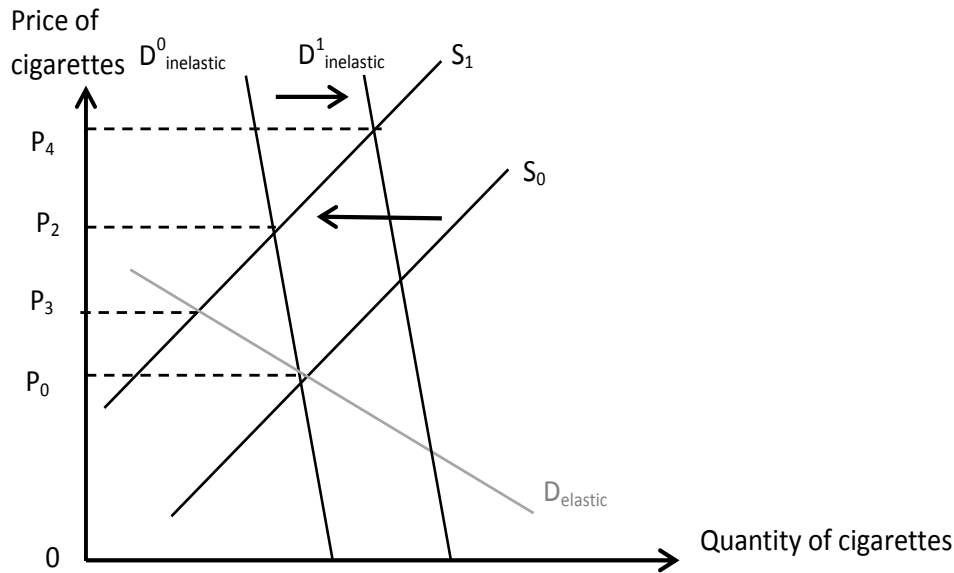


Figure 2

Now with an increase in demand, $D^0_{inelastic}$ shifts to the right to $D^1_{inelastic}$. At the initial equilibrium price (P_0), quantity demanded exceeds quantity supplied. This shortage causes an upward pressure on price as consumers compete for the existing quantity of cigarettes available by bidding up the price. At the same time, according to the law of supply, producers will increase the quantity supplied of cigarettes due to the higher price. This process is represented by the movement along the demand and supply curves, and will continue until there is no shortage and no upward pressure on price. The combined effect of the rise in demand and fall in supply of cigarettes results in a significant increase in the price of cigarettes

The inelastic nature of the demand curve results in the price of cigarettes to increase by a larger extent to OP_4 . Had the demand curve been more price elastic, even with the same extent of rightward shift, the price of cigarettes would not have risen to such a great extent.

Suggested Answer 3(b)

The Singapore government currently adopts several policies to improve resource allocation in the market for cigarettes due to **market failure reasons**. Market failure refers to the circumstances in which distortions prevent the price mechanism from allocating resources efficiently.

Cigarettes are deemed by the Singapore government to be **demerit goods** as the consumption of cigarettes exhibits **negative externalities**. Negative externalities refer to incidental costs to third parties that are not taken into account by those who are involved in the activity. A smoker will only take into account his private costs (price of the packet of cigarettes and own smoking-related health problems) and private benefits (satisfaction derived from smoking). However, he does not consider the negative externalities that would be generated by his smoking. There are many ill effects imposed on passive smokers that come from the exposure to second-hand smoke, such as diseases

Suggested Answer for AJC H1 Prelims 2015

like lung cancer, ischemic heart disease, asthma attacks, childhood respiratory disease and sudden infant death syndrome. The social cost from undertaking the activity is the private cost faced by the smoker as well as external costs accruing to third parties and this social cost can potentially be a huge sum of money. A 1997 study published in the Singapore Medical Journal in 2002 estimated that smoking cost the Singapore economy around \$839 million annually.

The presence of negative externalities will lead to divergence of private cost and social cost (Figure 3).

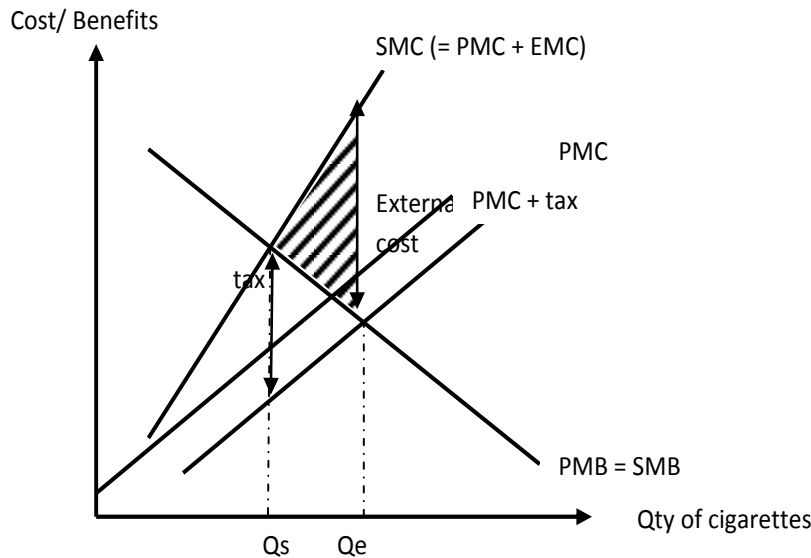


Figure 3

The problem of market failure arises because the negative externality is underpriced by the price mechanism. Private optimum occurs at Q_e where PMB (the benefit to the individuals of smoking the last unit of cigarette) equals PMC (the cost to the individual of smoking the last unit of cigarette).

But the socially efficient level is where $SMC = SMB$ i.e. at output Q_s . Therefore, there are too many scarce resources devoted to the consumption of cigarettes. There will be over-consumption of cigarettes because society values an extra unit of cigarette less than what it would cost society to consume it. The shaded area represents the welfare loss to society as a result of this over-allocation of resources. Society as a whole could be made better off if the current level of cigarettes were reduced to socially efficient level at Q_s . Thus, the current policies that the Singapore government adopts generally aim to bring the level of cigarettes consumed down to somewhere closer to Q_s .

One of the current policies that the Singapore government adopts to improve resource allocation is a tax. The government had recently raised tobacco tax by a further 10% in 2014, bringing the total to 71%.

To achieve the socially efficient level of consumption of cigarettes at Q_s , the tax levied has to be equal to the external marginal cost at Q_s (see Figure 3) in order to effectively internalize the negative externality. When internalized by the individual smoker, this will increase his private marginal cost of smoking and shift the PMC upwards to $PMC + tax$ resulting in a reduction of cigarettes smoked to

the socially efficient level of Qs.

A tax creates incentives to decrease consumption as smoking is now more expensive. Higher taxes are especially effective in reducing tobacco use among lower-income groups and in young people who are just starting to earn a salary. This is because demand for cigarettes is likely to be price elastic for these groups of smokers, as a more expensive pack of cigarettes would take up a larger proportion of their lower income. The disproportionately large number of lower-income smokers in Singapore means that a tax can be a very effective policy. In fact according to the World Health Organisation (WHO), for every 10% increase in the price of cigarettes, smoking drops by 4% to 8%, depending on how affluent the country is.

In addition, a tax has an added advantage of giving the Singapore government the option of using the tax revenue collected to fund smoking cessation clinics, educational campaigns, free health scanning, etc, further driving home the health detriments of smoking. The latest tax hikes on cigarettes and tobacco can in fact net the Singapore government \$70 million more a year.

Unfortunately in reality, it is very difficult to accurately measure the exact amount of EMC incurred by third parties. Underestimating the EMC will result in insufficient tax imposed to correct the market failure. Overestimating the EMC will lead to too high a level of tax leading to consumption below the socially efficient level and there will still be deadweight loss. A tax would also not work very well if demand for cigarettes is price inelastic – since they are habit forming. Thus, people who are already heavy smokers or who can well afford to pay, may not be responsive to the increase in price of cigarettes. In Singapore, the root cause of smoking could be linked to a social issue - rising delinquency among youths – which may be more effectively addressed with education than with draconian measures like a tax.

The Singapore government also relies on tough legislation and regulation to curb the consumption of cigarettes. In 2010, rules were tightened to suspend or revoke retailers who sold cigarettes to underage smokers of their tobacco retail licences. This came in addition of a fine of up to \$5,000 for the first conviction, and up to \$10,000 for subsequent convictions. Young people under 18 caught using, buying or being in possession of tobacco products may be fined up to \$300 if found guilty. Smoking is also prohibited at air-conditioned workplaces, educational institutions, bus shelters, interchanges, public pools and toilets, community clubs, open-air stadiums and even in entertainment outlets. Other forms of regulation that target consumption include the control of advertisements. These measures aim to bring the consumption of cigarettes closer to the socially efficient level, assuming the government has a good idea of ascertaining where that is.

Rules are relatively simple to stipulate and easy to administer and those who do not obey will be severely punished or fined which is a form of direct control. It is also better to enforce penalties than to slap a heavy tax on cigarettes because a heavy tax would encourage the formation of black markets, which would give smokers cheap access to contraband cigarettes.

Still, there must be rigorous enforcement, which would mean large amount of manpower needed, to ensure that these regulations are complied with. This imposes a severe drain on resources. Moreover, there are loopholes in these regulations. For example, persons below 18 years of age may try to beat the system by asking their older friends to buy cigarettes for them. The government

would also need to be mindful of the backlash from businesses, whose patronage and hence income will be badly affected by these laws.

Market failure can also be caused by imperfect information – smokers may be unaware of the short- and long-term health risks associated with smoking. As such, the Singapore government has also been actively involved in providing public education workshops and initiating public campaigns about the harmful effects of smoking. For example, the "I Quit" campaign is fronted by the Health Promotion Board to encourage smokers to stop smoking for 28 days and to have a healthier smoke-free lifestyle. Ideally armed with more information about the harmful effects of smoking, the individual's perceived PMC would now be more attuned to a much-higher actual PMC, resulting in a lower level of cigarettes consumed.

Education is seen as a more personable and humane approach than tax and legislation. If the educational messages get through to people, they are more likely to quit smoking willingly on their own accord and the effect would be much more lasting.

However, changing people's mind-set is a difficult and long-term endeavour especially since smoking is highly addictive. Education may only work for smokers who already have the intention to quit but not for others. And when pitched inappropriately, it can turn people off. Like legislation, this approach can be a drain on government resources. Money could have been spent on other areas of development of the economy.

To conclude, the effectiveness of the current policies depends on many factors such as the target group of consumers and the degree of urgency as resources are limited and hence there is a need to be strategic about the choice of policies. For example, if underage smoking is the main problem, a tax may be more effective since it hits them where it hurts most - their wallets. If the objective is to quickly bring down the number of smokers notwithstanding any age groups, then tough enforcements are the way to go. Ultimately, in view of the strengths and weaknesses of each policy, it is more sensible to implement a combination of policies that targets both production and consumption of cigarettes, and which takes into account the short-term and long-term effectiveness of each policy.

4. (a) Explain the key determinants of sustained growth in Singapore. [10]
- (b) With reference to Singapore, evaluate the current policies to maintain sustained economic growth. [15]

Suggested Answer 4(a)

Sustained economic growth refers to both increases in actual and potential growth that contributes to a continuous increase in the real national income (output) of country over time. In other words, sustained growth can only be achieved via a continuous increase in AD and LRAS. Actual growth refers to the percentage annual increase in the level of national output that is actually produced by the economy. Potential growth refers to the percentage annual increase in the capacity of the economy to produce.

One key determinant of sustained growth in Singapore is the inflow of foreign direct investment (FDI) due to government policies. Government policies of providing investment grants for new investment projects will have the tendency to stimulate investment expenditure. Likewise, the reduction in corporate tax rates will lead to higher **after-tax profits**, which will in turn lead to an increase in investment expenditure. For example, the **Singapore government** has always **pursued a policy of maintaining low corporate taxes to attract businesses** to invest in the Singapore economy. In fact, with a low corporate tax rate of 17%, Singapore corporate tax rate is the third lowest in the Asia-Pacific region after Hong Kong (16.5%) and Macau (12.5). A higher FDI inflow results in increased spending on capital goods like plant, equipment, machinery and building. This leads to an increase in AD as I is a component of AD, increasing real national income and achieving actual growth.

Another key determinant is due to higher export revenue due to the signing of more FTAs. The Singapore government has pursued a **policy of freer trade** by signing more Free trade agreements (FTAs) to achieve economic growth beyond its domestic economic resources. In an FTA, tariffs and quotas are removed between the signatories but retained outside the FTA for other countries. This provides producers in Singapore with an enlarged market for their goods and leads to an increase in demand for exports. There could also be an **increase in foreign direct investment (FDI)** into Singapore as a result of the signing of more FTAs as foreign firms would want to locate their production facilities in Singapore so as to take advantage of the access to a greater number of export markets. In addition, if Singapore maintains a strong and comprehensive network of FTAs with many countries, other countries would have greater incentives to ship their goods through Singapore and hence **generating export revenue** for Singapore, so as to bypass higher protectionist barriers in their final destination markets. These factors will help to increase AD and achieve actual growth.

Additionally, **a high level of investment expenditure will increase the size of capital stock assuming that there is positive net investment.** Usage of machines can bring about higher level of productivity and more output can be produced with the same amount of labour resources. Physical capital accumulation also increases the productivity of labour though a more efficient combination of labour and capital factors of production. Thus, a higher level of investment brings

about increased quantity and quality of an economy's factors of production, raises the ability of the economy to produce more, increases the productive capacity and achieves potential growth.

Moreover, a higher foreign direct investment could be in the area of research and development. In the longer term, **R&D efforts can also raise innovation and production capabilities**. Technological improvement can be either invention, which is the creation of new knowledge and new techniques of production or innovation, which is the application of new technology to the production processes. These can lead to greater productivity and hence more efficient usage of resources. This increase in productive capacity will result in an increase in the potential output, achieving potential growth.

Another key determinant of sustained growth in Singapore is improved labour productivity.

Increase in labour productivity can be achieved via training and upgrading of skills. This can be done through measures such as **subsidies on education**, training workers with new knowledge/skills, tax incentives/subsidies to encourage firms to mechanise and conduct R&D etc. For example, the Workforce Development Agency (WDA) in Singapore provides a range of training programmes which aims to build up the foundational and industry-specific skills. The Singapore government has also adopted schemes like Continuing Education and Training (CET) and has committed \$2.5 billion over the period of 2010 to 2015 to drive productivity growth with a designated target of 2% productivity growth per annum. The increase in labour productivity also increases the productive capacity of the economy, thereby helping to achieve potential growth in the long run. In conclusion, the main determinants causing a sustained economic growth are factors that will result in an increase in AD and AS. In Singapore, this can be due to our ability to attract foreign direct investment in our country and/or an improvement to the quality of the resources such as labour productivity.

Suggested Answer 4(b)

As mentioned in part a, one supply side policy used by Singapore to maintain sustained economic growth **is the increase in labour productivity** which can be achieved via training and upgrading of skills. This can be done through measures such as **subsidy on education**.

This policy is particularly effective as it **target the root cause of the problem** as Singapore has a problem of low productivity (ranging from -0.8 to 2.3% from 2011 to 2014). Coupled with an ageing population, there will be a fall in the availability of resources and as well as a higher cost of labour when the supply of workers decreases. This will lead to a fall in the productive capacity of the country in the long run. Thus to ensure that growth is sustained, one way is to enhance the **quality** of the workers via increasing their productivity. This increase in labour productivity helps to increase the productive capacity of the economy, thereby helping Singapore to achieve potential growth in the long run.

However, one limitation of training and education is that it needs a **long gestation period** and its success hinges on the receptiveness of the workers. Though CET was implemented from 2010; its success has largely been limited with productivity falling in certain years. In Singapore, workers who are **structurally unemployed** tend to be older workers who have little or no relevant skills to survive

in industries that are our new areas of comparative advantage. However, **due to their age**, many of these workers **may not recognise** that they could benefit from retraining programmes, and thus they might refuse to accept help in this way. Hence the increase in potential growth could be limited.

Other than improving productivity, the **government has also engaged in supply side policies such as spending on infrastructure building** especially in specific infrastructure development aimed to **create new comparative advantage** in new areas of manufacturing industries such as the development of Jurong Island for petrol-chemical industries, Tuas biomedical park for pharmaceutical industries, and Biopolis to encourage R&D. This will expand the range of economic activities to replace the declining industries that have lost their comparative advantage. The development of such infrastructure attracts inflow of established foreign firms into the country. With the entry of the foreign firms, there is further transfer of technology contributing to faster process and product innovation. The transfer of knowledge that may also occur due to this could help to scale up the competency/skill level of the local workers hence increasing the productive capacity of Singapore, leading to potential growth.

In the long run, supply side policies to create new areas of growth may be effective in achieving full employment as export demand for the knowledge based sectors tends to be less income elastic, hence export revenue will be affected to a lesser extent with a world-wide recession. With the increase in G on infrastructure and with a more productive workforce, Singapore is more likely to be able to continue attracting more FDI to create more employment opportunities. This achieves more actual and potential growth, thus **achieving a sustained economic growth**.

The supply side policy of the provision of infrastructure to develop new areas of CA is pertinent for Singapore in the midst of globalisation. With the emergence of China and India and many other low-cost economies, **Singapore is losing comparative advantage** in areas that were previously her mainstay, such as low end manufacturing industries. As such she has to create new areas of comparative advantage for export industries, such as pharmaceutical, biomedical and precision engineering, so as to ensure that there is a sustained growth.

However, supply – side policies have **limitations**. Supply-side policies tend to be **long term and uncertain** in their measurable outcome as they require structural changes to be made to increase aggregate supply in the economy. Identifying new areas for development is also difficult given the rapid change in technology and world supply conditions.

Other than supply side policies, another current policies to maintain sustained economic growth is **the signing of more FTAs, as mentioned in part (a)**

This policy is particularly effective as Singapore is one of the world's most trade dependent nations. In 2013, Singapore had the world's highest trade to Gross Domestic Product (GDP) ratio, with imports and exports amounting to about 3.5 times the value of the GDP. Singapore, with a small domestic market, is able to benefit from the signing of FTAs as it allows us to **tap into foreign markets**. Foreign companies may choose to **use Singapore as a springboard/gateway to other economies** where Singapore has FTAs with; this would ensure that they are able to benefit from the FTAs signed between Singapore and other countries. Given that FDI made up a large component of

In AD, trade policy is effective in contributing to actual growth for Singapore.

However, a greater reliance on **external demand** from adopting more free trade agreement also makes Singapore and other small countries vulnerable to effects of an external downturn. For example, Singapore was the **first East Asian country to go into a recession in 2009** due to the global slowdown arising from the US Financial Crisis. There was a significant decrease in global demand, resulting in a fall in net exports which hit Singapore especially hard, in view of the small domestic demand and heavy dependence on exports for growth. Thus, actual growth could be impacted more adversely during economic downturn.

One other policy that Singapore has adopted is to adopt a modest and gradual appreciation of the exchange rate. This helps to **improve price stability, enable more stable profits** and attract foreign direct investment. A gradual appreciation would lower domestic price of imports. This significantly reduces the general price level of the economy as much of the households and firms in Singapore depend on imports for final goods and services. This lowers imported inflation and helps achieve **price stability** in Singapore, thereby enabling more stable profits. This boosts **business confidence and investment**, especially in industries where a stronger Singapore dollar helps to lower productions costs. **The higher investment will promote growth** and create employment opportunities as AD increase. This will generate a multiplied increase in national income (actual growth) and increase national output. Firms will demand for more labour to meet the higher demand and hence creating more job opportunities. In the long term, LRAS increases with capital accumulation from the investment. **Potential growth ensues.**

However, the policy fails to address the dampening impact on Singapore's export competitiveness in the service sector which contributes about two thirds of its national income. A strong Singapore dollar would hurt Singapore's exports of services as they do not benefit as much from lower imported input prices as manufactured goods do. This could lead to a significant fall in net exports and a fall in Singapore's actual economic growth.

In conclusion, there is no single best policy to achieve a sustained economic growth. The government has to use a combination of demand management policies, supply side policies and trade policy to ensure that actual and potential growth go hand in hand.

While pursuing a sustained economic growth, the government also has to bear in mind the opportunity costs of current growth and the possible ills that accompany economic growth such as income inequality and higher levels of pollution. Therefore, the desired growth levels and the appropriate policies to achieve the desired growth levels is a normative decision that the government has to make. Additionally, the Singapore government should have **policies to curb these problems** that may arise due to sustained economic growth. For instance, the government can provide subsidies to low-income households to help them cope with the rising cost of living and to have measures to help the children of these households climb the social ladder (e.g. bursary). All in all, though attaining a sustained economic growth is good, achieving an inclusive growth would be even better.



ANDERSON JUNIOR COLLEGE

JC2 PRELIMINARY EXAMINATION 2015
Higher 2

ECONOMICS

9732/01

Paper 1

15 September 2015

Additional Materials: Answer paper

2 hours 15 mins

READ THESE INSTRUCTIONS FIRST

Write your name, PDG and index number in the spaces provided on all the work you hand in.

Write in dark blue or black ink.

You may use a soft pencil for any diagrams, graphs or rough working.

Do not use staples, paper clips, highlighters, glue or correction fluid.

Answer **all** questions.

Fasten your answer to each question **separately**.

Fasten **this cover page** in front of your answers to **Question 1**.

The number of marks is given in brackets [] at the end of each question or part question.

Name _____ ()

PDG _____/14

Question Number	Marks Awarded
1	/ 30
2	/ 30
Total Marks	

This document consists of 7 printed pages and 1 blank page, including this cover page.

[Turn over]

Section A

Answer all questions in this section

Question 1

Changes in Higher Education

Extract 1: Mergers in higher education

Over the past half century, the UK's higher education landscape has been shaped to a great extent by university mergers and acquisitions. According to Lancaster University research, some 30% of higher education institutions went through the process between 1994-5 and 2009-10. These include the merger of "equals", such as the link-up between the University of North London and London Guildhall University to form London Metropolitan University; and the absorption of smaller specialist colleges or schools (most commonly teacher training colleges or medical schools) by larger universities. All these strategic moves were underpinned by the belief that the external environment favoured larger institutions with broader and deeper subject coverage.

This year will see a significant addition to the tally, when the University of London's Institute of Education (IoE) surrenders its status as an independent institution to become the newest and largest faculty of University College London (UCL). The merger will allow two institutions with complementary strengths to pool expertise and build cross-disciplinary work across the full range of higher education while better supporting delivery of teacher training and ultimately pupil attainment in London. Boris Johnson, Mayor of London, said: "With international competition to attract the brightest students from around the world, this significant merger will further reinforce London's status as a global leader in higher education."

However, as institutions seek to better survive by reinventing themselves and rationalising - making do with just one administration and trimming the size of departments by bringing them together, the upheaval experienced by staff and its negative effects on morale should not be underestimated. There is a tendency that the larger the organisation becomes, the more remote the ordinary member of staff will feel about any form of decision-making. Ultimately, mergers may cost more than they save.

Adapted from: www.timeshighereducation.co.uk; www.guardian.co.uk; and www.ucl.ac.uk, accessed 3 Aug 2015

Extract 2: Reduction in subsidies for university education in the UK

A generation ago, students paid nothing for university education. Tony Blair then charged £3,000 in 2006 and David Cameron raised it to £9,000 in 2012. A spokesman for the government said: "We believe the £9,000 fee allows universities to deliver high-quality teaching, with many institutions now planning to invest more in improved teaching facilities for students." There is also more competition, with new universities offering robust, no-frills degrees.

It seemed to stand to reason that the fees would deter all but the wealthiest families but now, four years on, 592,000 students have applied for university, the highest ever. And not just the offspring of the well-heeled: the number of teenagers from deprived backgrounds has also jumped to a record high. Strikingly, 22% of deprived children in England have applied.

Sir Howard Newby, vice-chancellor of the University of Liverpool, said that the next step could see universities able to charge as much as they want for courses, provided they subsidise the costs incurred by students from poorer backgrounds. "The most rational way to deal with the financing of higher education is to have fees which are uncontrolled, with no cap, but in return universities have to make adequate provision for looking after students who can't afford to pay that fee," Sir Howard said.

In this way, the English system is moving a step closer towards that of America, home to 22 of the world's top 30 universities. Ivy League members are entirely independent of the US government, yet operate a system of social outreach that no government could rival. Their admission system is needs blind. Only once admitted is a student's ability to pay considered: if students are rich, they'll pay sky-high fees. But if they're poor, they'll be given what help they need to graduate. Using ingenious fundraising techniques, US universities are now rolling in resources, with which they can poach Britain's best academics in what is becoming a global marketplace.

Sir Christopher Snowden, vice-chancellor of the University of Surrey and president of Universities UK concurred that the £9,000 fee cap was not sustainable and should rise in line with inflation. His comments follow a recent call from the vice-chancellor of Oxford University, Andrew Hamilton, for undergraduate fees to be "more closely related to the true cost" of a degree at Oxford, £16,000. Last month Prof Hamilton said the funding shortfall meant Oxford faced an annual funding gap of £70m.

Universities UK will publish a report next week on the future of university financing. This is expected to look at how universities will fund a predicted 26% rise in demand for university places within the next 20 years. Universities Minister David Willetts has said a rising birth rate will mean the number of university places needed will grow from 368,000 to 460,000.

Adapted from: www.timeshighereducation.co.uk; www.telegraph.co.uk; and www.bbc.co.uk, accessed 3 August 2015

Extract 3: Singapore Government's subsidies to universities

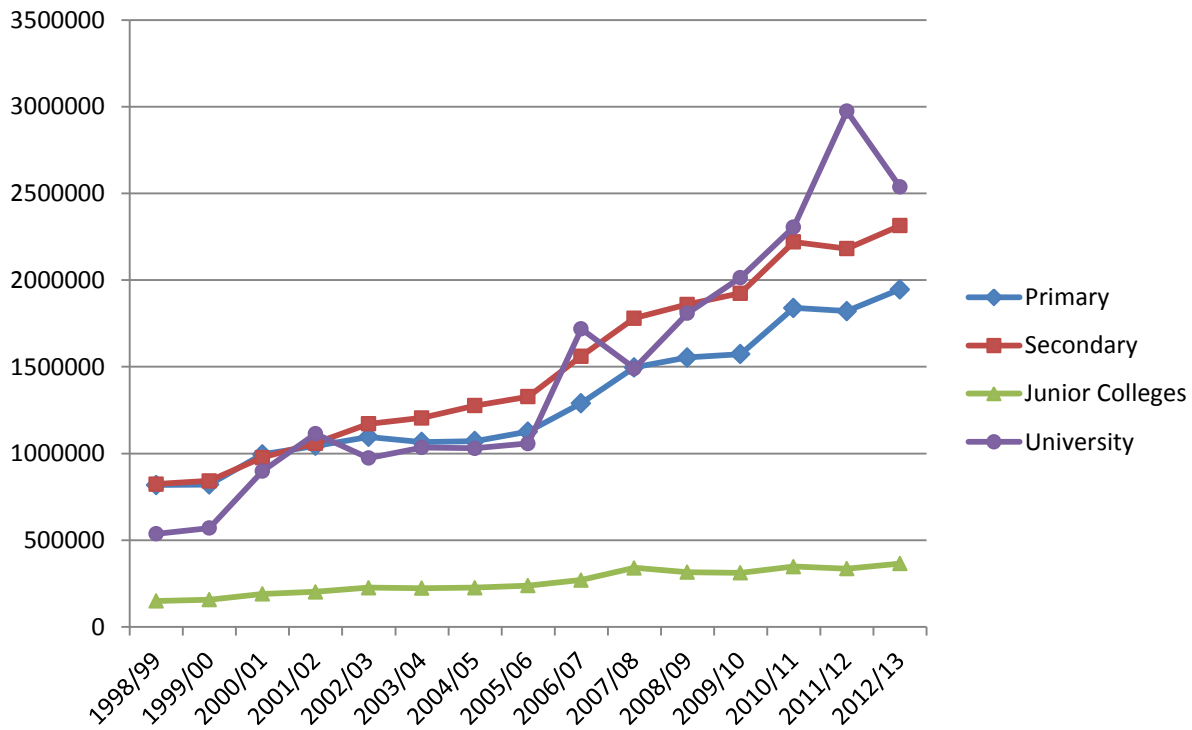
The Government will continue to subsidise substantially the cost of university education to ensure that it remains affordable to Singaporeans. Currently, the Government generally subsidises 75% or more of the cost of education for general courses such as Engineering, Humanities and Social Sciences provided by the autonomous universities, or about \$76,000 to \$105,600 for a four-year course per student. Students are expected to bear their fair share of the cost of education as they are the prime beneficiaries who would benefit from higher starting pay and successful careers after graduation. Specialised courses such as Medicine and Dentistry cost much more than general courses and students within these courses should therefore be prepared to pay higher fees.

However, MOE and the universities will ensure that no deserving students who are admitted to our universities will be denied a place due to financial difficulties. There is a wide range of financial assistance schemes — loans, bursaries, and work-study schemes — offered by the Government, universities, foundations, private and professional organisations, community groups and self-help groups. As such, a Singaporean student can obtain up to 100% of funding for fees and living expenses through a combination of loans and bursaries.

University fee increases have been modest over the years. For example, this year's fee increase (AY2010) for most undergraduate programmes is under 2% on an annualised basis. This is below the average annual inflation rate of about 3% for the past three years. When economic conditions require it, the universities have also chosen to defer fee increases, such as in AY2009 due to the global economic crisis.

Source: www.moe.edu.sg, accessed 3 Aug 2015

Figure 1: Government recurrent expenditure on education ('000 SGD)



Source: Ministry of Education (MOE), 2014

Questions

- (a) (i) With reference to Figure 1, compare the trend in government expenditure on primary and university education in Singapore between 1998 and 2013. [2]
- (ii) Explain **one** possible reason for the difference observed in (a)(i). [2]
- (b) Explain **one** reason why the UK government favours mergers of universities. [2]
- (c) Discuss whether mergers of universities 'cost more than they save'. [8]
- (d) 'A generation ago, students paid nothing for university education'. Explain the advantages and disadvantages of this approach. [6]
- (e) Discuss if you would recommend UK's policy approach to reduce subsidies to university education for Singapore. [10]

[Total: 30]

Question 2

Uncertain US Economic Recovery

Extract 4: The US recovery is frustrating — but it's the envy of the advanced world

The notion of the United States as a global engine is a reminder of what may now seem like an ancient era. In the aftermath of the Great Recession, emerging economies like Brazil and China took the lead role, but growth in those countries slowed as well. Economists caution that the US economy remains fragile. And it's unclear if the US can lift up other struggling economies — or will be pulled down by them.

The optimists say the US can persist as an island of growth, in large part because of healthy homegrown consumer demand. If consumer confidence remains high, the country can weather global shocks — as it did during the Asian Financial Crisis in the late-1990s. Strong consumer demand at home can even give a boost to other export-driven nations.

The US economy has been coming out of the recession by reliable consumer spending. But Thursday's data also came with an unexpected boost: The government, a negative drag in recent years, is again lending a hand. In the latest quarter, it was a spike in defence spending that provided the greatest lift. But more important, state and local governments — after a long period of austerity — are now injecting significantly more money into the economy.

“The US is pretty well-insulated, mostly because exports play a fairly small role,” said Nariman Behravesh, a chief economist at IHS. “By far, consumers are the most important factor, and the good news is, US consumers are in pretty good shape as gas prices are down, home values are on the rise, and there is an increasingly healthy debt-to-income ratio.”

Others say that the story of the economic recovery in the US is underway, yet uncertain. The US is still vulnerable to unexpected global fluctuations — say, a larger-than-expected slowdown in China and declining demand everywhere from France to Japan will trim US economic growth in the coming quarters. Jobs are coming back, but millions are reluctantly accepting part-time work.

Adapted from www.washingtonpost.com, accessed on 23 Jul 2015

Extract 5: Federal Reserve still uncertain on when to raise interest rates.

Total US job creation for 2014 hit 2.95m, the Labor Department figures showed. The strong job growth data reinforce the growing evidence that the US is powering ahead of other large economies and is likely to increase the gap in growth rates in the first half of this year.

Investors are betting that the US Federal Reserve will raise interest rates this summer. The figures showed a better than expected fall in the US unemployment rate from 5.8% to 5.6%, ahead of predictions of 5.7%. Economists have warned that as unemployment continues to fall to the rate the Fed considers normal — between 5.2% and 5.5% — pressure will build for interest rates to rise sooner rather than later.

However, the low level of inflation, which remains below the Fed's target of 2%, is still an area of concern for the Fed.

Source: www.ft.com, accessed on 20 Jul 2015

Table 1: Selected US economic indicators from 2009 – 2014

	2009	2010	2011	2012	2013	2014
Real GDP (% change)	-2.8	2.5	1.6	2.3	2.2	2.4
Unemployment rate (%)	9.3	9.6	8.9	8.1	7.4	6.2
Labour Force (Millions)	154.2	153.8	153.6	154.9	155.4	155.9
Inflation rate (%)	-0.4	1.6	3.2	2.1	1.5	1.6

Source: World Bank, US Bureau of labour Statistics

Table 2: Trade Data between US and Rest of the World (Selected Countries) in 2014

Country	Exports to US (in billions of USD)	% of country's GDP	Imports from US (in billions of USD)	% of country's GDP
Vietnam	30.6	16.5	5.7	3.1
Russia	23.6	1.2	10.7	0.5
UK	54.4	1.8	53.8	1.9
Singapore	16.4	5.3	30.5	9.9
Japan	133.9	2.9	67.0	1.5

Source: US Census Board & World Bank

Table 3: Russia: selected economic indicators 2010 – 2013

	2010	2011	2012	2013
GDP growth (annual %)	4.5	4.3	3.4	1.3
Inflation, consumer prices (annual %)	6.9	8.4	5.1	6.8
Unemployment, total (% of total labor force)	7.3	6.5	5.5	5.6
Current account balance (BoP, current US\$ billion)	67.5	97.3	71.3	34.1

Source: The World Bank

Extract 6: Russia's economy

Russia is one of the world's leading producers of oil and natural gas and is also a top exporter of metals such as steel and primary aluminium. Russia's manufacturing sector is generally uncompetitive on world markets and is geared toward domestic consumption. Russia's reliance on commodity exports makes it vulnerable to boom and bust cycles that follow the volatile swings in global prices.

The economy, which had averaged 7% growth during 1998-2008 as oil prices rose rapidly, was one of the hardest hit by the 2008-09 global economic crisis as oil prices plummeted and the foreign credits that Russian banks and firms relied on dried up. Slowly declining oil prices over the past few years and difficulty attracting foreign direct investment have contributed to a noticeable slowdown in GDP growth rates.

In late 2013, the Russian Economic Development Ministry reduced its growth forecast through 2030 to an average of only 2.5% per year, down from its previous forecast of 4.0% to 4.2%. In 2014, following Russia's military intervention in Ukraine, prospects for economic growth declined further, with expectations that GDP growth could drop as low as zero.

Faced with mounting uncertainty over the immediate future of the Russian economy, investors have been piling out of the rouble. As a result, the rouble has fallen sharply against the dollar, hitting record lows against the US currency.

In a drastic attempt to stem the rouble sell-off, Russia's central bank raised interest rates to 17.5% from 10.5%. It was the biggest one-day increase since the 1998 financial crisis that plunged Russia into recession and shook stock markets around the world.

Source: CIA-The World Fact Book, The Guardian

Questions

- (a) Compare the trend of unemployment rate and inflation rate in the US from 2011 to 2014. [2]
- (b) Explain why the Federal Reserve should not increase interest rates until:
- (i) inflation rate increases to 2%. [2]
 - (ii) unemployment rate falls to between 5.2 and 5.5%. [2]
- (c) (i) Explain how an increase in interest rate will lead to an increase in the external value of the US dollar. [2]
- (ii) With reference to Table 2, assess the extent to which standard of living in different countries will improve with an increase in interest rate in the US. [8]
- (d) (i) Explain why "the economic recovery in the US is underway, yet uncertain". [4]
- (ii) Discuss if the US economic recovery is the most relevant factor on whether the Russian government should focus on growth. [10]

[Total: 30]

End of Paper



ANDERSON JUNIOR COLLEGE

**JC2 PRELIMINARY EXAMINATION 2015
Higher 2**

ECONOMICS

9732/02

Paper 2

2 September 2015

Additional Materials: Answer Paper

2 hours 15 minutes

READ THESE INSTRUCTIONS FIRST

Write your name, PDG and index number in the spaces provided on all the work you hand in.

Write in dark blue or black pen on both sides of the paper.

You may use a soft pencil for any diagrams, graphs or rough working.

Do not use staples, paper clips, highlighters, glue or correction fluid.

Answer **three** questions in total, of which **one** must be from Section A, **one** from Section B and **one** from **either** Section A or Section B. Begin your answer to **each question** on a fresh sheet of writing paper.

At the end of the examination, fasten your answers to each question **separately**.

Fasten this **cover page in front of the first question attempted**.

Indicate in the table below the **question numbers** of the **three** questions you have attempted.

The number of marks is given in brackets [] at the end of each question or part question.

Name: _____ ()

PDG: ____/14

Question Number	Marks Awarded
	/25
	/25
	/25
Total Marks	/75

This document consists of **3** printed pages, including this cover page.

[Turn over]

Answer **three** questions in total.

Section A

One or **two** of your three chosen questions must be from this section.

1. Trouble continues to brew within the Malaysian government. The internal squabbles and allegations of corruption at the highest level have created much uncertainty for foreign investors. While the recently implemented Goods and Services Tax of 6% is seen as a more stable source of revenue for the Malaysian government, shops are bracing themselves for the impact. To make matters worse, the number of shoppers from Singapore has taken a hit due to a 400% increase in Causeway toll charges.

With the use of demand and supply analysis, discuss the impacts of the factors mentioned on different markets. [25]

2. Singapore raised excise duties on alcohol by 25% and banned alcohol from being sold in retail shops or consumed in public places from 10.30pm to 7am. The measures were deemed necessary as people often drink excessively, unwittingly harming themselves as well as causing fatal traffic accidents.

(a) Explain the reasons for government intervention in the market for alcohol [10]

(b) Discuss the relative effectiveness of taxation and legislation in curbing the consumption of alcohol. [15]

3. (a) Explain why firms may practise price discrimination domestically and internationally. [10]

(b) Discuss whether price discrimination is always undesirable from a society's point of view. [15]

Section B

One or two of your three chosen questions must be from this section.

4. Businesses cannot rely on low-cost, low-skilled foreign manpower to achieve its economic aims. Thus, Singapore has reduced its foreign manpower quota to encourage companies to invest in technology and to bring about a more equitable and efficient allocation of resources.

LABOR COST, LABOR PRODUCTIVITY AND GDP GROWTH

	2011	2012	2013	2014
	Percentage change			
UNIT LABOUR COST INDEX OF OVERALL ECONOMY	1.7	3.1	2.4	3.5
LABOR PRODUCTIVITY	2.3	-0.5	0.3	-0.8
GDP GROWTH	6.0	3.0	4.0	3.0

Source: Singstat.gov.sg and *Mof.gov.sg*, last accessed 29 July 2015

Discuss the view that improving labour productivity alone will achieve the economic aims of Singapore. [25]

5. China recorded GDP growth of 7.7% in 2013, its lowest in the last decade, and this trend is expected to stay.

(a) Explain the impacts of the above development on price stability in Singapore. [8]

(b) Discuss whether domestic or external factors are more likely to limit the effectiveness of exchange rate policy in achieving price stability in Singapore. [17]

6. The Trans-Pacific Partnership (TPP) is a proposed trade agreement that aims to expand the flow of goods, services and capital among its members. Its critics, however, warned of damage to domestic workforce from outsourcing and offshoring and are clamouring for more protection for workers.

Assess the economic case for these two approaches amidst the current global economic uncertainty. [25]

End of Paper

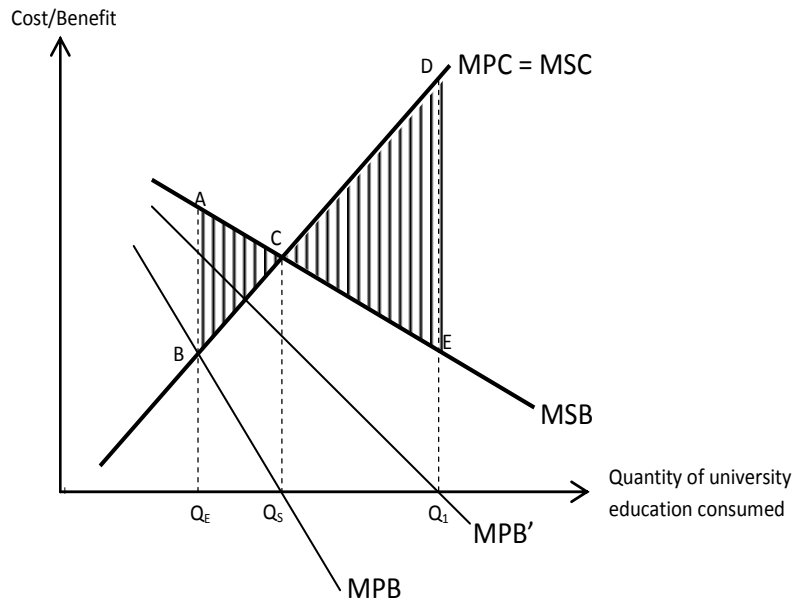


**Anderson Junior College
JC2 2015 H2 Economics
Preliminary Examinations**

CSQ 1 Changes in Higher Education

(a)	i. With reference to Figure 1, compare the trend in government expenditure on primary and university education in Singapore between 1998 and 2013.	[2]
	<ul style="list-style-type: none"> • Similarity: Both government expenditure on primary and university education in Singapore increased between 1998 and 2013. (1m) • Difference: The increase in government expenditure on university education was greater than that on primary education. (1m) <p><u>Other possible answers:</u> Increase in expenditure on primary education was gradual while increase in expenditure on university education saw more fluctuations.</p>	
	ii. Explain one possible reason for the difference observed in (a)(i).	[2]
	<p>The number of students entering university in Singapore has increased more than the number of students entering primary school which has remained relatively stable due to the low birth rate. In contrast, the proportion of students who qualify for a place at the local universities has increased significantly over the years.</p> <p><u>Other possible answers:</u> The expenditure on university education on a per student basis has increased more than that for primary education due to the significant increase in expenditure on creating the new universities as well as on research and other facilities in the universities.</p>	
(b)	Explain one reason why the UK government favours mergers of universities.	[2]
	<p>The UK government favours mergers of university as it can “better support delivery of teacher training and ultimately pupil attainment in London” (Extract 1). With mergers, UK universities would be able to reinforce UK’s status as a global leader in higher education. This would help them attract the brightest students from around the world. In the long run, this will improve the quality of labour factors as well as improve the quality of UK goods and services, achieving both actual and potential growth.</p>	
(c)	Discuss whether mergers of universities ‘cost more than they save’	[8]
	<p>There are two types of mergers of universities mentioned in Extract 1. Universities may undergo a merger of "equals" or larger universities may absorb smaller specialist colleges. Such mergers may or may not allow universities to enjoy cost savings.</p> <p>As universities undergo a merger, they are likely to be able to 'pool expertise and build cross-disciplinary work' (extract 1). Prior to the merger, if universities wanted to broaden the scope of subjects they offer to students or embark on cross-disciplinary research, there was a need for universities to collaborate with one another through discussions and contractual agreements which may take a long time to establish. Once the merger has been completed, the universities can now pool expertise and conduct cross-disciplinary research more easily and enjoy cost savings (i.e. time cost).</p>	

	<p>Furthermore, a merger allows the formation of 'one administration and the trimming of departments'. There will now be less overlap in the work done and the personnel hired by the universities. Also, instructions handed down to ordinary member staff would also be clearer and the decision making process will be made faster with only one administration instead of two. Hence, this will lead to costs savings for the university as they will now be able to provide the same level of services with less labour and with less time delays.</p> <p>However, mergers may also lead to higher costs experienced by universities. As the university become larger, it may lead to management problems of coordination and control, as 'ordinary staff members feel more remote about any form of decision making'. Hence, inefficiencies may go unchecked and this may result in higher costs incurred by the university. Also, there may be a loss in morale due to the significant changes experienced by the staff due to the merger, i.e. a loss in identity. This may lead to poor motivation and shoddy work, resulting in higher costs to correct such problems.</p> <p>Nonetheless, it is likely that university mergers will not cost more than they save. Given that there are reductions in subsidies for UK university education provided by the government, universities would have the incentive to pursue continual improvement and ensure that they are operating on the least cost possible. Hence, it is likely that universities would put in measures to ensure that staff welfare and morale is well taken care of in the midst of such significant changes.</p>	
(d)	'A generation ago, students paid nothing for university education'. Explain the advantages and disadvantages of this approach.	[6]
	<p>When students paid nothing for university education, this suggests that there was a subsidy provided by the government. This full subsidy provided by the government can be evaluated on grounds of efficiency and equity.</p> <p>A key advantage of this approach is that the access to university education is no longer subjected to the ability of students to pay. It is inevitable that income inequality will exist in the market for university education. By providing university education for free, willing students from poorer backgrounds are also able to enjoy the benefits of university education, such as the opportunity to gain employment with higher wage rates. Hence, this would result in a more equitable distribution of university places and an equitable distribution of income as these students earn higher incomes in the future.</p>	



Another advantage of such an approach is that there is a more efficient allocation of resources towards the attainment of university education. As explain in d(i), positive externalities from higher education result in the under-allocation of resources to university education and subsidies are thus required. As illustrated in figure 1, if the $MPB = MPC = 0$ at Q_s , the amount of subsidies required would be equivalent to the full amount of positive externality at Q_s and education should cost nothing to achieve allocative efficiency.

However, if the level of MPB was at MPB' and university education was provided for free, there will be an over-consumption of university education beyond the social optimal level of consumption (consumption will be at $Q_1 > Q_s$). As such, providing university education for free would lead to an over-allocation of resources to the attainment of university education and a resultant net cost to society by the triangle CDE .

Furthermore, the government provision of a full subsidy has led to a case of government failure where the government's efforts in correcting the under-consumption of university education, has led to a larger deadweight loss to society than before. For example, resources that could have been diverted to other markets in the economy to support the consumers from low income backgrounds are now over-allocated to the market for university education. Hence, this may lead to worsening equity as well as inefficiencies on the economy level.

Moreover, since university education is free for consumers, universities may not have the ability to deliver higher quality teaching or improve teaching facilities for students. For instance, by levying a £9000 fee would allow universities to deliver high-quality teaching, with many institutions now planning to invest more in improved teaching facilities. Hence, providing university education for free may result in a loss of students' welfare due to the sluggish development.

(e)	Discuss if you would recommend UK's policy approach to reduce subsidies to university education for Singapore.	[10]
<p>As explained in (d), subsidies are provided to reach the socially optimal level of university education. In Singapore, the Government continues to provide a high level of subsidies (75% or more of the cost of education for general courses) whereas the UK Government has been reducing subsidies and increasing fees from zero to £9,000 in 2012.</p> <p>UK's policy approach may be recommended as significant benefits of a university degree accrue to the individual in terms of "higher starting pay and successful careers after graduation" while the positive externalities are smaller. In other words, PMB is large while the extent of the EMB is small. In such a case, the Singapore government may have overvalued the amount of positive externalities and over-subsidised university education. This will lead to over-consumption of university education at Q_1 beyond the socially optimal level of consumption Q_s, resulting in net cost to society by the triangle CDE.</p> <p>Furthermore, overconsumption of university education can result in dilution of the value of university degrees and even future under- and unemployment of university graduates. Therefore, to achieve efficiency both in the short-term and in the long-term, the Singapore government should reduce subsidies by the amount GF to reach socially optimal level of university education.</p> <p>Also, given that university fee increases have generally been "below the average annual inflation rate in Singapore", the subsidy (area HDFG) that has to be provided by the government "may not be sustainable in the long term and should rise in line with inflation". Furthermore, the ageing population in Singapore would require increasing healthcare expenditure and to maintain fiscal sustainability, it is recommended that Singapore reduces subsidies for university education.</p> <p>Nevertheless, the positive externalities in Singapore from higher education may be larger than other countries. Increased knowledge capital of university graduates help to drive productivity gains which spill over and raise wages even for non-university graduates. In a resource-scarce, knowledge-based economy like Singapore, university education is crucial in driving economic competitiveness, allowing it to compete on the frontier of innovation in</p>		

an increasingly dynamic global environment. Thus, if the positive externalities are indeed high in Singapore's case and the current subsidy levels are equivalent to the amount of positive externalities, UK's policy approach to reduce subsidies would not be recommended as it is inappropriate to the context of Singapore and would instead lead to welfare loss.

In addition, if subsidies were reduced, lower-income groups may not be able to afford university education or may decide not to pursue university education as they have heavy financial responsibilities that compel them to enter the labour market as soon as possible. With the rich students receiving university education and thus higher pay and successful careers in future while the poor students continue to only be engaged in low-wage jobs, the income inequity in Singapore will worsen. Reducing subsidies is thus not recommended.

However, "Ivy League members are entirely independent of the US government, yet operate a system of social outreach that no government could rival". Thus, it is still possible for Singapore to reduce subsidies and leave universities to "use ingenious fundraising techniques to roll in resources" like in the US while working with the various institutions to publicise existing "financial assistance schemes", and to encourage more students from low-income families to take them up. This would ensure that eligible students are receiving the available support and not unduly burdened by the financing of their education.

On balance, it is still recommended that Singapore reduces across-the-board subsidies to everyone and provide more targeted assistance instead where "bursaries and loans are given to low-income families that require them while rich students pay the full cost of education". This will not only help to reduce the government spending on subsidies which can then be diverted to funding other social expenditure with higher net benefit but also reap greater "value relative to investment" as the positive externalities from allowing talented and motivated low-income students to earn university degrees before joining the labour market may be larger than that for a well-off student. Such an option would be more equitable, efficient and make better use of taxpayers' money.

CSQ 2: Uncertain US Economic Recovery

(a)	Compare the trend of unemployment rate and inflation rate in the US from 2011 to 2014.	[2]
<p>From Table 1 (S): Both unemployment rate and inflation rate generally decreased. (D): Unemployment rate has been consistently decreasing while inflation rate experienced an increase from 2013-2014</p>		
(b)	Explain why the Federal Reserve should not increase interest rates until:	
	(i) inflation rate increases to 2%.	[2]
<p>An increase in interest rates will reduce C and I due to higher costs of borrowing. This will reduce AD.</p> <p>As shown in Extract 5, the inflation rate of US is very low – below target of 2%/ falling inflation rate till 1.6% in 2004 as shown in Table 2. Given such low inflation rate, a fall in AD might lead to deflation. Consumers would delay consumption due to lower future expected prices which will lead to a fall in the real national income, impeding growth.</p>		
	(ii) unemployment rate falls to between 5.2 and 5.5%.	[2]
<p>Table 2: although unemployment rate is falling, it remains high at 6.2% in 2014. A fall in AD will significantly result in high demand deficient unemployment, worsening the already high unemployment in US.</p>		
(c)	(i) Explain how an increase in interest rate will lead to an increase in the external value of the US dollar.	[2]
<p>Increase in interest rate will lead to an increase in short term capital inflows which will result in rise in demand for US currency. Thus, the external value of the US dollar will rise/ appreciate.</p>		
	(ii) With reference to Table 2, assess the extent to which standard of living in different countries will improve with an increase in interest rate in the US.	[8]
<p>Standard of living (SOL) refers to the level of subsistence and comfort in everyday life enjoyed by a community. To ascertain standard of living, there's a need to look at both the material as well as non-material aspects. Material standard of living looks at material comfort as measured by the goods and services available to the population while non-material standard of living looks at the intangible aspects that make up human life, such as leisure, safety, physical health, environmental quality issues, etc.</p> <p>An increase in interest rate in the US will lead to an appreciation of US dollar as explained in part (i). Hence, the foreign price of US exports rises and domestic price of imports into US falls.</p> <p>P1: SOL in some countries will improve to a larger extent</p> <p>As the domestic price of imports into US is lower, US consumers will switch to purchasing imports. This result in an increase in US's import expenditure which will mean an increase in</p>		

export revenue of US's trading partners.

From Table 2, Vietnam's export to US takes up 16.5% of GDP which is relatively significant as compared to other countries. Hence export revenue for Vietnam will increase to a relatively large extent. Real national income increases, leading to an increase in **material SOL** by a greater extent as they are able to consume more goods and services.

With economic growth in Vietnam, more resources are likely to be allocated to improve the healthcare facilities and education services. This would lead to longer life expectancy, lower mortality rate and higher literacy rate, hence improving the **non-material SOL** significantly.

However, with increased production in the economy, this may lead to more pollution which will worsen the quality of life for the people, thus lowering **non-material SOL**.

P2: SOL in other countries will improve to a smaller extent

However, if exports take up a relatively insignificant percentage of GDP, the impact of increase in export revenue on GDP is minimal.

From Table 2, Russia's export to US takes up 1.2% of GDP which is the least as compared to other countries. Hence export revenue for Russia will increase by a smaller extent, hence increasing real national income and thus **material SOL** by a smaller extent.

Alternative P2: SOL in other countries will not improve

On the other hand, SOL may fall due to increase in interest rate in US. Appreciation of USD means that foreign price of US exports increases. This means that for countries which imports from US, they will face a higher imported price.

From Table 2, Singapore's import from US takes up 9.9% of GDP which is the most as compared to other countries. Higher price of US's imports into Singapore will increase cost of production in Singapore, resulting in a fall in SRAS and hence real national income. Thus, **material SOL** decreases in Singapore.

With a fall in real national income, there may be less resources allocated to improve healthcare facilities and education services, hence leading to lower life expectancy and literacy rate and thus **non-material SOL**.

Evaluation:

On the whole, it is difficult to assess the overall effect on the SOL in different countries due to missing information in Table 2. More information will be required to have a comprehensive assessment of the SOL. For example, if the gain from the export revenue is only limited to those in the export industry which is not distributed across the economy, the SOL of some citizens may not increase at all. Hence it is difficult to assess if the SOL has actually improved. Comprehensive measures such as GINI coefficient and Human Development Index could also be included for better assessment of SOL in the countries.

In addition, whether SOL improves in different countries depends on the existing policies in the countries. If the countries already have existing policies to address issues such as pollution, the non-material SOL may not deteriorate as much.

(d)	(i)	Explain why “the economic recovery in the US is underway, yet uncertain”.	[4]
		<p>As shown in extract 4, there was an increase in consumption expenditure due to higher consumer confidence as well as an increase in government defence spending. This leads to an increase in AD and hence real national income, indicating a US economic recovery is underway.</p> <p>However, the recovery is uncertain as the US is still vulnerable to external shocks. For example, as stated in extract 4, a slowdown in its trading partners will mean that there will be a fall in demand for US exports, which will reduce AD and result in a fall or even negative growth.</p>	
	(ii)	Discuss if the US economic recovery is the most relevant factor on whether the Russian government should focus on growth.	[10]
		<p>Russia is suffering from falling economic growth rates, a high inflation rate as well as a worsening current account, as shown in Table 3. Thus, Russia has to make a choice on whether to focus on growth, or to focus on other issues. Russia may choose to focus on growth as a continual decline in economic growth will lead to a fall in purchasing power as well as a fall in the standard of living in Russia.</p> <p><i>(Note: It is possible to argue that Russia should not focus on growth and use this as a basis for further discussion.)</i></p> <p>P1: US economic recovery is a relevant factor on whether Russia should focus on growth</p> <p>As the US economy recovers, more foreign direct investors may be drawn to invest in the US economy due to the higher demand and higher profits that they can enjoy in the US economy. Thus, Russia will need to focus on growth (which will provide higher and more stable profits for investors) so that there will not be a massive outflow of FDI from Russia, which will worsen its BOP as well as a further depreciation of the Russian Rouble.</p> <p><i>(For students whose premise is that Russia should not focus on growth, they could argue for the following under P1)</i></p> <p><i>US economic recovery will bring about an increase in demand for Russian exports, thereby increasing AD and RNY. Even though US may not be a main trading partner of Russia, the recovery of US will also bring about recoveries in other world economies who may be bigger trading partners of Russia, such as China. The recoveries of these economies will help to bring about growth in Russia through higher export demand. Thus, Russia should not focus on growth, but on other macroeconomic aims instead)</i></p> <p>P2a: US economic recovery is not a relevant factor on whether Russia should focus on growth</p> <p>Moreover, a US recovery will have little impact on Russia since Russia’s exports to US takes up only 1.2% of country’s GDP as shown in Table 2. In other words, even if US were to recover and import more from other countries, Russia is unlikely to benefit much from it. Thus, Russia cannot rely on the US recovery to bring about Russia’s economic growth and therefore, Russia should focus on achieving growth using its own economic policies</p>	

As stated in extract 4, the US economic recovery is uncertain. Thus, it may be too risky for Russia to base its economic decision on a US economic recovery when it cannot be sure if the economic recovery is going to happen. Thus, the US economic recovery will not be a relevant factor on whether the Russian government should focus on growth.

P2b: Other factors are more relevant

Conflict in macroeconomic objective: If Russia focuses on addressing slower growth through expansionary demand management policies, this may result in conflicts with other goals, such as price stability. Such expansionary policies will increase AD and exacerbate the inflation in Russia, which is already at 7.8% as stated in Table 2. This conflict in macroeconomic object may thus be a more relevant factor on whether Russia should focus on growth.

Relative severity of the different macroeconomic problems: Although growth is declining in Russia, it is still positive. On the other hand, the inflation rate is high and continues to increase. Thus there may be a more urgent need to address inflationary pressures in the country instead.

Expectations of future commodity prices: As Russia is a leading producer of commodities (Extract 6), the fall in commodity prices is one of the major factor why Russia is suffering a fall in economic growth. If commodity prices are expected to increase in the future, the Russian economy should recover without government intervention. Thus, the Russian government could thus decide to focus on objectives other than growth.

EV: As a major world economy, the US economic recovery will affect many countries, either directly or indirectly. The interconnectedness of the world economies will surely mean that Russia must take into account the state of the US recovery. However, it will be difficult to decide which the most relevant factor is as some of the factors discussed above are interconnected. For example, A US economic recovery will increase the demand for commodities, leading to an increase in prices. Thus, even though the expectation of future commodity prices may be an important factor, this expectation is also dependent on the US economic recovery.

1. Trouble continues to brew within the Malaysian government. The internal squabbles and allegations of corruption at the highest level have created much uncertainty for foreign investors. While the recently implemented Goods and Services Tax of 6% is seen as a more stable source of revenue for the Malaysian government, shops are bracing themselves for the impact. To make matters worse, the number of shoppers from Singapore has taken a hit due to a 400% increase in Causeway toll charges.

With the use of demand and supply analysis, discuss the impacts of the factors mentioned on different markets. [25]

Suggested Answer

The various factors have reduced both demand and supply of normal goods in Malaysia and other countries. The extent of impact on different markets will differ depending on the price and income elasticities.

Demand for a product refers to the quantity which a consumer is willing and able to buy at every price level, in a specified time period, *ceteris paribus*. Supply refers to the quantity which producers are willing and able to make available for sale at different prices in a specified period of time, *ceteris paribus*.

The two factors that will affect demand for various goods and services are the uncertainty for foreign direct investors as well as the increase in Causeway tolls.

The political instability and allegations of corruption have negatively impacted business confidence and stability of the investment environment. Investment expenditure falls due to lower business expectations of profits and stability. One market that is affected is the **labour market**. With falling investment expenditure, firms involved in the production of capital goods will experience unplanned stock accumulation. They will reduce their output and employ fewer factors of production, including labour. This fall in derived demand for labour will cause the equilibrium wage rate and quantity of labour to fall.

Real national income falls at the same time as aggregate demand falls, leading to lower purchasing power. The impact of a fall income levels on other markets depends on the income elasticity of demand (YED) for the good. YED measures the degree of responsiveness of the quantity demanded of a good to a change in income, *ceteris paribus*. **For normal goods** such as general merchandise and groceries, the income elasticity of demand (YED) is positive. With lower income levels, the demand for normal goods will fall due to a fall in purchasing power. In these markets, there will be fall in equilibrium price and quantity, leading to lower total revenue for the producers.

The fall in demand for **luxury goods** such as organic food products and luxury fashion items, which are income elastic, will be larger than for **necessities** such as basic food items and utilities, which are income inelastic ($0 < YED < 1$). Thus, the market for luxury goods will see a sharper fall in equilibrium price and quantity as compared to necessities.

On the other hand, **inferior goods**, such as instant noodles, have negative income elasticity ($YED <$

0). Hence the fall in income levels will result in an increase in demand as consumers switch from more luxurious substitutes, such as restaurant meals, to consume more instant noodles. In the market for inferior goods, equilibrium prices and quantity are likely to increase due to the increase in demand.

Furthermore, the large increase in toll charges (the charges that motorists pay when entering Malaysia) have also resulted in a reduction in the number of tourists from Singapore as it is now more expensive to travel by car to Malaysia for shopping and holidays. With fewer shoppers, both normal goods and inferior goods will experience a fall in demand.

Overall, normal goods are likely to experience a significant fall in demand due to the fall in income and increase in toll charges. However, inferior goods are likely to experience an increase in demand. This is because the shoppers and tourists from Singapore are more likely to be purchasers of normal and luxury goods when they travel to Malaysia. Hence the fall in demand for inferior goods due to the impact of the rise in tolls is not likely to outweigh the rise in demand due to a fall in income.

With the fall in demand for normal goods, the final impact on the market for various types of normal goods depends on the price elasticity of supply (PES). PES measures the degree of responsiveness of the quantity supplied of a good to a change in its own price, *ceteris paribus*.

The PES varies depending on the level of stocks and how easily they can be produced within a short period of time. Manufactured products such as toothpaste and soap are likely to have price elastic supply ($PES > 1$) as firms can keep larger quantities of stock and can be produced by factories relatively quickly. This means that there is a more than proportionate decrease in quantity supplied relative to a fall in price=

On the other hand, products such handmade luxury items such as bespoke clothing require a longer period of production as the material has to be made and crafted by hand, hence is also likely to have price inelastic supply i.e. $PES < 1$. This means that there is a less than proportionate increase in quantity supplied with a fall in price due to the fall in demand.

The implementation of the Goods and Service Tax (GST) of 6% will increase the cost of production as part of the tax burden will fall on producers, thereby reducing supply. GST is a form of indirect, *ad valorem* tax that is charged for every unit of good sold. However, the impact on inferior goods and necessities may be less significant as the government may choose to reduce the amount of GST taxable for necessities and inferior goods.

With the changes in supply, the final impact on the various markets depends on the price elasticity of demand (PED) of the different goods and services. PED measures the degree of responsiveness of the quantity demanded of a good to a change in its own price, *ceteris paribus*. It is shown by a movement along the demand curve and is calculated by the formula:

The proportion of income spent on basic food items like rice and cooking oil is generally small, and there are few alternatives available. Hence the demand for such necessities and inferior goods are likely to be price inelastic ($PED < 1$). The impact of the GST implementation will result in a less than proportionate fall in quantity demanded relative to the increase in price. In contrast, the demand for goods and services such as cars and branded imports are likely to be price elastic ($PED > 1$) as the

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proportion of income spent on these products are significant. The impact of the GST implementation will result in a more than proportionate fall in quantity demanded relative to the increase in price.

(Note: In reality, GST in Malaysia is not implemented on certain necessities such as rice. Nonetheless, the student is not expected to know this and analysis related to this aspect was not penalized for being factually inaccurate)

As shown in Figure 1 below, the overall impact of the various factors on luxury goods is a fall in equilibrium price and quantity for **luxury goods**. Demand falls from D_1 to D_2 , and supply falls from S_1 to S_2 , with demand likely to fall more than supply due to the combined impact of the tolls and fall in income. This is likely to be especially so for luxury goods and services in areas nearer to the Causeway, such as Johor, as they are likely to have a larger proportion of consumers from Singapore than areas further north.

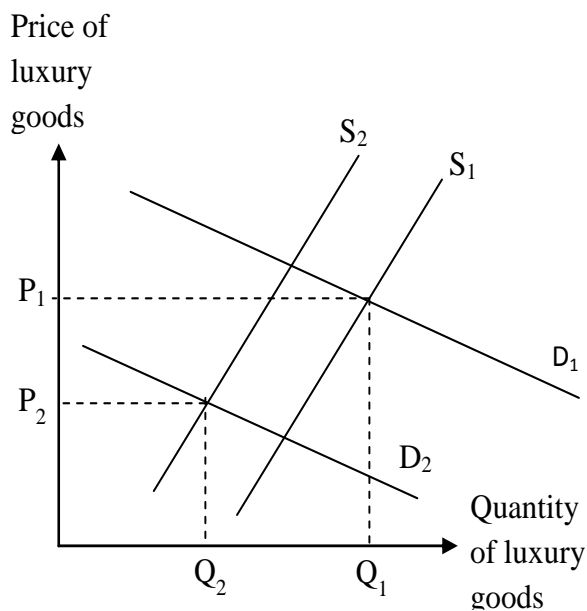


Figure 1: Luxury goods experience a fall in equilibrium price and quantity

As shown in Figure 2 below, the overall impact of the various factors on **necessities** is an increase in equilibrium price and fall in equilibrium quantity (from P_1 to P_2 and Q_1 to Q_2). Demand falls from D_1 to D_2 , and supply falls from S_1 to S_2 , with demand due to the relatively smaller impact of falling incomes and of the causeway tolls.

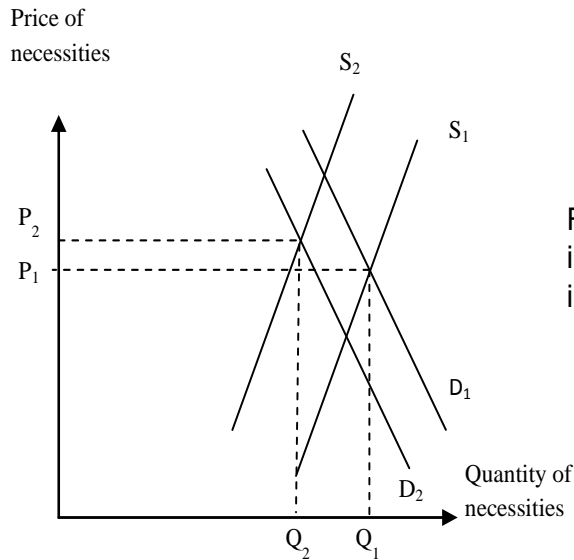


Figure 2: Necessities experience an increase in equilibrium price and fall in equilibrium quantity

As shown in Figure 3 below, the demand for **inferior goods** increases while the supply falls. As the increase in demand is likely to outweigh the fall in supply, the result is a significant increase in equilibrium price (P_1 to P_2) and a slight increase in equilibrium quantity (Q_1 to Q_2). This is likely to be the case as GST is not imposed on certain necessities in Malaysia.

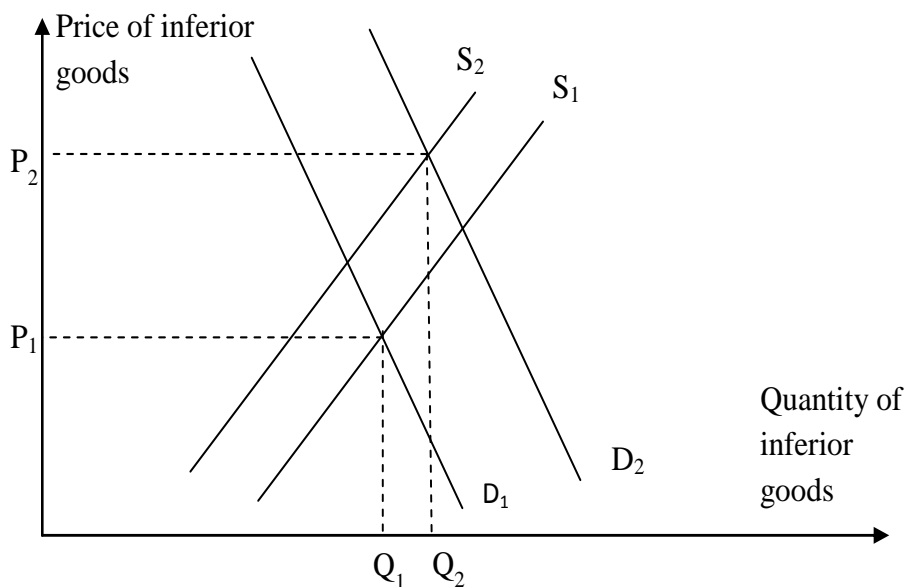


Figure 4: An increase in equilibrium price and quantity of inferior goods

Certain markets in Singapore may also be affected. Goods and services in Singapore can be seen as substitutes to those in Malaysia (especially those in Johor Bahru), hence with the cross-elasticity of demand is positive. Cross elasticity of demand measures the degree of responsiveness of the quantity demanded of good X to a change in the price of good Y, *ceteris paribus*. With the increase in prices of necessities and inferior goods in Malaysia, consumers may choose to stay in Singapore

and switch to the now relatively cheaper substitutes, such as choosing to do grocery shopping in local supermarkets and to eat at hawker centres, thereby increasing the demand for these products. The equilibrium price and quantity of such products will both increase. However, the increase in demand is not likely to be highly significant as the degree of substitutability is not very high, as consumers require much time and hassle to travel between the two places.

In conclusion, the various factors in Malaysia impact different markets differently. Luxury goods experience a fall in equilibrium price and quantity, while inferior goods experience the opposite. The equilibrium quantity of necessities fall but the equilibrium prices increase. While the extent of the changes in price and quantity in the different markets differ due to the differences in elasticities, the markets that depend heavily on Singaporean consumers and foreign direct investment are likely to be affected more than markets that do not. In the long run, the impact on different markets is also likely to vary due to changes in other factors, such as possible government intervention, and to the political scene. With a further worsening of the political situation, it is likely that demand for all goods and services in Malaysia will fall due to worsening consumer confidence thereby negatively reducing price and quantity, as well as total revenue.

2. Singapore raised excise duties on alcohol by 25% and banned alcohol from being sold in retail shops or consumed in public places from 10.30pm to 7am. The measures were deemed necessary as people often drink excessively, unwittingly harming themselves as well as causing fatal traffic accidents.
- (a) Explain the reasons for government intervention in the market for alcohol [10]
- (b) Discuss the relative effectiveness of taxation and legislation in curbing the consumption of alcohol. [15]

Suggested Answer for Part (a)

The government intervened in the market for alcohol due to imperfect information and existence of external costs.

Consumers of alcohol will only consider their private marginal cost (PMC) and private marginal benefit (PMB) in consuming alcohol. The private cost of alcohol consumption includes the price of alcohol while the private benefit includes the satisfaction from consuming alcohol, such as being able to de-stress. If left to the free market, consumers would be consuming up to the quantity where their PMB equates PMC at Q_e , as shown in Fig 1 below.

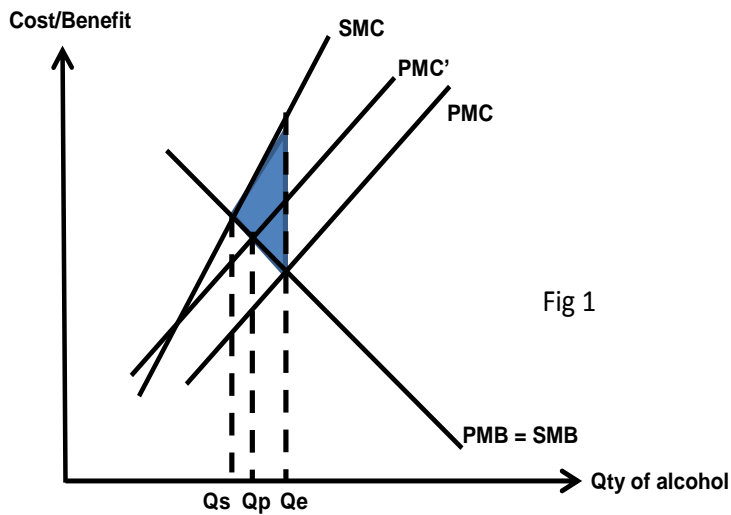
As stated in the preamble, “people often drink excessively, unwittingly harming themselves”. This could be because they didn’t factor in the true health costs of excessive alcohol consumption such as the cost of possible damage to the liver due to excessive drinking. Because of the existence of imperfect information on the actual private cost to the consumers, there is a divergence between the perceived and actual PMC. Actual PMC is shown in the diagram as PMC' . Hence at the level of consumption determined in the free market, i.e., Q_e , the PMB is lower than the actual PMC. This means that society values an additional unit of alcohol consumption less than what it costs society to consume it. The consumers’ optimal consumption of alcohol is at Q_p where PMB equates PMC' . Hence if left to the free market, there will be an over-consumption of $Q_e - Q_p$ as a result of imperfect information. There’s therefore a need for government to intervene for this reason.

In addition, there are also negative externalities associated with alcohol consumption. Examples of the external cost are the harm/violence towards the surrounding members of the public as the drinkers become easily aggravated and lost control of themselves. The surrounding members of the public may need to bear treatment cost as a result of the assault. In addition, when those who drink drive, their negligence may result in accidents; even fatal ones, as stated in the preamble. The cost inflicted on other road users or pedestrians are the treatment cost or even cost associated with loss of lives.

Because of the external cost, there is a divergence between social marginal cost (SMC) and PMC. At the level of consumption in the free market, the social marginal cost is greater than social marginal benefit (SMB). Society values an additional unit of alcohol less than what it costs society to consume it. The socially optimum level of consumption is at Q_s , where $SMB=SMC$. There’s therefore a situation of over-consumption, resulting in a deadweight loss as shown by the shaded area. Society’s

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welfare is not maximised at Q_e . There's a need to allocate less resource to the consumption of alcohol until the socially optimum level of consumption could be attained at Q_s . There's a need for the government to intervene to ensure this outcome.



Suggested Answer for Part (b)

How taxation works:

A tax that is imposed by the amount of the external marginal cost at the socially optimum level of consumption would increase the private marginal cost of consuming alcohol. This would reduce the consumption of alcohol to the socially efficient level and remove the deadweight loss indicated in Figure 1 earlier.

How legislation works:

The ban on the sale of alcohol from retail shops and the ban on consumption of alcohol at public places from 10.30pm to 7am directly reduces consumers' access to alcohol and reduces the likelihood of external cost being inflicted on members of the public when drinkers drink in public areas respectively, and helps to achieve the socially optimal quantity of consumption.

Perspective 1: Taxation > Legislation (Effectiveness of Taxation vs Limitation of Legislation)

Taxation works with the market forces. It maintains consumer sovereignty since consumers are still able to decide where and how much of alcohol they would like to consume. However, legislation works against the free market as it forces consumers to behave in a certain manner. For example, as stated in the preamble, it is illegal in Singapore to drink in public places from 10.30pm to 7am. This measure force consumers to drink elsewhere; they don't have the freedom to drink in public places. The banning of the sale of alcohol in retail shops also directly reduces consumers' access to alcohol during the stated hours.

Taxes can also be easily adjusted according to the level of external cost. As seen in the preamble, the government could easily adjust the tax upwards as the incidence of fatal traffic accidents increase. Changing of legislation and law however, would require more resource in dissemination of the information to the public; otherwise the people could simply claim ignorance if they are found to be breaking the rule.

The revenue from taxes would also improve the budget balance. The revenue could be used to fund public projects to create more awareness of the harm from excessive consumption of alcohol. This would be necessary to continue to curb the issue in the long run. On the other hand, legislations are costly in its enforcement. There's a need to mobilise resource such as police patrols to monitor and ensure that the legislation is adhered to. This would put a strain on the government budget instead, and perhaps the resource could have been better channelled elsewhere.

In addition, the ban only occurs during certain from 10.30pm to 7am. Consumers will still be able to purchase the alcohol prior to the ban and consume the alcohol in private places during the ban, and subsequently go to public places. Thus, the amount of alcohol consumed may not be reduced significantly and the external costs associated with the consumption of alcohol may not be reduced.

Perspective 2: Taxation < Legislation (Effectiveness of Legislation vs Limitation of Taxation)

However, there are also merits of legislation over taxation. Legislation would directly ensure that the socially optimum level of alcohol consumption could be attained. By banning consumption of alcohol in public areas from 10.30pm to 7am, consumers will not be able to consume alcohol at public areas at the stated hours, and since most of the external cost to third parties are inflicted during the stated hours, the external cost such as disturbances on members of the public is directly curbed with certainty; given proper enforcement of the law. On the other hand, there's uncertainty in the outcome of taxation, as whether the socially optimum level of consumption can be obtained depends on the price elasticity of demand for alcohol. Changes in the value of PED would mean that the government's estimated tax rate may not help in bringing consumption to the socially optimum level of consumption.

In addition, if the extent of external cost is large, it is administratively easier to just ban the activity. It is more cost effective to ban the sale of takeaway alcohol from 10.30pm, and ban the consumption of alcohol in public areas rather than to deploy resources in order to decide on the right amount of tax for the high external cost inflicted. Imperfect information on the true value of the external cost and the difficulty in assigning a monetary value to the intangible cost such as the psychological hurt on third parties assaulted by the drinker would also make it difficult to decide on the right taxation amount. Hence there could be incidences of over-taxation which could worsen the extent of deadweight loss to society.

EV: The Singapore government needing to raise taxes by 25% show that the previous tax estimation was inadequate. It is indeed difficult to estimate the extent of external cost and the socially optimum level, what more the tax amount required to achieve the socially optimum level. Hence while increases in taxation is beneficial in improving government's budget balance so that it has more resources to deal with the problem, an alternative measure such as the legislation also needs to be

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put in place to better keep the 3rd party effects of alcohol consumption under control. The revenue obtained from the taxes could be used to fund the monitoring cost of the legislation.

EV: In the long run, the government may need to reduce its extent of regulation and taxation and rely on provision of information to change drinking habits of the population. Improvement in provision of information to the public enables them to factor in the true costs of consumption to themselves and their family members and would hence be a more sustainable way to curb this problem in the long run, instead of continuing to drain the government resource on enforcement of legislation.

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3. (a) Explain why firms may practise price discrimination domestically and internationally. [10]
(b) Discuss whether price discrimination is always undesirable from a society's point of view. [15]

Suggested Answer 2(a)

Price discrimination occurs when a producer charges different prices for different units of the same commodity for reasons not associated with differences in cost. There are three types of price discrimination – first-degree, second-degree, and third-degree price discrimination though second- and third-degree price discrimination are more commonly found.

To understand why price discrimination is practiced both in the domestic and overseas markets, it is necessary to start from the objectives of firms.

Firms may practice price discrimination to **increase their profits**. **Profits are defined as total revenue less total cost.** To maximize profits, the firm will set the profit maximizing level of output at where marginal revenue (MR) is equal to marginal cost (MC). Such firms practicing price discrimination are likely to wield significant market power and are hence price-setters.

Price discrimination allows the firm to earn even more supernormal profits that would not have been possible as a single-price monopolist. Consider a monopolistic firm practicing first-degree price discrimination in a domestic market. For any given level of output, this discriminating monopolist will receive higher profits than if it charges a profit-maximising single price. This ability to charge multiple prices gives the firm the opportunity to capture all of consumer surplus, converting it into more profits for itself.

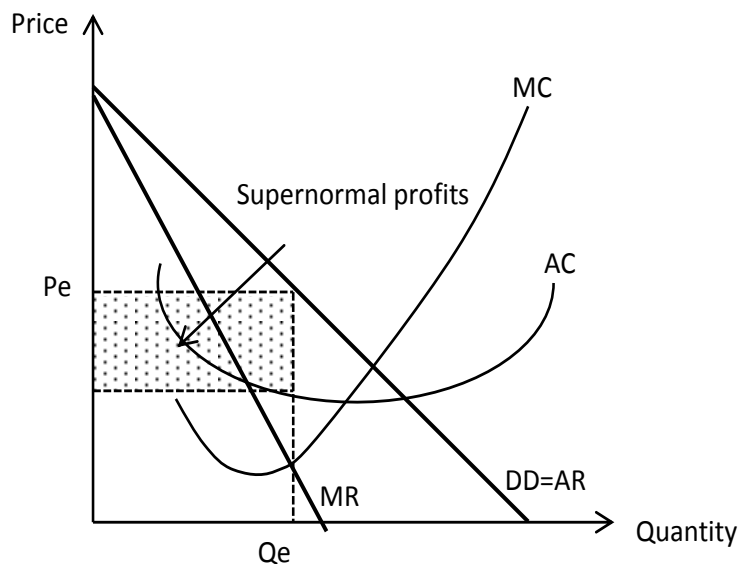


Figure 1: Single price monopolist

In Figure 1, the monopolist firm charging a single price at the profit-maximizing level of output Q_e would have enjoyed supernormal profits illustrated by the shaded area. But the monopolist firm charging a different price for every unit of output sold would have attained even more supernormal profits (Figure 2). This is possible since the firm is able to charge the maximum possible price for each unit which enables it to capture all available consumer surplus for itself. Fortunately in practice, first-degree discrimination is rare.

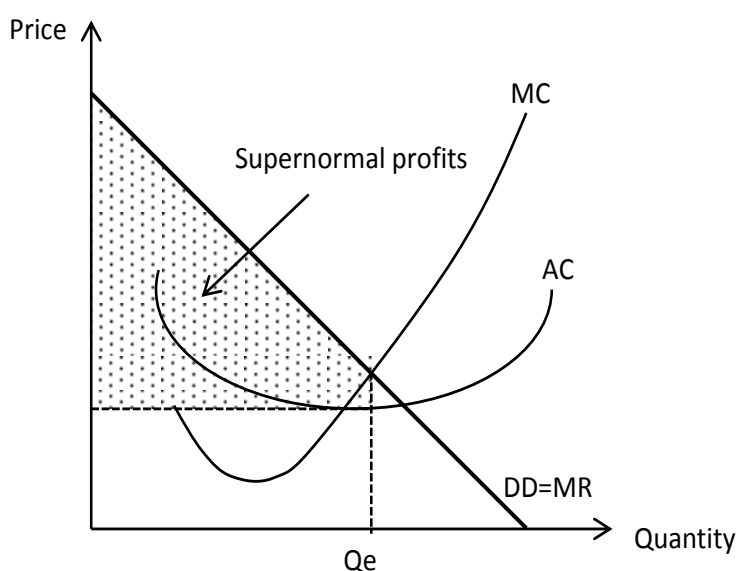


Figure 2: First-degree price discrimination

Firms may also practice price discrimination to **improve social welfare**. Such firms are likely to be state-owned firms or private firms who have an obligation of meeting certain social objectives. These firms generally provide goods or services which are deemed to be merit goods or which are essential to the well-being of the people e.g. education, health care, public transport, water and electricity. Consider public transport providers practicing third-degree price discrimination in the domestic market.

Public transport providers divide their total market into two sub-markets – concessionary and non-concessionary. Concessionary rates are often offered to elderly, students, people with disabilities and low-wage workers while everybody else pays non-concessionary rates. This helps to improve social welfare. From a financial viewpoint, the practice of doing so also allows the public transport providers to **earn more revenue**. As transport costs take up a larger proportion of the income of low wage workers, elderly and people with disabilities, their demand for public transport is relatively price elastic. Lowering the fare for this group of commuters will result in a more than proportionate increase in quantity demanded and hence an increase in total revenue for the provider. On the other hand, transport costs take up a smaller proportion of income of normal working adults, their demand for public transport is relatively price inelastic. Raising the fare for this group of commuters will result

in a less than proportionate decrease in quantity demanded and hence still an increase in total revenue for the provider.

Firms may also practice price discrimination to **expand their market share in overseas markets**. **Dumping** is where exports are sold at prices below the marginal cost of production. This is a form of international price discrimination because consumers in the domestic market of these firms will pay a higher price than those in the overseas market. To drive out competitors in the overseas markets, the firm temporarily lowers the prices of its goods – a practice known as **predatory dumping**. The purpose of doing so would be to gain monopoly power in these countries. Once local competition is driven out, the exporting firm will monopolize the foreign market and raise prices. There are examples of predatory dumping historically, such as the German chemical industry's attempt to drive Dow Chemical out of business by dumping bromine into the U.S. market in the early 1900s.

In conclusion, the motives for practicing price discrimination are generally for the promotion of self-interests of firms. Whether doing so will ultimately be undesirable from the society's point of view, this will be discussed in part (b).

Suggested answer 2(b)

As defined in part (a), price discrimination occurs when a producer charges different prices for different units of the same commodity for reasons not associated with differences in cost.

Price discrimination is undesirable from the society's point of view largely due to the reduction of consumer surplus which represents a loss of consumer welfare. The most extreme case is that of first-degree price discrimination where 100% of consumer surplus is extracted by the producer. Although this merely involves a transfer of surplus from the consumers to the producer and there is no additional deadweight loss incurred, nevertheless there is greater inequity due to transfer of income from consumers to monopolist. The monopolist benefits at the expense of the consumers, and this, from the society's point of view, should be prevented.

Higher profits earned by the discriminating monopolist may lead to **more complacency and X-inefficiency**. The monopolist may have less incentive to minimise cost since it can survive comfortably even without producing at the lowest possible cost. The firm may no longer seek to produce a given output at the lowest possible cost. It can incur extra expenses due to over-staffing, spending on unnecessary prestigious buildings and fixtures, over-generous perks for senior management, or from lack of motivation to use the most efficient production methods. Without competitive pressure on profit margins, cost controls become lax and goals other than profit-maximisation may be pursued. Hence, from society's point of view, it is likely that a discriminating monopolist is productively inefficient.

Predatory dumping, an international form of price discrimination, is also undesirable from the society's point of view due to the harmful effects caused to the importing country. The importing country may get the benefit of cheap imports in the beginning. But after competition ends and the

discriminating monopolists sells the same good at a high monopoly price, the importing country incurs a loss because it now has to pay a high price. In addition, when the domestic industries of the importing country are unable to bear the competition and close down, this leads to high unemployment. Such market distortions also go against the Theory of Comparative Advantage as the monopolist may not truly have comparative advantage but is merely incurring short-term losses to under-price its rivals. Protection from such unfair competition in the form of tariffs or quotas would hence be justified based on the market distortions which can result in long-term inefficiencies.

In addition, such aggressive tactics via predatory dumping can also **act as a barrier to entry** to keep out new entrants, exerting less competitive pressures on the firm who is less likely to seek cost-efficient methods to stay relevant and to engage in innovation. Arguably, however, the opposite may also happen: price discrimination may actually make a market more contestable. The ability of a firm to price discriminate may force producers to be more efficient to be able to stay in the market, resulting in increased productive efficiency.

However, price discrimination can also be desirable from the society's point of view. Output under price discrimination will generally be larger than under a single-price monopoly. A monopoly firm that must charge a single price for a product will produce less than under price discrimination because it knows that selling more depresses its price. Price discrimination allows it to avoid this disincentive. In the case of first-degree price discrimination, in which every unit is sold at a different price, the MR curve will now be identical to the demand curve. The monopolist will produce every unit for which the price charged is greater than or equal to its marginal cost. It will therefore produce up to the quantity of output where $MC = MR$ (the same quantity of output as the firm in perfect competition). As such, more goods are produced. This is desirable for society as the "right" amount of goods, in the case of first-degree price discrimination, is produced. Moreover, the price at the last unit of output produced is equal to its MC. As such, first-degree price discrimination also achieves **allocative efficiency** at the last unit of output produced.

The discriminating monopolist may produce goods or services which would otherwise not be produced by a single-price monopoly. Assume that there is a demand curve for a product which many people will like to purchase, and average cost is higher than average revenue at all levels of output. Hence, no single price charged can allow the monopoly to cover total costs and nothing will be produced by a single-price monopoly despite there being a demand for the product. However, it is possible for a price discriminating monopolist to cover costs of production, say at an output of OQ (Figure 3). At that level of production, total cost = area OCBQ. With first-degree price discrimination, total revenue = OFEQ (area under the demand curve). Since area ACF > ABE, this implies that total revenue is greater than total cost. As a result, the monopolist gains a profit which would not be possible without price discrimination. The consumer gains by being able to consume a good which otherwise would not be available.

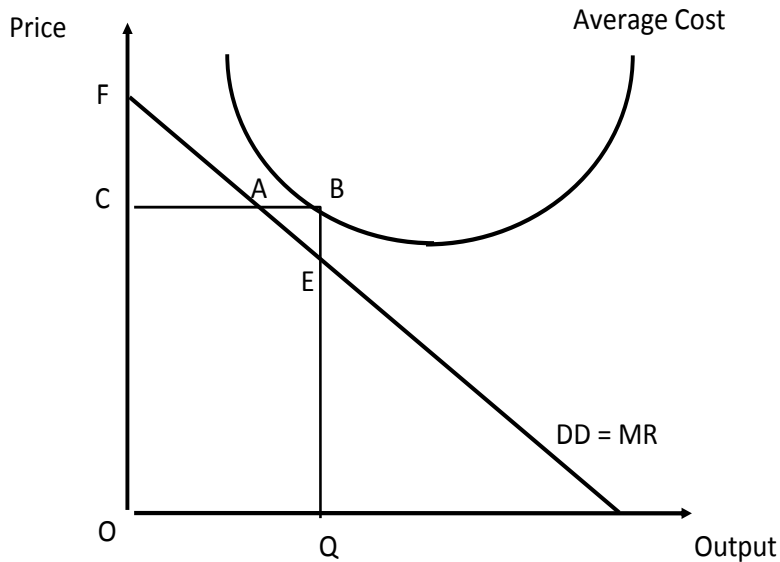


Figure 3: First-degree price discrimination

Unfortunately, these benefits made possible with first-degree price discrimination are unlikely to occur since first-degree price discrimination is very rare in the real world. The producer would need to know every single consumer's reservation price in order to practice first-degree price discrimination.

The discriminating monopolist can charge a lower price for some people which would otherwise not be possible under a single-price monopoly. In third-degree price discrimination, those charged the lower price will consume more of the good and in some cases they may be able to obtain a good or service they would otherwise be unable to afford if it were sold at a single (profit maximising) price, for example discounted medical fees for the poor and concessionary bus fares for senior citizens. Although those who pay higher prices may complain, but if by being more able to pay higher prices, they help subsidize the poor, this brings about greater level of equity.

Price discrimination can also **prevent over-consumption of resources at certain times and under-consumption of resources at other times** by managing demand more effectively. If there is no third-degree price discrimination practiced for public transport, trains and buses running at peak hours would be more overcrowded, generating congestion and other negative externalities. Price discrimination gives an incentive for some people to go much earlier or much later in the day. This means that those who have to travel at rush hour benefit from less congestion. The same can be said for airlines. Without lower airfares offered during non-peak seasons, planes would be flying at less than full capacity, wasting fuel and other valuable resources. Therefore, from the society's point of view, price discrimination can help to maximize the use of resources more efficiently.

Higher profits for the discriminating monopolist can also be re-invested into research and development which leads to product improvement and cost reductions. The extra profits that the firm earns may also allow it to expand and reap economies of scale in the long run. With the ability to exploit economies of scale, consumers can eventually benefit from lower prices as well.

Finally, predatory dumping is **extremely unlikely** since trade liberalization, reduced transportation costs, and increased competition in world markets have reduced the ability of firms to pursue international price discrimination and create worldwide monopolies, especially in undifferentiated intermediate product markets, which are the most likely targets for a dumping strategy. It is more likely to be **sporadic or intermittent dumping** adopted under exceptional or unforeseen circumstances when the domestic production of the good is more than the target or there are unsold stocks of the good even after sales. In such a situation, waste can be minimized. Dumping can also force industries or companies in the foreign markets (importing markets) to become more competitive and innovative. If they believe the dumping may continue for the long-term, they will have no choice but to look for ways to reduce costs or improve quality to differentiate their product. Either way, this works to benefit the consumers.

In conclusion, price discrimination can be both advantageous and disadvantageous. No doubt, price discrimination inevitably will reduce consumer surplus and raise producer surplus. But what matters more is to ensure that the price discriminating firm uses its increased profits suitably to benefit consumers in the long run. To ensure that this happens, close government monitoring and competition regulation may be needed.

4. Businesses cannot rely on low-cost, low-skilled foreign manpower to achieve its economic aims. Thus, Singapore has reduced its foreign manpower quota to encourage companies to invest in technology and to bring about a more equitable and efficient allocation of resources.

LABOR COST, LABOR PRODUCTIVITY AND GDP GROWTH

	2011	2012	2013	2014
	Percentage change			
UNIT LABOUR COST INDEX OF OVERALL ECONOMY	1.7	3.1	2.4	3.5
LABOR PRODUCTIVITY	2.3	-0.5	0.3	-0.8
GDP GROWTH	6.0	3.0	4.0	3.0

Source: Singstat.gov.sg and Mof.gov.sg, last accessed 29 July 2015

Discuss the view that improving labour productivity alone will achieve the economic aims of Singapore. [25]

Suggested Answer

The economics aims of a government include attaining both microeconomic and macroeconomic objectives. Microeconomic objectives include achieving economic efficiency and a more equitable distribution of income. Whereas, macroeconomic objectives include achieving sustainable economic growth, low rates of unemployment, price stability, as well as a healthy balance of payments.

Improving labour productivity, which refers to the output per worker per hour of work or output per man-hour, is an important factor to achieve the above aims though there are limitations and trade-offs that could result. Besides, there are other policies that the Singapore government can implement to achieve these economic aims. These include, adopting a modest and gradual appreciation stance to mitigate inflation and the signing of more FTAs to promote economic growth.

Improving labour productivity can help to achieve both actual and potential growth. Increase in labour productivity can be achieved via training and upgrading of skills. This can be done through measures such as **subsidy on education** & training to equip workers with new knowledge/skills, tax incentives/subsidies to encourage firms to upgrade existing physical capital & do R&D etc. so that the more efficient capital or production processes can enable the labour to increase its productivity too. For example, the Workforce Development Agency (WDA) in Singapore provides a range of training programmes which aims to build up the foundational and industry-specific skills. The Singapore government has also committed \$2.5 billion over the period of 2010 to 2015 to schemes like Continuing Education and Training (CET) to drive productivity growth with a target of achieving 2% productivity growth per annum. Additionally, the Singapore government has been tightening the supply of foreign labour to achieve productivity driven growth, especially in labour-intensive jobs such as cleaning, transport and F&B. The fall in labour supply would motivate firms in these industries to use technology and improve processes that help to increase labour productivity and decrease cost of production at the same time.

Since reductions in unit cost of production would increase the SRAS, it will help to dampen cost push inflation as well as create actual growth. The increase in labour productivity also increases the productive capacity of the economy, thereby helping to achieve potential growth and dampens DD-pull inflation in the long run. This policy is particularly effective as it **targets the root cause of the problem**. From the preamble, Singapore has a problem of low productivity (ranging from -0.8 to 2.3% from 2011 to 2014). More importantly, the data seems to suggest that for years with a fall in labour productivity, there was a slower increase in actual growth. This implies that productivity and actual growth are positively related. Thus, targeting higher productivity can lead to higher actual growth for Singapore.

Increasing labour productivity can also translate into higher export price competitiveness as cost of production is lowered. Given that demand for our exports is price elastic, the lowering of the price of exports will lead to a more than proportionate rise in quantity demanded, translating into higher export revenue, improving the balance of trade and balance of payments.

With greater availability of skilled labour, Singapore might become more attractive to FDI, and this can help to **reduce unemployment too**. The inflow of FDI can increase AD, real national income and real national output, thereby increasing the derived demand for labour and **increasing the domestic employment level**.

However, if labour productivity is achieved through improving capital and/or technology and if capital is still more efficient than labour, unemployment may not be reduced as firms may prefer to substitute labour with capital. Additionally, if AD does not increase as much as AS from labour productivity, there may also be unemployment.

Also, if improvement in labour productivity is uneven across sectors/industries, it may lead to greater income inequity. For industries e.g. cleaning or food & beverage industries where labour productivity is not easily increased, wages may remain stagnant while wages increase in other industries where it is easier to improve labour productivity. Hence income inequity could worsen.

Improving labour productivity in itself is also not easy to achieve. This is because; it requires education and retraining which may not be effective if workers are not receptive. From the table above, though CET was implemented from 2010, its success has largely been limited with productivity falling in certain years. Older workers are the main group that requires training, yet their mindset could be hard to change. This problem is compounded with Singapore facing an ageing population, and hence there are older workers who may be less receptive to training and retraining. To counter this, in Budget 2015, the Singapore government has advocated for 'lifelong learning' and made systemic changes to the educational landscape and introduced the Skillsfuture package to encourage lifelong learning for all Singapore Citizens. Thus in the future, we would expect to see a change in the receptiveness of workers and this limitation will be less pertinent. Nevertheless, this policy may only be more effective in the LR but not in the short run.

Programmes to improve labour productivity will also incur opportunity cost as government spending on providing subsidies for training and retraining will mean less money for other social programmes such as healthcare and education. However, this is not a big problem for Singapore as the Government has

strong reserves due to its prudent and disciplined approach in keeping a balanced budget annually.

In the case of tackling imported inflation, improving labour productivity will not be very effective because first, it does not address the root cause of the problem. Secondly, imported FOPs take up a large portion of production costs in Singapore. Thus, even though improving labour productivity can help to reduce cost of production, it cannot fully mitigate the effects of imported inflation. Thus, improving labour productivity alone cannot fully achieve the economic aims of Singapore. There is thus a need to use complementary policies such as the exchange rate policy.

The Singapore government has adopted a modest and gradual appreciation stance to mitigate **inflation**. As Singapore is a small economy with few natural resources and imported items make up a fairly large proportion of the average consumer's spending, an appreciation of the Singapore dollar (SGD) means that each unit of SGD is able to purchase more units of foreign currency, thereby reducing the domestic price of foreign imports. **This helps to alleviate and address the root cause of imported inflation.**

Besides improving labour productivity, the Singapore government has pursued a **policy of freer trade** by signing more Free trade agreements (FTAs) to achieve economic growth beyond its domestic economic resources. Singapore is the world's most trade dependent nation. In 2013, Singapore had the world's highest trade to Gross Domestic Product (GDP) ratio, with imports and exports amounting to about 3.5 times the value of the GDP. Singapore, with a small domestic market, is able to benefit from the signing of FTAs as it allows us to **tap into foreign markets**. This provides producers with an enlarged market for their goods and leads to an increase in production. The signing of FTAs also allows for **more efficient allocation of resources** as a result of specialisation and trade; Singapore is able to focus on the production of goods that are capital- and knowledge-intensive in nature, while importing other goods from countries in our trade network. There could also be an increase in foreign direct investment (FDI) into Singapore as a result of the signing of more FTAs.

In conclusion, increasing labour productivity is an important policy adopted by the Singapore government as it helps achieves the different economic goals for Singapore. Given that Singapore is facing an ageing population which will lead to a fall in the availability of resources and raise the cost of labour in future as the supply of workers decreases, increasing productivity is a good long term strategy for Singapore.

Furthermore, as suggested by the Tinbergen rule, in order to achieve a certain number of policy targets, it is necessary to control an equal number of policy instruments. Thus, in this case, to achieve the different economic goals, the government can use a combination of policies of increasing productivity, modest and gradual appreciation stance to mitigate imported inflation and demand pull inflation and trade policies to encourage freer trade to stimulate growth.

5. China recorded GDP growth of 7.7% in 2013, its lowest in the last decade, and this trend is expected to stay.
- (a) Explain the impacts of the above development on price stability in Singapore. [8]
(b) Discuss whether domestic or external factors are more likely to limit the effectiveness of exchange rate policy in achieving price stability in Singapore. [17]

Suggested answer 5(a)

The slower rate of growth in China would mean a smaller increase in China's national income. This would translate to a smaller increase in China's demand for exports from its trading partners, including exports from Singapore. China is Singapore's third largest export market and the slow-down in demand would lead to a smaller increase in Singapore's net exports and consequently aggregate demand (AD). Aggregate demand refers to total spending on goods and services and is made up of consumption expenditure (C), investment expenditure (I), government expenditure (G) and net exports (X-M). The Singapore economy is operating near full employment with a low unemployment rate of below 3% in 2013. The smaller increase in AD would mean less severe demand-pull inflation for Singapore.

Furthermore, the slower growth in China and the expectation that this trend would stay also means greater uncertainty in business outlook. China's slower rate of growth has a profound impact on the global economic outlook because it is the world's second largest economy and this is against the backdrop of slow recovery in the US and the debt crisis in the Eurozone. Global economic outlook would likely be uncertain and less optimistic, causing both domestic and foreign investment to fall and in this case, AD would fall and there would be a fall in demand-pull inflation.

The slower growth in China would also have an impact on cost-push inflation in Singapore. As the slower growth would also mean a slow-down in production in China, there would be a considerably smaller increase in the demand for factors of production such as energy and metals, leading to only moderate increase in prices of such factors of production. This would mean lower cost-push inflation for Singapore, which is significant as Singapore is heavily dependent on imported raw materials and intermediate goods for its manufacturing sector.

Overall, the slower rate of growth in China and expectation that the trend would stay would lead to greater price stability in Singapore.

Suggested answer 5(b)

The Monetary Authority of Singapore (MAS) adopts a policy of modest gradual appreciation of the Singapore exchange rate to achieve price stability in Singapore. This will control both cost-push inflation and demand-pull inflation.

Appreciation of the Singapore dollar will lead to an increase in the foreign price of exports and a fall in the domestic price of imports. Singapore is heavily dependent on imported raw materials as well as final goods. The fall in the domestic price of imports would lower the cost of imported raw

Suggested Answer for AJC H2 Prelims 2015

materials, especially critical factor inputs such as crude oil, thus helping to reduce cost-push inflation.

Furthermore, as the Marshall-Lerner condition (MLC) holds, where $PED_{\text{exports}} + PED_{\text{imports}} > 1$, due to availability of substitutes in foreign markets, net exports will fall, causing AD to fall, as shown by the leftward shift of the AD curve from AD_1 to AD_2 and consequent fall in the general price level from GPL_1 to GPL_2 , keeping inflation under control.

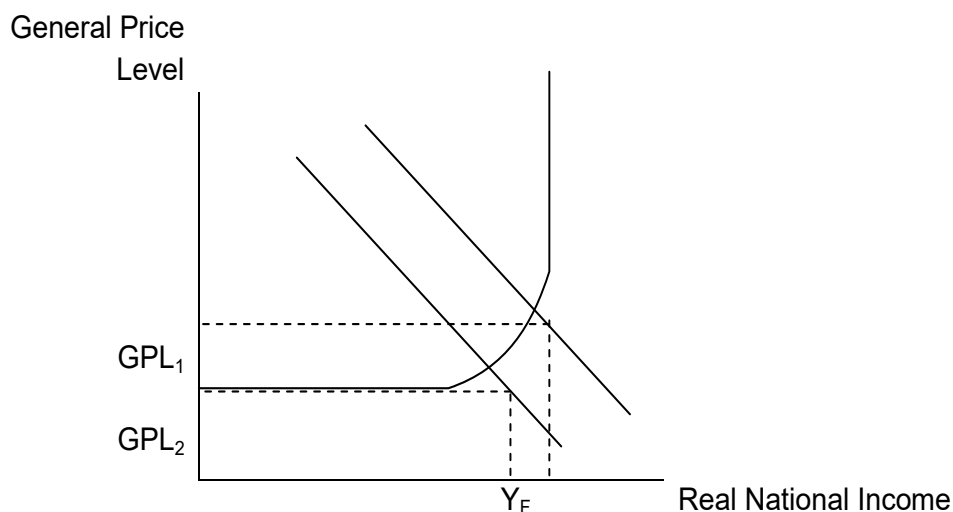


Figure 1: Effects of appreciation of the exchange rate

Notwithstanding the above, domestic and external factors could limit or even negate the effectiveness of the exchange rate policy in achieving price stability in Singapore.

For one, the Singapore government's policy of growing the service sector as an important engine of growth has limited the effectiveness of the exchange rate policy in achieving price stability. This is because services have relatively lower import content as compared to manufactured exports and thus the service sectors do not benefit from lower imported input prices as manufactured goods do. In other words, appreciation of the SGD would not reduce cost-push inflation significantly.

Secondly, sufficient foreign reserves are needed to intervene in the foreign exchange market to bring about an appreciation. This is, however, not a major limitation for Singapore because of the BOP surplus that it had accumulated.

In addition, the MLC may also not hold in the short run. As consumers' taste and preferences may be insensitive to changes in prices in the short run and it takes time for firms to make adjustments to their output due to business contracts, $(X-M)$ may instead increase and worsen demand-pull inflation. Furthermore, other domestic factors may even negate the effectiveness of the exchange rate policy in achieving price stability. High wage cost is one such domestic factor. With the tightening of foreign labour into Singapore coupled with limited improvement in labour productivity, wages have increased, leading to wage push inflation in Singapore. This will reduce the short-run

aggregate supply (SRAS), offsetting the effectiveness of the exchange rate policy in controlling inflation. However, the extent is not likely to be large due to tripartism in Singapore. The National Wage Council provides guidelines for wage increases that are in line with productivity growth over the long term to ensure sustainability and also to not erode the competitiveness of Singapore's economy.

Notwithstanding the above, changes in external conditions would also limit the effectiveness of exchange rate policy to achieve price stability in Singapore. Singapore lacks natural resources and is heavily dependent on imported raw materials. Therefore, any supply shocks to critical factors of input will severely increase our cost of production, lead to cost-push inflation and limit the effectiveness of our modest and gradual appreciation in achieving price stability. For example, the prices of crude oil and food increased sharply in 2013 and led to higher cost of production in the manufacturing and food and beverage industries in Singapore. MAS kept to its gradual and modest appreciation stance which helped to control cost-push inflation but did not further tighten monetary policy by increasing the rate of appreciation either as that would reduce net exports and cause AD and consequently real national output to fall significantly. Hence there is a limit to how much the MAS can appreciate the SGD to achieve price stability.

In addition, the exchange rate of other countries may have appreciated relative to the Singapore dollar and this would again cause the domestic price of imported inputs to increase. This would increase cost push inflation in Singapore and limit the exchange rate policy in achieving price stability.

Furthermore, in times of strong global economic growth, when the national income of our trading partners increases, demand for Singapore's exports will also increase. As net exports is a large component of AD in Singapore, the increase in AD will be significant and appreciation of the SGD may not be sufficient to control demand-pull inflation and achieve price stability.

Overall, both domestic and external factors are significant in limiting the effectiveness of exchange rate policy in achieving price stability in Singapore. The relative significance depends on several factors such as the root cause of the inflation, the magnitude of changes in domestic and global conditions as well as the nature of the Singapore economy.

The small and open nature of the Singapore economy may mean that external factors are more likely to limit the effectiveness of exchange rate policy to achieve price stability in Singapore. This is because our growth is intrinsically tied to external demand and our factor inputs are mostly imported, thus making Singapore more vulnerable to changes in external conditions. As we have seen, it is also not sufficient to use the exchange rate policy alone to achieve price stability. Therefore, the Singapore government supplements the exchange rate policy with supply-side policies to increase the SRAS as well as the productive capacity of the Singapore economy to ease inflationary pressure. Together, they effectively achieve price stability in Singapore regardless of domestic or external factors that contribute to inflation.

6. The Trans-Pacific Partnership (TPP) is a proposed trade agreement that aims to expand the flow of goods, services and capital among its members. Its critics, however, warned of damage to domestic workforce from outsourcing and offshoring and are clamouring for more protection for workers.
Assess the economic case for these two approaches amidst the current global economic uncertainty. [25]

Suggested answer

With the expansion of the flow of goods, services and capital among its members, the Trans-Pacific Partnership (TPP) would augment the trend towards globalisation and free-trade. A free trade agreement (FTA) is a legally binding agreement between two or more countries to bring about closer economic integration. Its critics are however, advocating for protectionism to maintain home employment.

There is strong economic case for the TPP as it helps countries achieve their economic goals, which is made difficult by the current global economic uncertainty. Firms and households across countries have cut spending in view of the uncertain economic outlook. This has led to fall in outward investment and demand for exports from trading partners. The fall in export revenue would lead to a fall in aggregate demand (AD) and if the fall in AD persists, firms would cut production and lay-off workers.

This is where the TPP may be able to mitigate the negative impact of the global uncertainty. The TPP connects member countries to major economies and new markets and enhance trade and investment flows through the removal of trade barriers and improvement to custom procedures. With the removal of trade barriers, a greater degree of specialisation based on comparative advantage (CA) is encouraged when countries specialise and trade in industries which they have CA in, shifting consumption away from high-cost producers towards low-cost producers. The theory of CA states that so long as a country has comparatively lower opportunity cost in the production of a good, specialisation and trade can benefit itself and its trading partner.

The access to an enlarged market afforded by the TPP and specialisation according to CA will enable countries to reap the gains of improved resource allocation and economies of scale, resulting in lower average cost and higher efficiency and thus a lower price for consumers. Consumers no longer have to pay high prices for domestically produced goods in which the country has a comparative disadvantage. The goods can now be obtained more cheaply from other members of the TPP. In return, the country can export goods to them in which it has a comparative advantage in. World output increase and more trade takes place. Thus free trade is needed to bring up the level of world output which would otherwise have declined because of the global economic uncertainty.

The easier access to foreign markets could also lead to an increase in foreign direct investment and hence, an increase in the level of income, employment and standard of living for member countries. The TPP facilitates the inflow of FDI and also enables member countries to gain higher export revenue from producing and exporting to an enlarged market. The increase in investment and net

exports will increase AD. This will offset the fall in AD from reduced consumption and investment expenditure due to the economic uncertainty that reduced households' and firms' confidence. The increase in FDI also allows for an increase in capital goods leading to greater productive capacity in the economy. There can also be a transfer of technology and expertise together with the inflow of foreign capital. In the long run, investments also help to improve productivity levels and thus lead to potential growth. Thus the increased trade and capital flows between member countries help to mitigate the negative impact of the global economic uncertainty.

Another good reason for the TPP is that it will bring about increased competition between member countries as trade barriers are removed and foreign firms could enter domestic markets more easily. Increased competition puts pressure on domestic firms to be more cost efficient and to engage in research and development to improve product quality and production processes. This will stimulate efficiency, encourage investment and reduce monopoly power. If cost savings are passed on to consumers in terms of lower prices of goods, it will help to ensure that there is still demand for their exports despite the global economic uncertainty.

Notwithstanding the gains that the TPP could bring to its member countries, there are some calls for protectionism amidst the global economic uncertainty. Protectionism refers to any action that the government may take to influence market forces to provide an advantage to domestic industries over foreign producers.

The current global economic uncertainty has made the achievement of macroeconomic goals difficult. As firms and households across countries cut spending, there will be a fall in demand for exports from trading partners. An export-led decline for countries which rely heavily on export demand would lead to a significant fall in national income and demand-deficient unemployment. As net exports fall and aggregate demand (AD) falls, firms have unplanned increase in stock levels which will prompt them to cut production in the next cycle. If the uncertainty persists and demand remains low, firms would have to retrench workers because of a lack in global demand for their goods rather than a loss of comparative advantage. Thus at this point, they cannot enjoy the benefits of trade. In such a case, protectionist measures are used to ensure that income is spent on domestically produced goods to prevent massive unemployment in the country. For example, the government may impose tariffs on imports which would make imports more expensive. This will cause a fall in the quantity demanded of imports as consumers switch to the cheaper domestically produced goods. This will maintain the level of domestic production and protect home employment. Otherwise, massive unemployment would cause a further drop in consumer and investor confidence, leading to a fall in consumption and investment expenditure and consequently fall in AD, deepening the uncertainty.

Furthermore, with global economic uncertainty, prevalence of dumping may increase. With the fall in AD, firms are likely to have excess stock which they may try to sell in overseas market at prices below their marginal cost of production. Domestic firms which are unable to match the lower prices would be driven out of business and workers would be retrenched. Thus protectionism may be justified in such circumstances to protect home employment

Moreover, free-trade such as that proposed by the TPP could potentially bring about negative impact on economies, chiefly on unemployment, and worsen the already higher level of unemployment caused by the global economic uncertainty.

The TPP would lead to increased labour and capital mobility. Developed member countries with higher wage cost, such as the US and Japan may offshore their lower-end production processes to lower-wage countries such as Mexico and Peru to lower their cost of production and boost their exports price competitiveness. However, this will lead to loss of job opportunities for domestic workers and if they lack the skills to take on jobs in other industries, they face structural unemployment.

The increased competition afforded by the TPP could also lead to unemployment. Smaller domestic industries in some member countries may be unable to compete effectively against the larger MNCs, in terms of prices or quality of their products. Domestic firms which are unable to compete will have to leave the industry. Domestic workers are laid off and if they do not have the skills to take up jobs in other industries, structural unemployment will result. In view of the possible adverse impact on unemployment, protectionist measures are used to protect domestic industries and hence employment.

This is especially undesirable for a country like Japan which exports cars and various electronic products to the world economy. If they do not adopt protectionist measures, they will face massive unemployment. This is because of a possible large fall in demand as the YED value is likely to be greater than 1. This means a fall in world income will lead to a more than proportionate fall in demand for such luxury goods, leading to a large increase in demand deficient unemployment. Therefore, there is a need to adopt protectionist policies to protect local employment.

Amidst the uncertainty, governments may try to identify and develop new growth areas. Thus in the short term, protectionist measures to protect infant industries with potential comparative advantage may be a valid reason. A country may have a potential comparative advantage in a certain industry i.e. a new industry (infant industry). However, it cannot compete with the established foreign industries due to a lack of economies of scale that the rivals enjoy. At the initial stage of operation, the infant industry faces a high initial cost of production as it has only a small share of the market. Thus, establishing an infant industry can be quite difficult in the early years, especially if the new industry faces keen competition from a long established firm operating at lower costs in the international market. If the infant industry does have the potential comparative advantage, then protection may well be justified as it means the development of an export revenue earning industry. The future increase in net exports from the infant industry would increase aggregate demand bringing an increase in national income. This would provide long term employment and eventually economic growth. Examples of infant industries in Asia include electronics in Taiwan, automobile industry in the early stage of Japan's economic development and shipbuilding in South Korea. .

In conclusion, there are strong economic reasons for adopting a free-trade stance on trade as well as

valid reasons for protectionist measures.

However, by protecting their industries and employment in the midst of the global economic uncertainty, countries are merely passing their problem on to their trading partners who in turn may retaliate, leading to further contraction in world trade and fall in global income. On the other hand, the inter-connectedness of world trade means that when a recovery does begin, the flow-on benefits to all countries will spread quicker without protectionism.

Protectionism, even of infant industries with potential CA, should only be a temporary measure. The reality however, is that once a tariff is imposed, it is not easily removed. Thus, protection should not be indiscriminately given to local industries.

Free-trade such as that proposed by the TPP would impact member countries differently. Some would gain more while some would gain less, depending on their relative CA and also the nature of their economy. Small and open economies dependent on external demand and investment would gain more from free trade than protectionism. In addition, member countries which are able to correctly identify their CA and seize the opportunities afforded by the TPP while putting in place appropriate policies to mitigate the threats would gain more. Policies that could mitigate the challenges include supply-side policies to equip workers with continued skills upgrading, as well as grants to encourage product and process innovation to build comparative advantage and improve cost efficiency of production.

ANGLO-CHINESE JUNIOR COLLEGE
2015 JC2 PRELIMINARY EXAMINATIONS



ECONOMICS

8819/01

Higher 1

20 August 2015

3 hours

Additional materials: Answer paper

READ THESE INSTRUCTIONS FIRST

Write your index number and name on all the work you hand in.
Write in dark blue or black pen on both sides of the paper.
You may use a soft pencil for any diagrams, graphs or rough working.
Do not use staples, paper clips, highlighters, glue or correction fluid / tape.

Section A

Answer **both** questions.
Begin each case study question on a **fresh** sheet of paper.

Section B

Answer **one** question.
Begin essay question on a **fresh** sheet of paper.

The number of marks is given in brackets [] at the end of each question or part question.

At the end of the examination, arrange your answers in order.

Fasten your answers securely to the cover sheets provided.

This document consists of **8** printed pages.
Please check that your question paper is complete.

Section A

Answer all questions in this section.

Question 1

Healthcare in China and India

Table 1: Health expenditure per capita, 2009-2013

	2009	2010	2011	2012	2013
China	189	216	274	322	367
India	46	54	61	58	61
Japan	3746	4115	4656	4787	3966

Table 2: Selected healthcare indicators, 2013

	Life expectancy at birth (years)	Mortality rate, under 5 years old (per 1000)	Immunization, measles (% of children ages 12-23 month)	Improved sanitation facilities (% of population with access)
China	75	13	99	65
India	66	53	74	38
Japan	83	3	95	100

Source: The World Bank Group

Extract 1: China: A soaring demand for quality medical care

Despite the Chinese healthcare system running at full speed over the past few decades, it can't possibly move fast enough to keep up with the country's social and economic changes. China's per capita GDP grew more than 25-fold from 1980 to 2011; its life expectancy rose by nine years; its infant mortality rate quartered. By the end of last year, China's elderly comprised 14 percent of its population. That figure is expected to grow to 25 percent by 2030. It is an appealing market for pharmaceutical firms and medical-equipment makers; with spending in the industry expected to nearly triple to \$1 trillion by 2020 from \$357 billion in 2011.

Yet, hospitals are not keeping up well enough. Those who need the essential, basic services are unable to seek treatment, including this growing elderly population. China has a lack of doctors and that has led to bottlenecks at hospitals, with frustrated patients who want to receive better medical attention resorting to bribing doctors.

The Chinese government has poured billions of dollars into healthcare reform in recent years, and the system has improved accordingly. Yet the price of basic medical services has also risen, with patients still paying the same amount as they did before despite subsidies. Thus, China has one of the highest savings rates in the world – about 50% – largely because families fear catastrophic healthcare costs.

Therefore, China will increase its healthcare subsidies by 19 percent this year to deepen social reforms and strengthen safety nets. Authorities will also use new technologies, new training

regimens for doctors, reduce the cost of drugs and medical checks, and increase the availability of doctors in rural areas, with the total number of doctors doubling by 2020. Yet, many feel that these measures are still insufficient as these resources are likely to move into more lucrative sectors like cosmetics and cardiology, rather than the much-needed general family medicine.

Source: *The Guardian*, 29 October 2014 and *Reuters*, 9 May 2015

Extract 2: China healthcare reform to relax curbs on foreign investment in hospitals

China will ease curbs on foreign investment in joint-venture hospitals, as the government aims to cut costs and spruce up overloaded public services. The move would increase the number of locations where Hong Kong, Taiwan and Macau investors could set up wholly-owned medical centres, and let overseas investors set up wholly-owned hospitals in designated areas such as the Shanghai free trade zone.

China's private healthcare sector has drawn investment from both domestic and overseas firms as the government opens it up to attract funds and reduce the burden on public hospitals. Healthcare providers such as Singapore-based Raffles Medical Group Limited and U.S.-listed Chindex International Incorporation already operate in China. Analysts say more private hospitals are expected to open, as firms, both local and foreign, are all heading in.

Source: *Reuters*, 28 May 2014

Extract 3: Why India trails China

Modern India is, in many ways, a success. But besides slower growth, the far greater gap between India and China is in the provision of essential public services like education and healthcare — a failing that depresses living standards and is a persistent drag on growth.

India's underperformance is due to a failure to learn from the examples of Asian economic development, in which rapid expansion of human capability is both a goal in itself and an integral element in achieving rapid growth.

Japan used investments in education and health care, to simultaneously enhance living standards and labour productivity and thus achieve rapid economic growth. Their development experiences remained and were followed by Singapore and China in the early 1980s. There are strong economic returns that come from bettering human lives. For India to match China in its range of manufacturing capacity — its ability to produce gadgets of almost every kind, with increasing use of technology and better quality control — it needs a better-educated and healthier labour force at all levels of society. China's healthier, more productive workforce and its manufacturing capacity are attractive for foreign firms, when deciding where to locate their factories. It has thus allowed China to become the manufacturing hub of the world.

Source: *The New York Times*, 19 June 2013

Extract 4: Things to know about India's healthcare system

In India, one of the fastest growing economies globally, a staggering 70% of the population still lives in rural areas and has no or limited access to hospitals and clinics. Many rely on herbal, alternative medicine and government programmes in rural health clinics as they do not know the importance of proper healthcare. Also, only a small percentage of the population has access to quality sanitation, which further exacerbates health problems due to easy spread of diseases. There is a growing need to fix its basic health concerns in the areas of malaria, tuberculosis, diarrhoea and mortality. The Indian government contributes only about 30% of the country's total healthcare expenditure, the 11th lowest in the world in 2013.

Source: *Forbes India*, 9 September 2014

Questions

- (a) (i) Compare the trend of health expenditure per capita between India and China from 2009 to 2013. [2]
- (ii) What conclusion would you draw from Tables 1 and 2 about the relationship between health expenditure and healthcare outcomes? Explain your answer. [4]
- (b) Using demand and supply analysis, explain what you would predict about healthcare prices in China beyond 2015. [6]
- (c) (i) Illustrating your answer by reference to the data, explain how a positive externality can create a divergence between private and social benefits. [4]
- (ii) Comment on the extent to which subsidies should be used as a means of increasing the consumption of healthcare in India. [6]
- (d) Discuss the impact of easing curbs on foreign investments in hospitals as mentioned in Extract 2 on China's current and future standard of living. [8]

[Total: 30]

Question 2

The Japanese and Greek economies

Table 3: Selected macroeconomic indicators of Japan:

	2010	2011	2012	2013
Real GDP Growth (annual %)	4.7	-0.5	1.8	1.6
Consumer Prices (annual %)	-0.7	-0.3	0.0	0.4
Unemployment (% of total labour force)	5.0	4.5	4.3	4.0
Interest Rate (%)	1.6	1.5	1.4	1.3
Public Debt (% of GDP)	194.1	200.0	211.7	218.8

Source: World Bank, Trading Economics

Table 4: Selected macroeconomic indicators of Greece:

	2010	2011	2012	2013
Real GDP Growth (annual %)	-5.4	-8.9	-6.6	-3.9
Consumer Prices (annual %)	4.7	3.3	1.5	-0.9
Unemployment (% of total labour force)	12.5	17.7	24.2	27.3
Interest Rate (%)	1.0	1.0	1.0	0.8
Public Debt (% of GDP)	129.7	146	171.3	156.9

Source: World Bank, Trading Economics

Extract 5: Eurozone debt burden hits all-time high even after austerity

Europe's debt dynamics keep getting worse in spite of years of austerity measures. Official figures showed that the debt burden of the 17 European Union countries that use the euro hit all-time highs at the end of the first quarter, even after austerity measures were introduced.

Battered by a global recession and a banking crisis, a number of euro countries have been forced to undertake austerity measures to deal with their debts.

One side-effect of the austerity measures has been to keep a lid on economic growth – government spending is a key component of the economy, while tax rises can choke consumption and investment. Many euro countries are actually in recession and shrinking economies can make the debt-to-GDP ratio look less favourable. Coupled with the fact that countries continue to add to their debt mountains, the overall debt burden of the Eurozone has continued to rise.

The hope of those who have advocated austerity as the main response to Europe's debt crisis is that economic growth will start to emerge as soon as countries get their borrowing levels

down to manageable levels. There are hopes that the Eurozone recession, which has lasted since the end of 2011, may come to an end, primarily through strength in Germany.

Source: *The Huffington Post*, 22 July 2013

Extract 6: Low interest rates to generate economic growth come with risks

European Central Bank Governing Council member Jens Weidmann said low interest rates come with risks that can't be ignored, even though the current expansionary monetary policy is appropriate. The ECB reduced its benchmark rate to a record low of 0.25 percent last week after inflation slowed to 0.7 percent in October, the lowest in four years.

"The expansionary monetary policy is justified considering the outlook for price stability," Weidmann, who heads Germany's Bundesbank, said in a speech in Frankfurt today. At the same time, "one must not lose sight of the many challenges that come within an environment of negative interest rates," he said.

Weidmann said he sympathizes with savers, whose return on deposits may fall further after last week's rate cut. He argued that savers across the euro area are affected by lower interest rates.

"It is important to make sure that negative real interest rates won't become a permanent state and that monetary policy isn't captive to politics or financial markets," Weidmann said. "Ultra-loose interest-rate policy is no substitute for structural reform, which is necessary in some euro-area member states."

Some member states like Italy and Ireland experience supply-side roadblocks to growth. Rigidities and gaps in capital, labour, and product markets continue to hamper productivity, job creation, and the shift of resources from the domestic to the export sector. Persistently high unemployment and low investment could reduce the economy's capacity to grow in the foreseeable future.

Source: *Bloomberg*, 13 November 2013

Extract 7: Abe's three arrows: Can Abenomics make Japan's economy fly?

After decades of economic stagnation signs of recovery are back in Japan. Many Japanese are loosening their purse strings and don't hesitate to splurge \$10,000 or more on precious things like a gold and diamond ring.

What has turned Japan around? The answer lies in the country's Prime Minister Shinzo Abe and his bold measures to jump-start the economy, known as "Abenomics". Abe has vowed to revive the country's sluggish economy with "three arrows".

The first arrow is printing money and easing monetary policy to jolt consumer spending and weaken the yen, thus boosting exports. The Bank of Japan, the country's central bank, announced in April that it would boost the money supply by 60 trillion yen to 70 trillion yen, in a bid to reach 2% inflation in two years.

The second arrow is spending money by revving up fiscal stimulus. Abe announced ambitious spending packages this year: one that is worth 10.3 trillion yen in January and another 5.5 trillion yen (\$54 billion) that was unveiled on December 5.

Abe's two arrows have proved an effective weapon. In October, inflation rate was recorded at 1.1%, while core Consumer Price Index (CPI) rose 0.9% from a year earlier. The world's third largest economy expanded in the first half of 2013, 4.3% annual growth rate in the January-March quarter.

But Abe's toughest battle yet is to deliver **the third arrow: structural reform**. One area that reformers hoped the committees would tackle is Japan's labour market. Currently, unless they are going out of business, firms are barred from firing staff employees.

"We're not talking about small technological innovations, we're talking about a big economic reform," says the chief Japan economist at Credit Suisse. This includes opening up its many protected sectors; loosening labour rules, making it easier for companies to hire and fire workers; and relaxing immigration rules – but these have left many Japanese workers cautious about how Abenomics would affect wages.

Source: *The Cable News Network*, 11 December 2013

Extract 8: Public Debt in Japan

Some economists are warning that Japan would be wise to attack its rising debt levels by hatching a plan to cut welfare benefits and raise taxes in the medium term. The debt problem is severe. Japan's gross public debt is projected to hit 230% of GDP by 2014 after years of sustained deficits.

For many years, very low interest rates allowed Japan to issue debt and not be overwhelmed by servicing payments. And Japanese citizens, famous for their savings habit, were happy to buy government bonds. In contrast to countries like Greece, almost all Japanese debt is held domestically. But risks remain, especially if interest rates spike.

Source: *The Cable News Network*, 23 April 2013

Questions

- (a) (i) Explain the theoretical relationship between economic growth and public debt. [2]
(ii) How far does Table 4 demonstrate this relationship? [3]
- (b) (i) What evidence is there in the data that real interest rate was negative in Greece? [2]
(ii) Explain one adverse effect of negative real interest rate on an economy. [2]
- (c) (i) Using a diagram, explain why the structural reforms identified in Extract 7 "have left many Japanese workers cautious about how Abenomics would affect wages". [3]
(ii) Assess the costs and benefits of the structural reforms on the Japanese economy. [6]
- (d) Identify and explain the type of unemployment experienced in Greece from 2010 to 2013. [4]
- (e) In view of the large public debt, discuss what would be the most appropriate policy for Greece to achieve economic growth. [8]

[Total: 30]

Section B

Answer **one** question from this section.

Begin this section on a **fresh** sheet of paper.

- 3 (a) Explain how the price mechanism allocates scarce resources in the free market. [10]
- (b) Assess the ability of the price mechanism in allocating scarce resources efficiently. [15]
- 4 (a) Explain the consequences of a persistent and large balance of payments deficit on an economy. [10]
- (b) Discuss the extent to which expenditure-reducing policy alone can be effective in correcting a balance of payments deficit. [15]

ACJC Prelim: H1 Case Study 1 (Healthcare in China and India)

- (a) (i) **Compare the trend of health expenditure per capita between India and China from 2009 to 2013.** [2]

Similarity:

The health expenditure per capita in both China and India shows increasing trend from 2009 to 2013.

(Any) Difference:

China's health expenditure per capita is consistently increasing while India's fell once in 2012.

OR

China's health expenditure per capita is increasing faster than India's (94% versus 33%)

- (ii) **What conclusion would you draw from Tables 1 and 2 about the relationship between health expenditure and health outcomes? Explain your answer.** [4]

Explain relationship

We can conclude that there is a positive relationship between health expenditure per capita and healthcare outcomes. Higher per capita spending on health would lead to better healthcare outcomes as more spending on healthcare would mean people can get protected and treated against diseases and illnesses.

Explain evidence

China has a larger spending on health expenditure per capita than India and better healthcare outcome in terms lower mortality rate of children under 5 years old. This could be due to China having higher % of children whom are immunized against measles hence they are less likely to be infected and grow up healthily.

China has also better healthcare outcome than India in term of higher life expectancy at birth. A reason could be because China has better sanitation facilities than India which resulted in the Chinese being able to live more hygienically and less susceptible to diseases which resulted in higher life expectancy.

- (b) **Using demand and supply analysis, explain what you would predict about healthcare prices in China beyond 2015.** [6]

Increase in demand

- Increase in income: China's per capita GDP grew more than 25-fold from 1980 to 2011 (Extract 1)
- China will continue to experience slowing but still positive economic growth beyond 2015. There will be an increase in per capita disposable income, and assuming healthcare is a normal good, its demand will rise beyond 2015.
- OR change in demographics: By the end of last year China's elderly comprised 14 percent of its population. That figure is expected to grow to 25 percent by 2030. (Extract 1)
- As China's is expected to have an increased proportion of elderly and aged, there will be an increase in the proportion of population who need

healthcare, thus there will be an increase in demand beyond 2015.

Increase in supply

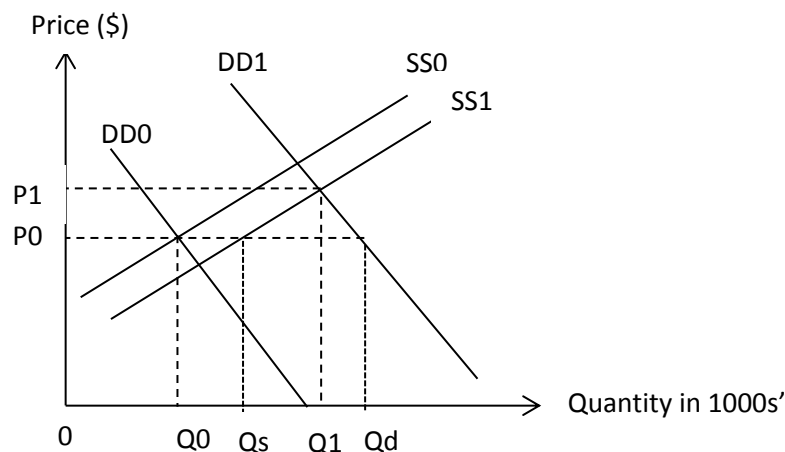
- Government policy: China will increase its healthcare subsidies by 19 percent this year/ reduce the cost of drugs and medical checks/ increase the availability of doctors (total number of doctors doubling by 2020) (Extract 1)
- Subsidies by the Chinese government / reduced cost of drugs and medical checks will lead to a fall in cost of production of healthcare and an increase in supply beyond 2015.
- OR increase in doctors: The increase in number of doctors can lead to an increase in number of clinics or healthcare facilities, thus increasing the supply of healthcare beyond 2015.
- OR Technology: Authorities will also use new technologies (Extract 1)
- The use of new technology will allow hospitals to use current resources more efficiently and be able to produce more healthcare services like surgeries and check-ups, leading to an increase in supply beyond 2015.

Relative magnitude of shift

- The government policies are still insufficient as these resources are likely to move into more lucrative sectors like cosmetics and cardiology, rather than the much-needed general family medicine (Extract 1)
- The increase in demand is likely to outweigh the increase in supply because the increase in demand due to rapid increase in income is reinforced by a large increase in demand due to the rise in the aged population.
- This is represented by the demand curve shifting to the right more, from DD0 to DD1 than the supply curve shifting from SS0 to SS1.

(Or any explained judgement)

Diagram



Price Adjustment Process

At original price P_0 , the new quantity demanded exceeds the new quantity supplied. The resultant shortage of $(Q_d - Q_s)$ will cause an upward pressure on price along DD1 and SS1 to clear the shortage.

Overall conclusion on prices

The equilibrium price for China's healthcare beyond 2015 is likely to increase, from P_0 to P_1 , since the increase in demand is larger than the increase in supply.

- (c) (i) **Illustrating your answer by reference to the data, explain how a positive externality can create a divergence between private and social benefits.** [4]

Identifying example

Positive externality is an external benefit enjoyed by third parties not involved in the consumption or production of a good, and is unpaid for.

In the health market, immunization against measles is a health service that exhibits positive externality. (Table 2)

OR

In the healthcare market, consumption of healthcare services, such as vaccinations, surgeries or even medication to keep one healthy can have spill over benefits to society and the economy (Extract 3).

Explanation of example: External benefit

Measles is a highly contagious disease and when an individual decides to get immunized by it, he reduces the probability of third parties around him contracting the contagious disease.

OR

A healthier individual is more productive, being physically present and well, and is able to produce a greater output for his employer.

OR

A healthier labour force can lead to a more productive workforce and attract foreign firms to invest, which enables a country to enjoy higher economic growth, with its citizens, even those who did not consume healthcare enjoying higher incomes.

Explanation of example: Private benefit

Individuals will not consider this benefit enjoyed by others as they aim to pursue self-interest and will only consider his private costs and benefits, such as his own health and comfort and the medical bills, when deciding whether to consume a measles vaccination.

Explanation of divergence

As $\text{marginal social benefits} = \text{marginal private benefit} + \text{marginal external benefit}$, the existence of positive externalities in the consumption of healthcare can lead to a divergence between private and social benefits.

- (ii) **Comment on the extent to which subsidies should be used as a means of increasing the consumption of healthcare in India.** [6]

Explanation of how a subsidy works to increase the consumption of healthcare in India

- A subsidy is a payment made by the government to producers in order to lower their cost of production.
- By subsidizing the production of healthcare, the supply will increase and equilibrium price lowers and equilibrium quantity increases. (OR the MPC of consuming healthcare will decrease)
- This higher equilibrium quantity of healthcare would mean its consumption has increased.

Weighing the extent of using subsidies

Large extent:

- Subsidies can be effective when it is well-targeted measure as it is able

to increase the consumption of healthcare directly. It is also well-received by producers and consumers, which is crucial as India is still a developing country and healthcare is an essential service for consumers to enjoy.

- India's current health expenditure is very low, even compared to China – another developing country (Table 1) and with poor health outcomes in terms of life expectancy and infant mortality as compared to China (Table 2). They perform poorer than Japan, a developed country and certainly need to increase spending on healthcare to achieve higher consumption as the country develops economically.

Small extent:

- Considerations of government budget (the size of the budget, trade-offs of other aspects like education and public goods). India is still a developing country with low national income and low tax revenue, and with many essential products like defence and education that require government spending. Constraints of the government budget may mean limited amount of subsidies can be provided, so consumption of healthcare would only increase by a small amount.
- Limited effectiveness of subsidy in increasing consumption of healthcare, given that the demand for healthcare is price inelastic. Consumption on healthcare may only increase by a small amount. Otherwise, a significantly large amount of subsidy is needed to bring about a substantial increase in healthcare consumption, which again strains the government budget.
- Many rely on herbal, alternative medicine and government programmes in rural health clinics as they do not know the importance of proper healthcare (Extract 4). Limited effectiveness of a subsidy as the cause of under-consumption may be imperfect information rather than the presence of positive externalities or inability to afford or access (rural areas). In this case, consumers may not be fully aware of the benefits of proper healthcare systems and its effectiveness, and instead are misinformed about the benefits of herbal and alternative medications.
- Subsidies alone may not be sufficient to increase the consumption as it needs to address the issues of the different standards and access to healthcare in rural and urban regions.
- Other policies can be more appropriate to increase consumption of healthcare: such as joint provision, especially in rural areas with poor access, education about herbal versus proper medication and legislation of compulsory measles vaccination.

Overall conclusion:

Given that the level of the current low level of government intervention and poor health outcomes, subsidises are certainly needed for the India government to increase the consumption of healthcare. However, while they can rely on subsidies to a large extent, the Indian government needs to use other policies as well to prevent a prolonged drain on their budget. Since they may be constrained by the size of their budget, they can choose to only subsidize services which create large positive externalities, or those that are crucial and necessary for survival. This will allow the Indian government to maximize the benefits of higher healthcare consumption given its budget.

Level descriptors		Marks
L3	Developed analysis of how a subsidy works, as well as well-explained considerations of some strengths and limitations of using a subsidy before coming to a conclusion about the extent of using subsidies.	5-6
L2	Weak analysis of how a subsidy works and its strengths and limitations OR Well explained but unbalanced, e.g. only explaining the strengths or limitations of a subsidy. Conclusion may be given, but not weighed. Answer was not in the context of India (no reference to case materials)	3-4
L1	Descriptive answer without good linkages in statement Did not understand question requirements e.g. giving a range of policies and comparing against each other.	1-2

- (d) **Discuss the impact of easing curbs on foreign investments in hospitals as mentioned in Extract 2 on China's current and future standard of living.** [8]

Easing curbs on foreign investment in hospitals will allow the supply of hospitals to increase, as more private, international firms enter to offer medical services. This is also an increase in Investment at the economy level, and would lead to actual and potential economic growth in China.

There will be a micro and macro effect of this policy, and it should increase the current and future standard of living of the Chinese. Standard of living refers to the material goods and necessities, comfort and wealth available to a person. It comprises of the material aspect, which refers to the amount of goods and services one has at their disposal to enjoy, and the non-materials aspect which is a more holistic picture of their well-being: including health, income inequality and education.

Micro effect (DD/SS diagram optional):

This will lead to an increase in supply of healthcare, **fall in equilibrium price and increase in equilibrium quantity of healthcare**. There will be an increased consumption of healthcare, affordability and able to improve people's **health standards and thus improve non-material standard of living** in China.

Furthermore, it allows increased **variety and choice** for consumers, who will then be able to choose the hospitals that can better cater to their needs. For example, the public hospitals may begin to offer basic, necessary services like family medicine (Extract 1) which are kept affordable for the general population. On the other hand, the private firms, or especially international firms, can **specialize and focus** on more complicated healthcare services like cardiology and cosmetic surgery that are more expensive. This will allow the low income to be able to afford healthcare they need, and the higher income to pay for the quality they want. This differentiation also ensures a more **efficient and equitable allocation of resources** in the healthcare market, by ensuring both low and high income Chinese can enjoy healthcare.

Also, the **increased competition** between the private domestic and international firms may result in better quality services that allow consumers to enjoy health and an improvement in non-material standard of living.

The increased supply and availability of more healthcare services is important since there is a rising elderly population in China (Extract 1). The existence of a rural and urban population, which may suggest a differing income level and ability to afford healthcare, so domestic and foreign firms specializing in different types and quality of health services and thus differing prices of healthcare, can enable Chinese to afford the appropriate, basic healthcare services they need.

Nonetheless, a long period of time is needed for construction of these new hospitals and healthcare services and so in the current period, there may not be the desired effect of a lower price and higher quantity, so the non-material living standards will only improve in the future. Also, whether the introduction of new firms can really ensure better healthcare and living standards for the lower income depends on whether firms will then all choose to specialize in areas that can earn more, or choose to focus on different aspects of healthcare. The Chinese government needs to intervene and regulate the market, by ensuring that there is a better allocation of resources into the different types of healthcare services.

Macro effect (AD/AS diagram optional):

This will lead to an **increase in Investments** in China, and will increase the Aggregate Demand since I is a component of the AD. The increase in AD will cause an **increase in national income in China**. The higher demand for capital goods will lead to firms hiring more workers to increase production, hence higher national output produced and higher national income earned by these workers. The increase in national income will mean an increase in disposable income for the Chinese, assuming the increase in population does not outweigh the increase in national income. With higher real disposable income and greater output, Chinese citizens are able to purchase more goods and services for their consumption. This will improve their **current material standard of living**.

Furthermore, as investments represent an accumulation of capital goods that will enable them an increase in quantity of factors of production. Also, an increase in foreign investments can also lead to a transfer of knowledge and technology, which in total can **increase China's productive capacity**, and is seen by a rightward shift of the LRAS.

In addition, with more and better health services, the Chinese people would be able to achieve better health outcomes. The healthier workforce will be more productive, showing an improvement in the quality of labour. This will be able to **increase China's productive capacity** and is seen by a further rightward shift of the LRAS.

Furthermore, the healthier and more productive Chinese labour force would be able to attract more foreign direct investments, especially in the areas of manufacturing (Extract 3), which further means an accumulation of capital goods and will be able to **increase China's productive capacity** and is seen by a further rightward shift of the LRAS.

This means China will experience a higher full employment national output, and

allow her to enjoy non-inflationary economic growth in the future, if AD continues to increase. This means the Chinese will be able to enjoy higher disposable income and output in the future and thus purchase more goods and services for their consumption. The **future material standard of living** in China will also improve.

However, this increase in supply of healthcare providers may come with a lower quality of healthcare as firms aim to cut costs to lower prices and compete more. Overall, this may not signify an improvement in the standards of healthcare and thus health outcomes of the Chinese.

Also, this improvement in material standard of living and health standards in China does not necessarily mean the overall standard of living will improve. SOL includes other aspects of one's well-being. The higher national income may result in longer working hours for Chinese workers, which will mean less leisure time and time with families. Also, the increased production and construction means more energy is used, leading to higher carbon emissions, which may cause pollution and cause poorer health standards, worsening their non-material SOL.

Overall conclusion:

Overall, the easing curbs on foreign investments in hospitals will, to a larger extent, have a positive impact on China's current and future, material and non-material, in terms of health, standard of living. This is also dependent on how the China government regulates these new firms to ensure that there is an overall improvement in health outcomes for its people.

Level descriptors		Marks
L3	Developed analysis of how the ease of curbs on foreign investment will improve current and future standard of living. Answer has considered material, non-material (with some understanding of the healthcare market) aspects of SOL	5-6
L2	Undeveloped analysis of how the ease of curbs on foreign investment will improve current and future standard of living. OR Unbalanced but well explained answer: e.g. Considered material SOL or non-material SOL only, OR Considered current or future SOL only.	3-4
L1	Descriptive answer, without economic concepts. Did not understand question requirements	1-2
E2	Well-explained judgement about overall impact on various SOL aspects (with some reference to possible negative impacts)	2
E1	Unexplained or one-sided judgement	1

ACJC Prelim: H1 Case Study 2 (Japan and Greece)

(a) (i) Explain the theoretical relationship between economic growth and public debt. [2]

- There is an inverse relationship between economic growth and debt. When economic growth is positive and increasing, public debt should fall.
- As the country experiences positive economic growth, national income increases, income tax revenue increases while expenditure on unemployment benefits falls, thus reducing the budget deficit and in turn the public debt levels.

(ii) How far does Table 4 demonstrate this relationship? [3]

- The relationship is demonstrated in Greece in 2011 and 2013. During this period, GDP growth worsened while public sector debt was increasing as a percentage of GDP.
- However, the relationship is not demonstrated in Greece in 2012, where GDP growth was improving but public sector debt increased as a percentage of GDP.
- Conclusion: Thus the relationship is demonstrated in Table 4 to a large extent.

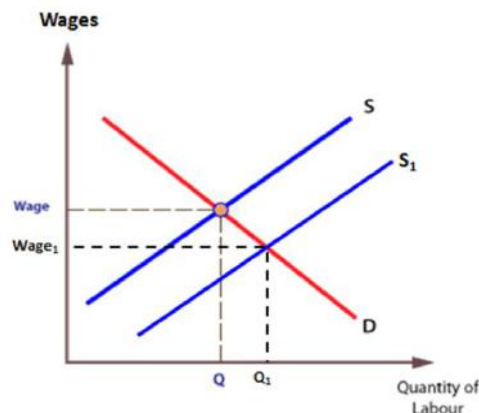
(b) (i) What evidence is there in the data that real interest rate was negative in Greece? [2]

- Real interest rate is nominal interest rate, adjusted to remove the effects of inflation
- From **2010 – 2012 (time period must be stated)**, the inflation rate as measured by annual % change in consumer prices was higher than the nominal interest rate. (Table 4)
- Therefore Greece had negative real interest rate from 2010 to 2012.

(ii) Explain one adverse effect of negative real interest rate on an economy. [2]

- Savings are discouraged leading to less loanable funds available in banks. This could reduce future investment levels and affect the potential growth of the economy in the long run.
- Savers suffer lost their returns to deposits, and instead, incur a cost for saving. This reduces their future income levels, therefore reducing future material standard of living.
- Negative interest rates if used in the long run may lead to overheating of the economy once it is out of recession. It may lead to high levels of consumption and investment which increases AD. This causes demand pull inflation if the economy is close to full capacity.

(c) (i) Using a diagram, explain why the structural reforms identified in Extract 7 “have left many Japanese workers cautious about how Abenomics would affect wages”. [3]



According to extract 7, the structural reforms include relaxing migration rules. This could lead to an influx of foreign labour into Japan, increasing the supply of labour.

- An increase in the supply of labour would result in a surplus of labour at the current wage rate. There would be a downward pressure on wages until a new equilibrium, with lower wages, is established in the market. Therefore the risk of falling wages would be a cause for concern for Japanese workers.

(ii) Assess the costs and benefits of the structural reforms on the Japanese economy. [6]

Explain the structural reforms:

- Refers to market oriented supply side policy
- Relaxing labour laws are likely to lower wages, which will lower cost of production for firms
- Technological innovations will also help to boost the productive capacity in Japan

Benefits:

- Lower wages → lower cost of production → increase in SRAS → growth in the economy
- Lower COP → attracts foreign firms to invest in Japan → increase investment → growth in both AD and LRAS → actual and potential growth + creation of jobs and lower unemployment rate (demand deficient unemployment)
- Exports also become more price competitive due to lower COP → growth in exports → actual growth and improvement of BOP (current account)

Costs:

- Japanese may suffer from lower wages due to the loosening labour rules. Existing employees may be fired more easily leading to loss of income. This could result in a fall in consumption expenditure by households and may lead to a fall in AD → fall in actual growth.
- Structural reforms may worsen the problem of deflation. Japan is already suffering from very low levels of inflation, with CPI growth falling below 0 in 2010 and 2011. Expanding the aggregate supply through structural reforms will lead to further fall in general price levels. This will cause Japan to be stuck in a deflationary spiral where consumers expect prices to fall further and delay expenditure. It also reduces business confidence in the economy, further reducing investment levels.

Synthesis:

- Structural reforms are likely to bring about more harm than good In the short run given that the current situation of Japanese economy is that of unhealthy low level of inflation and slow growth in Japan
- However, if used together with other demand management policies, such as the first two arrows of expansionary fiscal policy and quantitative easing (as mentioned in extract 7), it may be beneficial to Japan in the long run. This is because it targets the root problem of poor expectations in the economy.

Level	Descriptors	Marks
L3	<ul style="list-style-type: none"> • Well-developed explanation of both costs and benefits • Good reference to data and context given • Weighs the benefits and costs to come to an overall conclusion 	5-6
L2	<ul style="list-style-type: none"> • Underdeveloped explanation of costs and benefits of structural reforms • Developed explanation of either costs OR benefits • Some reference to the context given 	3-4

L1	<ul style="list-style-type: none"> • Descriptive answer lacking economic analysis • Points are largely irrelevant • Pure listing of points 	1-2
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(d) Identify and explain the type of unemployment experienced in Greece from 2010 to 2013. [4]

- Greece experienced demand deficient/cyclical unemployment from 2010 to 2013
- Evidence: Growth rate was negative from 2010 to 2013, indicating that Greece was suffering from a recession
- This indicates that aggregate demand was low and falling from 2010 – 2013. As AD falls, national output is falling. With less goods and services being produced, the economy would experience a loss of jobs, resulting in rising cyclical unemployment.

(e) In view of the large public debt, discuss what would be the most appropriate policy for Greece to achieve economic growth. [8]

Introduction:

- Explain debt levels in Greece: High level of debt (up to 156% of GDP). Debt is held externally which results in leakages from the economy when Greece repays its debt. This will then affect the BOP of Greece as there are more outflows than inflows, resulting in a loss of foreign reserves in financing its deficit.
- Explain current economic conditions of Greece – Negative economic growth (-3.9% in 2013), High Unemployment (27.3% in 2013), falling consumer prices which has brought about weak consumer and business confidence in Greece.

Body:

A) Austerity measure might be appropriate in reducing high government debt to pursue EG for Greece

- In light of the high government debt, austerity measures by cutting government spending and increasing taxes, seems more appropriate to reduce its debt level. However, this will be contractionary and will result in negative growth in the short run.
- Yet by reducing public debt levels in Greece, this may start to improve business and consumer sentiments which will increase C and I and increase AD and NY in the long run (Extract 5).

However, austerity measures will have a contractionary effect on Greece's economy and will result in negative growth in the short run. By cutting G and increasing T, this will cause a fall in AD and NY. Also, falling GDP will also cause debt-to-GDP ratio to look less favourable in Greece (Extract 5). Thus there is a need for more appropriate policies to generate economic growth in both the short and long run.

B) Expansionary DD-management policies are appropriate in using domestic demand to pursue EG for Greece even with the high government debt

- Expansionary FP by increasing G more than the contractionary impact of the sales tax (ie. fall in C & I) – describe mechanism & its net impact on AD
 - The impact: Rise in AD would promote the level of economic activity that leads to greater employment of resources (esp labour – derived dd) leading to a magnified rise in NY due to the multiplier effect, achieving economic growth.
 - Contextualisation/Link to the question:

However, the high government debt limits the scope of expansionary fiscal policy, thus make it inappropriate as it may worsen the situation where the debt increases further if the government expenditure is larger than the tax revenue that it collects.

- High debt levels are unsustainable in the long run as the government may not be able to pay back their debts.
- There is also a further strain on the budget due to the interest on borrowing that has to be paid back in the future. Therefore this may limit the government's spending in the future, and impeding future economic growth.
- Greece is already experiencing deflation and negative growth, which results in weak business and consumer confidence. In this context, reducing taxes will be ineffective as consumers and firms are unwilling to borrow and spend. The poor economic outlook encourages them to save instead.
- Increasing levels of debt also reduces business and consumer confidence (as mentioned earlier) and could in fact lead to a fall in I and C, especially if the economy experiences the crowding out effect when the government borrows from private banks.

But expansionary fiscal policy need not lead to a worsening of debt and hence it may still be appropriate. Since the economy is in recession, the government should not try to reduce its debt yet, but wait for the economy to recover, as growth will help to alleviate the debt levels.

Yet expansionary fiscal policy will still require government spending in the short-run, which might lead to the worsening of debt. Since monetary policy does not require government spending, it seems like an appropriate policy tool for the Greek government to use in order to stimulate aggregate demand.

ii. Expansionary MP:

- The impact: Rise in AD would promote the level of economic activity that leads to greater employment of resources (esp labour – derived dd) leading to a magnified rise in NY due to the multiplier effect—achieving actual growth.
- Contextualisation/Link to the question:
 - However in the case of Greece, it does not have control over its own monetary policy as it belongs to the Eurozone which shares a common currency –Euro, and the ECB determines the interest rate. Thus in Greece's case, it is unable to change its interest rate or exchange rate unilaterally.
 - Hence for Greece, its expansionary monetary policy would be implemented by relaxing loan obligations, giving more incentives for companies to borrow, making it easier for people to borrow money which will increase C & I.
 - At the same time, the current expansionary monetary policy which ECB is adopting is appropriate for Greece (Extract 6). Interest rate levels are at a very low level, which is hence supposed to encourage borrowing, increasing C & I, increasing actual growth.

However, as Greece is currently experiencing high unemployment rates and going through recession, the current consumer and business sentiments are very weak. As a result, using domestic demand to drive economic growth in Greece might not be very appropriate and thus Greece might need to use external demand to drive the economy instead.

C) Trade policies are appropriate in using external demand to pursue EG for Greece even with the high government debt

Currently as there is weak domestic demand, Greece should hence tap on external demand to drive economic growth by signing more FTAs and diversify its trading partners. This is to increase net exports, which will then increase AD and achieve higher growth rates. Also by

opening up new markets, this will encourage foreign direct investments that will also increase both actual and potential economic growth.

However, Greece needs to build up its domestic industries and develop a comparative advantage in various areas in order to benefit from trade. Thus there is a need for SS-side policies to increase productivity and upgrade the skills of its citizens.

D) Supply side policies may be more appropriate to achieve economic growth despite high government debt

- Given the high amount of debt, Greece's government is unable to use expansionary fiscal policies indefinitely.
- Greece should use SS-side policies to address the root problem of poor expectations in the economy in order to get out of the recession and ensure sustainable growth in the long run as well.
- Short run supply side policy:
 - The government can try to encourage more competition in markets through deregulation and anti-trust policies. This will encourage firms to be productively efficient and find lower cost methods of producing.
 - There will be an increase in SRAS and corresponding increase in national income
- Long run supply side policy:
 - The government can spend on skills upgrading or building infrastructure to develop a comparative advantage in certain goods and services.
 - This will help to attract investors into the country by boosting the confidence in the economy as well as increase export revenue into Greece.
 - Though spending is needed in the short run, it is not an indefinite increase in expenditure as the government can cut down spending once investment and consumption starts increasing.

For an economy like Greece which is facing a chronic govt debt, as well as falling economic growth, the odds are against Greece in being able to get the funds to incentivize retraining to enhance the labour productivity level or to generate adequate domestic demand to pursue EG of both types.

While some supply side policies may require spending by the government, they are able to solve the root problem in the long run and are more sustainable (Extract 6). These policies are more sustainable as they are self-financing. By channelling funds to training workers, this will increase productivity and generate higher income in the long-run. Hence even though these policies may incur higher spending in the short-run and worsen debt levels, this will generate higher income and economic growth in the long-run, which can be used to repay Greece's debt.

E) Synthesis/Conclusion:

In spite of Greece's high debt levels, it would be myopic to adopt austerity measures as this will hinder growth. But it would be more appropriate for Greece to use expansionary DD-management, trade and SS-side policies to achieve economic growth. Growth will also help to reduce public debt levels in the long run. As the country experiences positive economic growth, national income increases and as a result, income tax revenue increases. In the same way, through increasing tax incentives/concessions, this will increase the profitability of firms, which will also increase tax revenue and thus reduce budget deficit. Also, as the country experiences increase in economic growth rates, this will lead to higher production and hence higher

demand for labour, increasing employment levels. This will cause expenditure on unemployment benefits to fall, thus reducing the budget deficit and in turn, public debt level falls.

Hence in Greece's case the most appropriate policy measure is not simply a choice between dd-side or ss-side, but whether any macroeconomic policy measure undertaken by the Greek government would actually achieve any degree of EG that would create a positive ripple-effect (multiplier-accelerator effect) that would gain momentum to cure all the chronic components of the ailing economy albeit one at a time.

Level	Knowledge, Application, Understanding and Analysis	Marks
L3	<ul style="list-style-type: none"> Balanced and developed discussion of at least 2 policies to pursue economic growth for Greece (& how it might conflict with other macro objectives) Answer exhibits consideration of Greece's large debt Good reference to data and context given 	5-6
L2	<ul style="list-style-type: none"> Developed but one-sided discussion of at least 2 policies to pursue economic growth for Greece Undeveloped but balanced discussion of various policies to pursue economic growth for Greece Limited reference to Greece's large debt Limited reference to data 	3-4
L1	<ul style="list-style-type: none"> Descriptive answer lacking economic analysis Points are largely irrelevant Pure listing of points 	1-2
E2	<ul style="list-style-type: none"> Reasoned judgement on appropriateness of various policies for Greece based on a criterion for e.g Expansionary Fiscal Policy is unlikely to be the most appropriate in the long-run given that Greece already has high levels of unsustainable debt. 	2
E1	<ul style="list-style-type: none"> Unreasoned judgement of one policy being more appropriate to pursue economic growth for Greece 	1

3. (a) Explain how the price mechanism allocates scarce resources in the free market. [10]
- (b) Assess the ability of the price mechanism in allocating scarce resources efficiently. [15]

Suggested Solution

Synopsis:

Candidates will show how the price mechanism works to allocate scarce resources in the free market. Candidates may use DD/SS framework for their analysis of the price mechanism, and explain how the three questions of allocation of resources are solved. Examples of how resources are allocated should be raised.

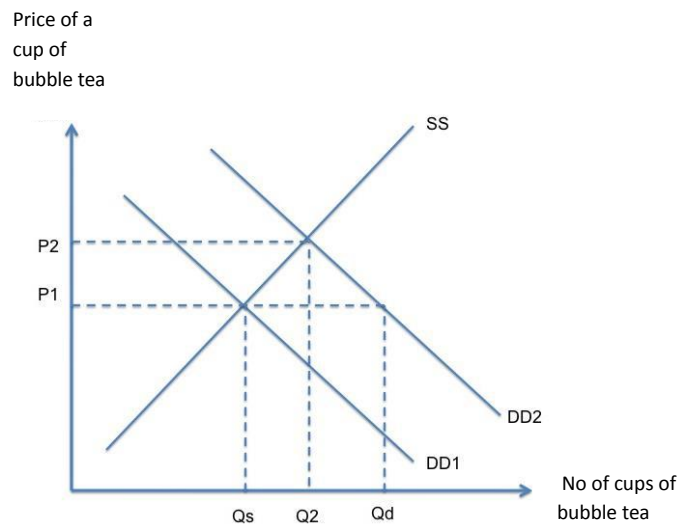
Introduction:

1. Explain the meaning of “free market” and price mechanism:
 - a. A free market is an economic system in which prices and wages are determined by unrestricted demand and supply forces, without government regulation or intervention.
 - b. Through the use of price signals, the price mechanism is the ‘invisible hand’ that guides goods, services and resources (Factors of production) to move to where they are most needed.
2. Explain why resources are “scarce” → unlimited wants but limited resources

Body/Analysis:

3. How the price mechanism works to allocate scarce resources in the free market:
 - a. The price mechanism serves as a signalling function for the free market.
 - b. Market prices of goods will adjust to changing demand and supply forces, and highlight to the consumers and producers where resources are required, and where they are not:
 - i. Increasing prices signal a need for resources to be employed into those markets;
 - ii. Falling prices will indicate that resources are not needed in that market, and thus will be re-allocated elsewhere.
 - c. In the free market, these market price adjustments serve to re-allocate the scarce resources towards producing goods that fetch the relatively higher price at that time. Such adjustments will then reduce unnecessary use of resources in producing the less valued/wanted goods;
4. 3 resource allocation questions will be answered as the price mechanism works its way through the market: What to produce, How to produce and For Whom to produce.
 - a. **‘What’ to produce:** The market would decide which needs or specific goods/services among the unlimited wants would be produced instead of the others. Usually these are goods which may signal the relatively higher prices due to their higher demand.
 - b. **‘How’ to produce:** Once producers have been given the signal by consumers on what to produce, they will engage in seeking factors of production and conduct production processes that are the most productively efficient. Producers may thus

- choose production methods that could be labour intensive or capital intensive, depending on the overall costs that will be compared against the benefits derived.
- c. **'For Whom' to produce:** The free market system would decide who would ultimately get to enjoy these goods/services produced and usually it would be those who are willing and able to pay the prices of these goods/services. They might even bid for the goods at higher prices if they are willing and able to purchase it.
5. Illustration/Example of the price mechanism in action: the bubble tea market
- a. *To answer the question of 'what to produce':* When there is rising demand for bubble tea (from $Dd1$ to $Dd2$), the price of bubble tea will rise (from $P1$ to $P2$) and this signals producers to produce more teas to meet the rising demand. More resources such as labour and capital will then be allocated to production of bubble tea.



- b. As shown from the above diagram, producers would react to the higher price by increasing the quantity supplied of bubble tea from Qs to $Q2$.
- c. As the producer allocates more resources to the production of teas, he would try to increase production using lowest cost possible. The question of "How to produce" is answered through sourcing for the lowest cost teas and labour available. The firm would hence use the cheapest possible combination of resources to increase production of teas so that his profits are the highest.
- d. *'For whom' to produce:* At the same time, as more people demand bubble teas, its price will rise. Consumers who can afford the higher prices of Bubble teas will leave the market. At the higher price, some people will not wish to consume bubble teas will leave the market.
- e. Without government intervention, resources are allocated more efficiently towards production of bubble teas.
6. The price mechanism, when allowed to exist freely without any govt intervention, would be able to achieve **allocative efficiency**.

Conclusion:

7. The price mechanism works well without government intervention.

Knowledge, Analysis and Application		
L3	<ul style="list-style-type: none"> • Good explanation and analysis of the price mechanism PLUS a good account of the 3 questions of allocation of resources. • Candidates using demand/supply framework should show a complete analysis of how changes in demand and supply forces may lead to changes in resource allocation. • Candidates use an example to illustrate how equilibrium price and quantity is achieved through the price mechanism, and make some reference to resource allocation taking place. 	7-10
L2	<ul style="list-style-type: none"> • Sound explanation of the price mechanism but with insufficient or inadequate analysis of the 3 questions of allocation of resources. • Candidates might only provide token explanation for the questions of 'What to produce, how to produce and for whom to produce'. • Candidates may illustrate the working of the price mechanism or the dd/ss framework using an example of a good without making reference to resource allocation. • Sufficient explanation of the price mechanism using demand/supply framework without making reference to resource allocation 	5-6
L1	<ul style="list-style-type: none"> • Inaccurate explanation of price mechanism or mostly irrelevance in demand and supply analysis. • Not using demand/supply framework • Presence of major conceptual inaccuracies. 	1-4

(b) Assess the ability of the price mechanism in allocating scarce resources efficiently.

[15]

Suggested Solution

Synopsis:

Candidates will assess the ability of the price mechanism to allocate scarce resources efficiently. This is dependent on a variety of factors, and society might need the government to intervene to achieve allocative efficiency.

Introduction:

1. Define allocative efficiency:
 - The situation in which one could not be made better off without making some else worse off;
 - All resources are fully employed, and are being used to obtain the maximum benefit to the entire society.
 - Consumer and producer surpluses are maximised.

Body/Analysis/Evaluation:

2. Analyse how efficiency is achieved in the free market system, alluding to the details in part (a), where the price mechanism has already been explained.
3. Students should highlight that consumer surplus and producer surplus would be maximised, if the equilibrium price were to be achieved in the market. (A diagram on

maximum consumer/ producer surplus would be useful, if it has not been indicated earlier)

4. Allocative efficiency also means that maximization of welfare in the economy is achieved. At this point, the valuation of the good should be equal to the additional cost of producing the good ($P = MC$).
5. However, the ability of the price mechanism to allocate scarce resources efficiently depends on some conditions being present: *(students should highlight at least two reasons that show inefficiencies in the market)* firms are operating in a perfectly competitive environment and externalities (external costs and benefits) are not present, goods sold are rival and excludable.
6. **Imperfect competition in markets**
 - a. This exists when there are barriers to entry and products are differentiated. Firms in such markets may engage in some competitive behaviour, but due to the presence of barriers, they may acquire some level of market power, and their demand curve would be less than elastic.
 - b. Differentiated products also lead to firms' demand to be less elastic, and thus would have some ability to set a price that is greater than the market price.
 - c. The market would have thus failed to achieve allocative efficiency if the price is not at equilibrium. Resources would thus have to be allocated less efficiently in this case.
7. **Presence of externalities (positive & negative):**
 - a. The valuation of goods and services by consumers and producers are only based on self-interests; third-parties may be affected positively or negatively without having been compensated.
 - i. Explain external costs and benefits.
 - ii. This would mean that the overall costs and benefits to society are much higher than the market price that has been paid and received by consumers and producers respectively.
 - iii. Goods with negative externalities will be over-consumed; goods with positive externalities will be under-consumed. Thus, the market would thus have failed to allocate resources efficiently.
8. Some goods cannot rely on the price signals. These are called **public goods**.
 - a. Public goods are non-excludable and non-rival in nature.
 - i. Define non-excludable and non-rival.
 - ii. *Non-excludable*: it is not possible to exclude non-payers from consuming the good. There exists a free-rider problem in this case as consumers will not be willing to pay for the good.
 - iii. *Non-rivalry*: consumption of the good by one does not diminish the benefits and satisfaction by subsequent consumers. The provision of the good to additional consumers does not incur additional costs.
 - b. For these goods, consumers are able to consume these goods even though they have no intention to pay for it. There is no price signal, and this is a case of missing market. For example, the military defence forces.
 - c. As a result, the free market does not allocate resources for production of these essential goods. Allocative efficiency is not attained.
9. For all the cases above where the price mechanism is not able to allocate resources efficiently (situations of market failure), the government would have to intervene: *(not limited to these measures)*

- a. The govt may subsidise the low income groups for them to sufficiently afford basic consumption goods or goods with positive externalities like healthcare and education
- b. The government may impose indirect taxes on demerit goods or on goods with negative externalities like alcohol and cigarettes.
- c. These specific measures, if calibrated correctly, would help the market achieve efficient resource allocation.

Conclusion:

Left on its own, the price mechanism is not able to achieve efficient resource allocation, unless the above conditions are met. Intervention by the govt is then needed to achieve allocative efficiency most of the time.

Knowledge, Analysis and Application		
L3	<ul style="list-style-type: none"> • Candidates provide a comprehensive analysis of achievement of allocative efficiency by the price mechanism. • Candidates give a good account of sources of market failure (where price mechanism is not able to achieve efficient resource allocation) • Candidates show good analysis of both forms of market failures (externalities and public goods). 	9-11
L2	<ul style="list-style-type: none"> • Candidates are able to show that the price mechanism is not always able to achieve efficient allocation of resources • Candidates make some attempts to discuss allocative efficiency but lacked economic analysis of both forms of market failure. • Answers are not balanced and limited to just good detailed analysis of one form of market failure. 	6-8
L1	<ul style="list-style-type: none"> • Candidates have not discussed the reasons for the inability of the price mechanism to achieve allocative efficiency • Mostly inaccurate and irrelevant answers 	1-5
Evaluation		
E2	<ul style="list-style-type: none"> • For an evaluative assessment based on sound economic analysis. 	3-4
E1	<ul style="list-style-type: none"> • Evaluation without justification. 	1-2

4. (a) Explain the consequences of a persistent and large balance of payments deficit on an economy. [10]

(b) Discuss the extent to which expenditure-reduction policy alone can be effective in correcting balance of payment deficit. [15]

Suggested Solution

Synopsis:

Candidates will explain the impact of a persistent and large balance of payments deficit on the domestic and external facets of an economy.

Introduction:

1. Define and explain the make-up of a country's balance of payments (BOP): Current Account, Capital Account and the Official Reserves Account.
2. Explain the meaning of deficit in the BOP.

Body/Analysis:

3. Explain some reasons why the deficit BOP may be ***persistent and large*** in some cases:
 - a. Could be due to a deficit in the Current Account:
 - i. When the economy is continuously dependent on imported consumption goods; local production is insufficient to satisfy local demand for goods and services
 - ii. When the economy does not own natural resources and is dependent on imported raw materials for its production processes
 - iii. When there is insufficient demand for its exports – could be due to a relatively high rate of domestic inflation or relatively lower quality of goods as compared to its competitors
 - b. Could be due to a deficit in the Capital Account:
 - i. An unresolved economic or political crisis in the economy could also lead to persistent outflow of funds over a few years as foreign investors flee the country.
 - ii. Increasing investment overseas by domestic firms who seek expansion elsewhere that are not matched by an inflow of investment from overseas companies.
 - c. When the economy does not have sufficient reserves or it is unable to borrow from official sources to offset the deficit in the primary balance (deficit in current and/or capital accounts).
4. Analysis of the consequences an economy might face if a persistent and large deficit in the BOP is present:

(Students may incorporate the analyses below as a consequent of each of the reasons above)

 - a. Depreciation of exchange rate against other currencies, such that
 - i. Prices of imports increase → higher cost of living (due to high import prices) for domestic residents → lower purchasing power for residents

- ii. Investors' confidence may be negatively affected, and investment and employment may be significantly reduced. → Long-run AS (productive capacity of the economy) will shift left, indicating that their potential income is reduced.
- b. **Persistent deficit:** The country's reserves could be depleted if the country chooses to continuously support the weakening exchange rate → these reserves could be funds that could be used for future infrastructural development projects. → AS could be reduced
 - i. Overall, funds required to build the economy up for the future would be reduced, and potential inflows discouraged from being invested in the economy.
 - ii. Possibility of reducing imports in the future → ability to support production is affected negatively

Conclusion:

- 5. A persistent and large deficit in BOP can cause costs of living to increase and standards of living to fall in an economy. In the long run, the economy could face severe contraction in their economic potential and high unemployment.

Knowledge, Analysis and Application		
L3	<ul style="list-style-type: none"> • Candidates give a well-written analysis and addresses the issue of “a large and persistent BOP” • Candidates give a good analysis of the economic problems of inflation, unemployment and contraction of AD in the economy • Candidates provide a clear analysis of the consequences of persistent deficit using AD/AS framework 	7-10
L2	<ul style="list-style-type: none"> • Candidates just adequately explain in general, the effect of a deficit BOP, without highlighting its persistence and magnitude • Candidates may not be consistent in using AD/AS framework in analysis of the consequences of deficit. 	5-6
L1	<ul style="list-style-type: none"> • Candidate shows inaccurate analysis of BOP components and the effects of a persistent and large deficit BOP on the economy • Mostly inaccurate and incoherent explanation of a deficit in BOP and its effects. 	1-4

(b) Discuss the extent to which expenditure-reduction policy alone can be effective in correcting balance of payment deficit. [15]

Synopsis

Candidates are expected to analyse the effectiveness of expenditure-reducing strategies in order to correct BOP deficit. It is also expected that students offer alternative policies, for example, expenditure-switching measures, which could supplement expenditure-reduction policy to improve the deficit in BOP.

Introduction:

1. Explain the meaning of expenditure-reduction policy → These involve a general reduction in aggregate demand to achieve the goal of **reducing expenditures on imports**

Body/Analysis/Evaluation:

2. Expenditure-reduction policies may include contractionary fiscal or monetary policies that reduce aggregate demand, which would reduce expenditure on imports:
 - a. **Contractionary fiscal policy** → e.g. a reduction in government expenditure and/or a rise in taxes to reduce aggregate demand.
 - b. **Contractionary monetary policy** → e.g. a rise in interest rates, stricter hire purchase regulations, more constraints on bank lending, which can dampen spending and investments.
 - Expenditure on imports could be reduced, with a long-term view of eradicating the deficit BOP.
 - Both contractionary policies will lower AD, and will also lower domestic inflation → improvement in competitiveness of exports, hence also reducing trade/ current account deficit.
3. **Evaluation** → The effectiveness of these policies depend on:
 - a. The extent of conflict between external and internal objectives:
 - i. As the BOP deficit improves, the deflationary policies could slow down the country's economic growth and increase unemployment.
 - ii. If the BOP deficit is due to inflation caused by high domestic goods prices, then the contractionary policy could solve both problems at the same time.
 - b. The proportion of consumption attributed to import expenditures → the higher the proportion, the more imports will fall and thus reduce the deficit.
 - c. The economic slowdown due to the contractionary policies could be worse and longer than expected: higher unemployment would result, and the economy should brace itself for a recession, if the downturn is prolonged.
4. **Other policies considered: Expenditure-switching strategies** → These policies are aimed at reducing the consumption of imported goods in favour of domestic goods:
 - a. Depreciating or devaluing the domestic currency → prices of imports increase relative to prices of domestic goods
 - i. depending upon the PED for X and PED for M, this might worsen the deficit before improving it after a time lag (J-Curve effect)
 - b. Use of import restrictions and tariffs → this will increase the prices of imports and thus discourage its consumption:
 - i. These have to be targeted at consumer goods and not at producer goods as taxes or quotas will add to cost of production to industries that depend on imported raw materials.
 - c. Switch the expenditures of foreign households from domestic goods to foreign goods (e.g. Singapore goods) to boost our exports. → improve quality of goods, seek new markets to export to.
5. **Other policies considered: Reducing investment overseas, and re-structuring the economy**
 - a. Investment overseas can be reduced by changing tax policies on profits from investments abroad or through direct foreign exchange control. → Capital account deficit can be overcome.
 - A problem with this policy is that a future source of invisible receipts (i.e. future income earned from overseas in the form of profits and dividends) is reduced, hence worsening the balance on current account.
 - b. If the current industries in the economy are not competitive, then such investments can be re-channeled into potentially lucrative areas and industrial development.

→ This requires the govt to take a longer-term perspective, and target the LRAS. In the short-run, however, current consumption expenditures would have to be reduced.

6. **Other policies considered: Reducing other debit items**, e.g. limiting the amount of foreign exchange allowed to the country's residents travelling abroad.

Conclusion:

7. Expenditure-reducing policies may be risky for economies that are already facing a downturn, as it may worsen the gloomy conditions further. A better policy could be to re-structure the economy, and target improving productivity and quality of goods. This can ensure an improvement in exports as well as future growth prospects and potential.

Knowledge, Analysis and Application		
L3	<ul style="list-style-type: none"> • Candidates provide a comprehensive analysis of expenditure-reducing and one other alternative measure • Candidates use AD/AD framework well in analysing the effects of those policies. 	9-11
L2	<ul style="list-style-type: none"> • Candidates adequately analyse the expenditure-reducing measures to correct the BOP deficit and offer alternative policy, but analysis is not developed or did not use AD/AS framework in the analysis. • Candidates offer alternative policies, but ideas are less coherent • Candidates give an unbalanced view/analysis with respect to expenditure reducing strategies and the alternative policies. 	6-8
L1	<ul style="list-style-type: none"> • Insufficient or incoherent analyses of the measures to reduce deficit BOP. • Conceptual error in analyses. 	1-5
Evaluation		
E2	<ul style="list-style-type: none"> • For an evaluative assessment based on sound economic analysis. 	3-4
E1	<ul style="list-style-type: none"> • Evaluation without justification. 	1-2

ANGLO-CHINESE JUNIOR COLLEGE
2015 JC2 PRELIMINARY EXAMINATIONS



ECONOMICS

9732/01

Higher 2

20 August 2015

Paper 1: Case Studies

2 hours 15 minutes

Additional materials: Answer paper

READ THESE INSTRUCTIONS FIRST

Write your index number and name on all the work you hand in.
Write in dark blue or black pen on both sides of the paper.
You may use a soft pencil for any diagrams, graphs or rough working.
Do not use staples, paper clips, highlighters, glue or correction fluid/tape.

Answer **all** questions.
Begin each question on a **fresh** sheet of paper.

The number of marks is given in brackets [] at the end of each question or part question.

At the end of the examination, arrange your answers in order.

Fasten your answers for Question 1 and Question 2 **separately** using the cover sheets provided.

This document consists of **7** printed pages and **1** blank page.
Please check that your question paper is complete.

Answer all questions

Question 1

Healthcare in China and India

Table 1: Health expenditure per capita, 2009-2013

	2009	2010	2011	2012	2013
China	189	216	274	322	367
India	46	54	61	58	61
Japan	3746	4115	4656	4787	3966

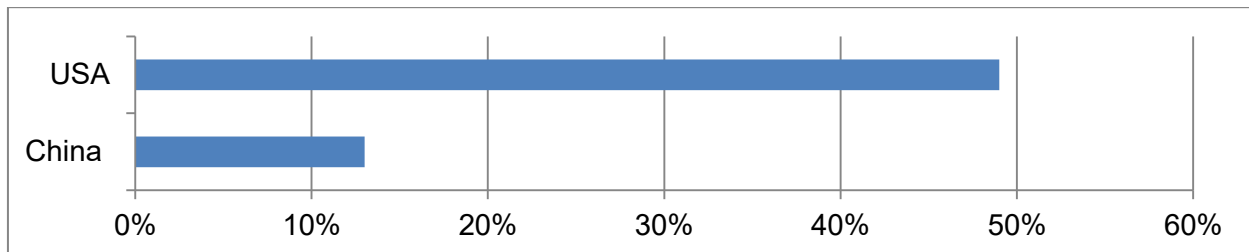
Source: The World Bank Group

Table 2: Selected healthcare indicators, 2013

	Life expectancy at birth (years)	Mortality rate, under 5 years old (per 1000)	Immunization, measles (% of children ages 12-23 month)	Improved sanitation facilities (% of population with access)
China	75	13	99	65
India	66	53	74	38
Japan	83	3	95	100

Source: The World Bank Group

Figure 1: Market share of the top 10 drug companies in China and US in 2012



Source: IMS Health

Extract 1: Why India trails China

Modern India is, in many ways, a success. But beside slower growth, the far greater gap between India and China is in the provision of essential public services like education and healthcare – a failing that depresses living standards and is a persistent drag on growth.

India's underperformance is due to a failure to learn from the examples of Asian economic development, in which rapid expansion of human capability is both a goal in itself and an integral element in achieving rapid growth.

Japan used investments in education and healthcare, to simultaneously enhance living standards and labour productivity and thus achieve rapid economic growth. Their development experiences remained and were followed, by Singapore and China in the early 1980s. There are strong economic returns that come from bettering human lives, especially at the bottom of the socioeconomic pyramid. For India to match China in its range of manufacturing capacity — its ability to produce gadgets of almost every kind, with increasing use of technology and better quality control — it needs a better-educated and healthier labour force at all levels of society. China's healthier, more productive workforce and its resulting manufacturing capacity is a strong pull factor for foreign firms, when deciding where to locate their factories and firms. It has also allowed China to become the manufacturing hub of the world.

Source: *New York Times*, 19 June 2013

Extract 2: Things to know about India's healthcare system

In India, one of the fastest growing economies globally, a staggering 70% of the population still lives in rural areas and has no or limited access to hospitals and clinics. Many rely on herbal, alternative medicine and government programmes in rural health clinics as they do not know the importance of proper healthcare. Also, only a small percentage of the population has access to quality sanitation, which further exacerbates health problems due to easy spread of diseases. There is a growing need to fix its basic health concerns in the areas of HIV, malaria, tuberculosis, diarrhoea and mortality. For primary healthcare, the Indian government contributes only about 30% of the country's total healthcare expenditure, the 11th lowest in the world in 2013.

Source: *Forbes India*, 9 September 2014

Extract 3: Drug companies face pressure despite China price pledge

China's leaders on Thursday said Beijing would lift maximum price controls on pharmaceuticals, a move long called for by drug companies and health experts to encourage both foreign and domestic firms to offer better drugs. According to consulting firm McKinsey & Co., the move could further open up the pharmaceutical industry. The industry totalled 655 billion yuan in drug sales last year, up 14% from 2013. The move "creates more incentives for foreign and local firms to develop more innovative drugs," according to research firm China Global Insight.

The move is part of a broader government effort to create lower drug prices through free-market competition in the long term. Many drug companies might look to increase profits by raising prices, but they ultimately still compete on price and will be forced now to more greatly differentiate themselves through branding. China has long kept a tight rein on drug prices as part of its efforts to keep medical care affordable for its vast and ageing population. But the industry and experts have blamed price pressures for spurring some domestic manufacturers to cut corners such as using leather scraps to make gelatin capsules, leading to high levels of carcinogenic substances in their pills to maintain profits.

Authorities have been slowly stepping away from price restrictions, ending retail-price caps on low-cost medicine last year. But they have struggled to promote innovative drugs and ensure stable supplies.

Source: *The Wall Street Journal*, 5 March 2015

Extract 4: China: A soaring demand for quality medical care

Despite the Chinese healthcare system running at full speed over the past few decades, it can't move fast enough to keep up with the country's social and economic changes. China's per capita GDP grew more than 25-fold from 1980 to 2011; its life expectancy rose by nine years; its infant mortality rate quartered. By the end of last year, China's elderly comprised 14 percent of its population. That figure is expected to grow to 25 percent by 2030. It is an appealing market for pharmaceutical firms and medical-equipment makers; with spending in the industry expected to nearly triple to \$1 trillion by 2020 from \$357 billion in 2011.

Yet, hospitals are not keeping up well enough. Those who need the essential, basic services are unable to seek treatment, including this growing elderly population. China has a lack of doctors and that has led to bottlenecks at hospitals, with frustrated patients who want to receive better medical attention resort to bribing doctors.

The Chinese government has poured billions of dollars into healthcare reform in recent years, and the system has improved accordingly. Yet the price of basic medical services has also risen, with patients still paying the same amount as they did before despite subsidies. Thus, China has one of the highest savings rates in the world – about 50% – largely because families fear catastrophic healthcare costs.

Therefore, China will increase its healthcare subsidies by 19 percent this year to deepen social reforms and strengthen safety nets. Authorities will also use new technologies, new training regimens for doctors, reduce the cost of drugs and medical checks, and increase the availability of doctors in rural areas, with the total number of doctors doubling by 2020. Yet, many feel that these measures are still insufficient as these resources are likely to move into more lucrative sectors like cosmetics and cardiology, rather than the much-needed general family medicine.

Sources: *The Guardian*, 29 October 2014 and *Reuters*, 9 May 2015

Questions

- (a) (i) Compare the trend of health expenditure per capita between India and China from 2009 to 2013. [2]
- (ii) What conclusion would you draw from Tables 1 and 2 about the relationship between health expenditure and healthcare outcomes? Explain your answer. [4]
- (b) Assess whether implementing measures similar to those undertaken by the Chinese government is the most appropriate way for the Indian government to achieve better healthcare outcomes. [8]
- (c) Identify the market structure of the pharmaceutical industry in China and USA. [2]
- (d) (i) Explain the possible barriers to entry for the pharmaceutical industry. [4]
- (ii) Discuss how the market structure of the pharmaceutical industry in China will affect the ability of firms in this industry to make excess profits in the long run when the Chinese government removes price controls. [10]

[Total: 30]

Question 2

The Japanese and Greek economies

Table 3: Selected macroeconomic indicators of Japan:

	2010	2011	2012	2013
Real GDP Growth (annual %)	4.7	-0.5	1.8	1.6
Consumer Prices (annual %)	-0.7	-0.3	0.0	0.4
Unemployment (% of total labour force)	5.0	4.5	4.3	4.0
Interest Rate (%)	1.6	1.5	1.4	1.3
Public Debt (% of GDP)	194.1	200.0	211.7	218.8

Source: World Bank, Trading Economics

Table 4: Selected macroeconomic indicators of Greece:

	2010	2011	2012	2013
Real GDP Growth (annual %)	-5.4	-8.9	-6.6	-3.9
Consumer Prices (annual %)	4.7	3.3	1.5	-0.9
Unemployment (% of total labour force)	12.5	17.7	24.2	27.3
Interest Rate (%)	1.0	1.0	1.0	0.8
Public Debt (% of GDP)	129.7	146	171.3	156.9

Source: World Bank, Trading Economics

Extract 5: Eurozone debt burden hits all-time high even after austerity

Europe's debt dynamics keep getting worse in spite of years of austerity measures. Official figures showed that the debt burden of the 17 European Union countries that use the euro hit all-time highs at the end of the first quarter, even after austerity measures were introduced.

Battered by a global recession and a banking crisis, a number of euro countries have been forced to undertake austerity measures to deal with their debts.

One side-effect of the austerity measures has been to keep a lid on economic growth – government spending is a key component of the economy, while tax rises can choke consumption and investment. Many euro countries are actually in recession and shrinking economies can make the debt-to-GDP ratio look less favourable. Coupled with the fact that countries continue to add to their debt mountains, the overall debt burden of the Eurozone has continued to rise.

The hope of those who have advocated austerity as the main response to Europe's debt crisis is that economic growth will start to emerge as soon as countries get their borrowing levels down to manageable levels. There are hopes that the Eurozone recession, which has lasted since the end of 2011, may come to an end, primarily through strength in Germany.

Source: *The Huffington Post*, 22 July 2013

Extract 6: Low interest rates to generate economic growth come with risks

European Central Bank Governing Council member Jens Weidmann said low interest rates come with risks that can't be ignored, even though the current expansionary monetary policy is appropriate. The ECB reduced its benchmark rate to a record low of 0.25 percent last week after inflation slowed to 0.7 percent in October, the lowest in four years.

"The expansionary monetary policy is justified considering the outlook for price stability," Weidmann, who heads Germany's Bundesbank, said in a speech in Frankfurt today. At the same time, "one must not lose sight of the many challenges that come within an environment of negative interest rates," he said.

Weidmann said he sympathizes with savers, whose return on deposits may fall further after last week's rate cut. He argued that savers across the euro area are affected by lower interest rates.

"It is important to make sure that negative real interest rates won't become a permanent state and that monetary policy isn't captive to politics or financial markets," Weidmann said. "Ultra-loose interest-rate policy is no substitute for structural reform, which is necessary in some euro-area member states."

Some member states like Italy and Ireland experience supply-side roadblocks to growth. Rigidities and gaps in capital, labour, and product markets continue to hamper productivity, job creation, and the shift of resources from the domestic to the export sector. Persistently high unemployment and low investment could reduce the economy's capacity to grow in the foreseeable future.

Source: *Bloomberg*, 13 November 2013

Extract 7: Abe's three arrows: Can Abenomics make Japan's economy fly?

After decades of economic stagnation signs of recovery are back in Japan. Many Japanese are loosening their purse strings and don't hesitate to splurge \$10,000 or more on precious things like a gold and diamond ring.

What has turned Japan around? The answer lies in the country's Prime Minister Shinzo Abe and his bold measures to jump-start the economy, known as "Abenomics". Abe has vowed to revive the country's sluggish economy with "three arrows".

The first arrow is printing money and easing monetary policy to jolt consumer spending and weaken the yen, thus boosting exports. The Bank of Japan, the country's central bank, announced in April that it would boost the money supply by 60 trillion yen to 70 trillion yen, in a bid to reach 2% inflation in two years.

The second arrow is spending money by revving up fiscal stimulus. Abe announced ambitious spending packages this year: one that is worth 10.3 trillion yen in January and another 5.5 trillion yen (\$54 billion) that was unveiled on December 5.

Abe's two arrows have proved an effective weapon. In October, inflation rate was recorded at 1.1%, while core Consumer Price Index (CPI) rose 0.9% from a year earlier. The world's third

largest economy expanded in the first half of 2013, 4.3% annual growth rate in the January-March quarter.

But Abe's toughest battle yet is to deliver **the third arrow: structural reform**. One area that reformers hoped the committees would tackle is Japan's labour market. Currently, unless they are going out of business, firms are barred from firing staff employees.

"We're not talking about small technological innovations, we're talking about a big economic reform," says the chief Japan economist at Credit Suisse. This includes opening up its many protected sectors; loosening labour rules, making it easier for companies to hire and fire workers; and relaxing immigration rules – but these have left many Japanese workers cautious about how Abenomics would affect wages.

Source: *The Cable News Network*, 11 December 2013

Extract 8: Public debt in Japan

Some economists are warning that Japan would be wise to attack its rising debt levels by hatching a plan to cut welfare benefits and raise taxes in the medium term. The debt problem is severe. Japan's gross public debt is projected to hit 230% of GDP by 2014 after years of sustained deficits.

For many years, very low interest rates allowed Japan to issue debt and not be overwhelmed by servicing payments. And Japanese citizens, famous for their savings habit, were happy to buy government bonds. In contrast to countries like Greece, almost all Japanese debt is held domestically. But risks remain, especially if interest rates spike.

Source: *The Cable News Network*, 23 April 2013

Questions:

- (a) (i) Explain the theoretical relationship between economic growth and public debt. [2]
(ii) How far does Table 4 demonstrate this relationship? [3]
- (b) Consider the effects of negative real interest rate on an economy. [4]
- (c) (i) Using a diagram, explain why the structural reforms identified in Extract 7 “have left many Japanese workers cautious about how Abenomics would affect wages”. [3]
(ii) Assess the likely impact of the structural reforms on the Japanese economy. [8]
- (d) With reference to the data, discuss whether Japan should adopt similar policies as Greece to reduce their public debt levels and achieve economic growth. [10]

[Total: 30]

2015 ACJC PRELIM: H2 Case Study 1 (Healthcare in China and India)

(a)	(i)	<p>Compare the trend of health expenditure per capita between India and China from 2009 to 2013.</p>	[2]
		<p>Similarity: The health expenditure per capita in both China and India shows increasing trends from 2009 to 2013.</p> <p>(Any) Difference: China's health expenditure per capita is consistently increasing while India's fell once in 2012.</p> <p>OR</p> <p>China's health expenditure per capita is increasing faster than India's (94% versus 33%)</p>	
	(ii)	<p>What conclusion would you draw from Tables 1 and 2 about the relationship between health expenditure and healthcare outcomes? Explain your answer.</p>	[4]
		<p>Explain relationship We can conclude that there is a positive relationship between health expenditure per capita and healthcare outcomes. Higher per capita spending on health would lead to better healthcare outcomes as more spending on healthcare would mean people can get protected and treated against diseases and illnesses.</p> <p>Explain evidence China has a larger spending on health expenditure per capita than India and better healthcare outcome in terms lower mortality rate of children under 5 years old. This could be due to China having higher % of children whom are immunized against measles hence they are less likely to be infected and grow up healthily.</p> <p>China has also better healthcare outcome than India in term of higher life expectancy at birth. A reason could be because China has better sanitation facilities than India which resulted in the Chinese being able to live more hygienically and less susceptible to diseases which resulted in</p>	
(b)		<p>Assess whether implementing measures similar to those undertaken by the Chinese government is the most appropriate way for the Indian government to achieve better healthcare outcomes.</p>	[8]

Introduction

Measures adopted by the Chinese government to improve healthcare outcomes of life expectancy at birth and infant mortality rate

- 1) Increase in healthcare subsidies
- 2) Increase number of doctors in rural areas
- 3) Use new technologies

Development

Students are to discuss whether India should implement the above measures taken by China.

1) Increase in healthcare subsidies

India should increase healthcare subsidies as health expenditure per capita in India is much lower than in China and Japan. Table 1 and 2 has shown that there is a positive relationship between health expenditure and healthcare outcome. **An increase in healthcare subsidies which makes healthcare services more affordable would be able to increase consumption of healthcare which improve healthcare outcome as people get treated for their medical condition.** A subsidy is a payment made by the government to producers in order to lower their cost of production. By subsidizing the production of healthcare, the **supply will increase** and equilibrium price lowers and equilibrium quantity increases. Alternatively, subsidies could also be given to consumers. The increase in healthcare subsidies would be the most helpful for the low income workers as healthcare may be too expensive for them as **majority of Indian population still lives in rural area.**

Increasing subsidies may impose a **large burden on India's government budget** as the demand for healthcare is likely to be price inelastic. Hence a large amount of subsidies is required to increase consumption on healthcare significantly to improve healthcare outcome.

This may be not a serious problem as the spending on healthcare need not increase significantly. The Indian government currently spends only about 30% of the country's total healthcare spending on primary healthcare, the 11th lowest in the world in 2013 (Extract 2). Hence the Indian government could just reallocate more of the total healthcare spending towards primary healthcare.

2) Increase number of doctors in rural area

India should also increase number of doctors in rural area as 70% of Indian population still lives in rural area. There may be a lack of doctors in the rural area as there is **limited or no access to hospital and clinics** (Extract 2) to meet the huge demand and resulted in low consumption of healthcare and therefore poorer healthcare outcome. India government could subsidize the training of new doctors so that the cost of a medical degree is lower and **supply of doctors would increase.** With the increase in supply of doctors,

more people could get access to doctors and get treated.

However, training of doctors takes time and healthcare outcome may only improve in the long term. Hence it may not be the most appropriate measure if healthcare outcomes were to improve quickly.

While increasing number of doctors would mean more people could get treated at a cheaper price, it may not be the most appropriate measure as it does not solve the problem of poor sanitation in India which increased the possibilities of people getting infected.

3) Use new technologies

India could also use new technologies to improve its healthcare outcomes. The use of new technologies would **improve the quality of healthcare services** and productivity level, thus allowing more patients to be treated more effectively. Examples include the use of more advanced medical equipment which allows doctors to detect diseases more accurately and prescribe the correct drugs so that people become healthier and can live longer.

However, the use of new technologies could increase the price of healthcare services as the cost of these new technologies may be passed onto the consumers. Price of healthcare services would increase if productivity level does not increase sufficiently. The rural population may not have the purchasing power to pay for the better quality healthcare services even with the increase in subsidies. Moreover, **India lacks basic healthcare services and not higher quality healthcare services** hence it may not be the most appropriate measure.

Conclusion

India should only implement the measures which can tackle the root causes of its poorer healthcare outcome. From the data given, India faces inadequacies in terms of quality sanitation and knowledge of proper healthcare (imperfect information). Hence increasing subsidies and using new technology may not be the appropriate measures. Increasing number of doctors in the rural area would be more appropriate especially if the doctors can impart knowledge about proper healthcare to the Indians rural population

Other policies may be more appropriate such as **education and legislation on compulsory vaccination** as these policies tackle the root causes of the problem directly. Awareness campaigns about proper healthcare could be conducted in the rural area so that the Indian would visit the doctor to receive proper treatment instead of relying on herbal and alternative medicine. A law may be enacted to ensure all children are immunized against measles to protect themselves from the deadly disease.

Level descriptors		Marks
L3	<ul style="list-style-type: none"> Developed and balanced analysis on whether implementing similar measures to the Chinese government is the most appropriate way for the Indian government to achieve better healthcare 	5-6

		<p>outcomes.</p> <ul style="list-style-type: none"> Well supported by case material 	
	L2	<ul style="list-style-type: none"> Undeveloped analysis but balanced analysis on whether implementing similar measures to the Chinese government is the most appropriate way for the Indian government to achieve better healthcare outcomes. <p>OR</p> <ul style="list-style-type: none"> Developed but one-sided analysis on whether implementing similar measures to the Chinese government is the most appropriate way for the Indian government to achieve better healthcare outcomes. Limited use of case material 	3-4
	L1	<ul style="list-style-type: none"> Descriptive answer with no economic analysis and framework to support. Answer contains conceptual errors 	1-2
	E2	Well-explained judgement about whether implementing similar measures to the Chinese government is the most appropriate way for the Indian government to achieve better healthcare outcomes	2
	E1	Unexplained judgement about whether implementing similar measures to the Chinese government is the most appropriate way for the Indian government to achieve better healthcare outcomes.	1
(c)		Identify the market structure of the pharmaceutical industry in China and USA.	[2]
		The market structure of the pharmaceutical industry in China is monopolistic competition while the market structure of the pharmaceutical industry in USA is Oligopoly	
(d)	(i)	Explain the possible barriers to entry for the pharmaceutical industry.	[4]
		<p>Students are to explain any two types of barriers to entry</p> <p>One of the possible barrier to entry is patent. Patent is is a set of exclusive rights granted by a sovereign state to an inventor or assignee for a limited period of time in exchange for detailed public disclosure of an invention. Pharmaceutical firms can apply for patent for new drugs created through R&D. Hence existing and new pharmaceutical firms will not be able to manufacture the drugs until the patent expired, giving the firm monopoly power.</p>	

	<p>Another possible barrier to entry is that of branding. Larger existing firms have the financial ability to engage in product differentiation through advertising due to their ability to reap supernormal profit in the short run. Smaller new entrants may not have the brand loyalty to compete with these firms especially if the drugs sold are similar (selling drugs whose patents have expired)</p> <p>Significant internal economies of scale can prevent the entry of new firms. The pharmaceutical industry is a highly capital intensive industry where huge amount of money is devoted into R&D of new drugs in order to dominate the market. Potential new entrants may not have the startup fund and researchers to enter the industry. Large firm are also able to spread out its R&D cost over a larger output. Large pharmaceutical firms can also reap marketing economies of scale where the firm can spread its advertising cost over a large output and lower its average cost.</p> <p>Safely regulation can be a form of barrier to entry for the pharmaceutical industry. Pharmaceutical firms are subjected to very stringent testing by authorities due to the huge potential health hazard a clinically unproven drug can bring to people. New firms may not have the expertise and technology to attain the necessary safety standards to enter the industry.</p>	
(ii)	<p>Discuss how the market structure of the pharmaceutical industry in China will affect the ability of firms in this industry to make excess profits in the long run when the Chinese government removes price controls.</p>	[10]
	<p>Introduction</p> <p>Explain how price control works in the pharmaceutical industry in China and its implication on the likely types of profits pharmaceutical firms are likely to make currently</p> <p>Price control in the pharmaceutical industry in China refers to a price ceiling or maximum price legislation in order to keep drug prices low so that medical care is affordable (Extract 3) Hence a price below the market equilibrium price is imposed by the government.</p> <p>As the market structure of the pharmaceutical industry in China currently is monopolistic competition due to weak barriers to entry, there are many small firms selling slightly differentiated drugs. Weak market power and the price ceiling meant that pharmaceutical firms in China are likely to make only normal profits (or a small amount of supernormal profit) currently.</p> <p>Development : Students are to discuss how the removal of price control would affect the ability of different pharmaceutical firms to make excess profit in the long run</p> <p>Key idea: The ability to make excess or supernormal profit in the long run</p>	

depends on the strength of the barriers of entry which would ultimately determine the market structure of the industry. The higher the barriers to entry, the more market power the firms have and the more able the firms can make excess profits in the long run.

1) Large foreign pharmaceutical firms

The removal of price controls would increase the market prices of drugs and **increase the amount of profits pharmaceutical firms would make. Bigger foreign firms may now also choose to enter** the Chinese pharmaceutical market and they are able to do so due to the weak barriers to entry. US pharmaceutical firms are likely to be bigger as the US pharmaceutical industry is an oligopolistic one. They **have the financial capabilities and technological know-how to innovate hence erecting higher barriers to entry in the industry.**

Initially the price controls stifled innovation as there are no incentives for firms to engage in R&D to create new drugs so that they could charge a higher price for it to make higher revenue. The price control will not cover the cost of R&D poured into the innovation. Now due to the removal of price controls, there is now incentive and ability to innovate. As the new drug has no or few substitutes, demand would be price inelastic and a price increase would result in a less than proportionate decrease in quantity demanded. Demand would also increase if the new drug is able to cure illness faster or even provide a cure where no existing drugs can do so. **Firms could then apply for patent** to be the sole manufacturers for an extended period of time and earn supernormal profit. These **supernormal profits can then be reinvested into R&D so that further innovation can take place and stronger barriers to entry can be erected.** This may then result in an oligopolistic market in the long run where firms are more able to make excess profits in the long run.

Furthermore, these large foreign pharmaceutical have **existing brand name and financial abilities to engage in large scale advertising which can create brand loyalty**, hence lowering the price elasticity of demand. Demand for the firm's product would also increase as consumers switch from rival firms. The firm can then increase price and receive more revenue. Assuming the revenue earned is more than the cost of the advertising, profit would increase. **The increased in brand loyalty also erect a higher barrier of entry in the industry and blocked off potential entrants, enhancing the ability to make excess profit in the long run.**

2) Existing firms

The removal of price control would increase the profit of the existing firms. To compete with the potential entrant of large foreign pharmaceutical firms, these firms could use the supernormal profit earned to engage in R&D to innovate new drugs as well as advertising. Hence the ability of these firms to make excess profits depends on

- a) The **extent of the increase in supernormal profit due to the removal of price control.** Both require huge monetary outlay and the

increase in supernormal profit may not be enough for the firms to engage in R&D or advertising.

- b) What the firms do with the increase in supernormal profit. **Without innovation, any advertising is likely to focus on branding where perceived differences are created between rival firms.** This would only result in **slight product differentiation and barriers of entry would remain weak.** Thus the firms are unlikely to make much supernormal profits in the long run
- c) **Whether the firms merged.** Merging allows these existing firms to compete more effectively with the larger foreign firms through reaping more internal economies of scale and tapping on existing brand loyalty. Smaller firms would not be able to compete on both quality of drugs and prices hence they would be driven out of the market.

Conclusion

The **capital intensive nature of the industry means that it is likely to be oligopolistic when the government removed price control and allows free market forces to work.** Hence the removal of price control enhance the firms' abilities to make excess profits in the long run but not all existing firms would be able to make excess profit in the long run as the smaller inefficient firms are unlikely to survive. Moreover, innovation takes time and there is no guarantee that it will be successful as there is high risk involved. Given that China is still a developing country with less expertise and infrastructure on R&D, the likelihood of successful innovation is reduced.

Whether Pharmaceutical firms in China can make excess profit in the long run when the Chinese government removes price controls also depends on

- 1) **Strength of patents:** The stronger the patent, the more likely innovation will take place and potential entrants are less able to enter the market. Hence the more able Pharmaceutical firms in China can make excess profit in the long run. Extract 3 pointed out that the regulation in china is not very strong as firms are able to cut corners using inappropriate material in their drug manufacturing process. Hence firms may not be willing to engage in R&D if they feel that the Intellectual Property law is not strong enough
- 2) **How open the Chinese government is towards foreign firms.** The more open the Chinese government is towards foreign firms, the more likely innovation will take place and potential entrants are less able to enter the market. Hence the more able Pharmaceutical firms in China can make excess profit in the long run. Although the entrant of big foreign pharmaceutical firms could bring about more innovation and thus dynamic efficiency, this would lead to the closure of domestic pharmaceutical firms and thus bring about unemployment. Hence additional government regulation (protectionism) may be imposed to protect the domestic producers and slow down the rate of innovation.

Level descriptors		Marks
L3	<ul style="list-style-type: none"> Developed and balanced analysis on the effects of the removal of price control on the ability of pharmaceutical firms in China to make excess profit in the long run in relation to the type of market structure the China pharmaceutical would be in the long run Well supported by case material 	7-8
L2	<ul style="list-style-type: none"> Balanced but underdeveloped analysis on the effects of the removal of price control on the ability of pharmaceutical firms in China to make excess profit in the long run <p>OR</p> <ul style="list-style-type: none"> Developed but one-sided analysis on the effects of the removal of price control on the ability of pharmaceutical firms in China to make excess profit in the long run Limited use of case material 	4-6
L1	<ul style="list-style-type: none"> Descriptive answer with no economic analysis and framework to support. Answer contains conceptual errors 	1-3
E2	<ul style="list-style-type: none"> Well-explained judgment about whether pharmaceutical firms in China can earn excess profits in the long run when price control is removed 	2
E1	<ul style="list-style-type: none"> Unexplained judgment about whether pharmaceutical firms in China can earn excess profits in the long run when price control is removed 	1

[Total: 30 marks]

2015 ACJC Prelim: H2 Case Study 2 (Japan and Greece)

(a) (i) Explain the theoretical relationship between economic growth and public debt. [2]

- There is an inverse relationship between economic growth and debt. When economic growth is positive and increasing, public debt should fall. [1]
- As the country experiences improving positive economic growth, national income increases, income tax revenue increases while expenditure on unemployment benefits falls, thus reducing the budget deficit and in turn the public debt levels. [1]

(ii) How far does Table 4 demonstrate this relationship? [3]

- The relationship is demonstrated in Greece in 2011 and 2013. During this period, GDP growth worsened while public sector debt was increasing as a percentage of GDP. [1]
- However, the relationship is not demonstrated in Greece in 2012, where GDP growth was improving but public sector debt increased as a percentage of GDP. [1]
- Conclusion: Thus the relationship is demonstrated in Table 4 to a large extent. [1]

(b) Consider the effects of negative real interest rate on an economy. [4]

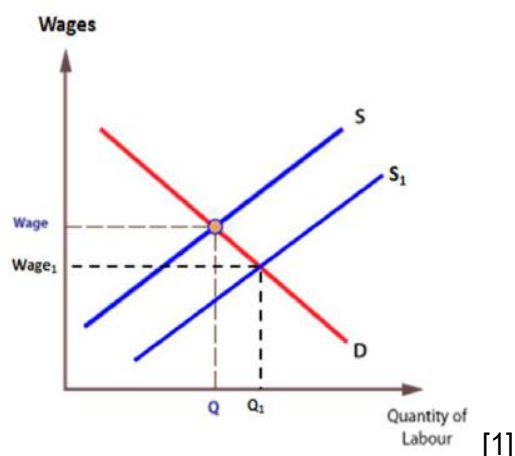
Positive Effects: [2]

- Borrowers no longer have to incur a cost for borrowing. In fact, borrowers are now able to earn returns from borrowing money. This will help to encourage borrowing by consumers and firms to increase consumption expenditure and investment levels.
- The increase in C and I would lead to an increase in AD and increase in national income through the multiplier effect. Economic growth increases, unemployment falls, and inflation levels increase.

Adverse Effects: [2]

- Savings are discouraged leading to less loanable funds available in banks. This could reduce future investment levels and affect the potential growth of the economy in the long run.
- Negative interest rates if used for a prolonged period of time may lead to overheating of the economy once it is out of recession. It may lead to high levels of consumption and investment which increases AD. This causes demand pull inflation if the economy is close to full capacity.

(c) (i) Using a diagram, explain why the structural reforms identified in Extract 7 “have left many Japanese workers cautious about how Abenomics would affect wages”. [3]



- According to extract 7, the structural reforms include relaxing migration rules. This could lead to an influx of foreign labour into Japan, increasing the supply of labour. [1]
- An increase in the supply of labour would result in a surplus of labour at the current wage rate. There would be a downward pressure on wages until a new equilibrium, with lower wages, is established in the market. Therefore the risk of falling wages would be a cause for concern for Japanese workers. [1]

(ii) **Assess the likely impact of the structural reforms on the Japanese economy.**

[8]

Introduction:

Explain the structural reforms:

- Opening up protected sectors which will increase competition. This might drive firms to increase productivity and to find more cost-efficient methods of production, which will lower cost of production for firms as well as to boost productive capacity in Japan (Extract 7).
- Relaxing labour laws are likely to lower wages, which will lower cost of production for firms (Extract 7).
- Technological innovations will also help to boost the productive capacity in Japan (Extract 7).

Body:

Structural reforms will bring about impact on SRAS, LRAS, AD of the Japanese economy, and hence the SOL of its citizens.

Point 1: Impact on SRAS

- By relaxing labour laws, this will increase competition for jobs → Lower wages → lower cost of production → increase in SRAS → growth in the economy

Point 2: Impact on LRAS

- Opening up protected sectors and relaxing labour laws will attract foreign firms to invest in Japan due to lower cost of production → increase investment → growth in LRAS → potential growth
- Opening up protected sectors and technological innovations will increase productivity of factors of production → growth in LRAS → potential growth

Point 3: Impact on AD

- Opening up protected sectors and relaxing labour laws will attract foreign firms to invest in Japan due to lower cost of production → attracts foreign firms to invest in Japan → increase investment → growth in AD → actual growth + creation of jobs and lower unemployment rate (demand deficient unemployment)
- Opening up protected sectors and relaxing labour laws will lower COP → Exports also become more price competitive → growth in exports → actual growth and improvement of BOP (current account)
- While structural reforms will expand the productive capacity of the country, given the current state of Japan, structural reforms may worsen the problem of deflation. Japan is already suffering from very low levels of inflation, with CPI growth falling below 0 in 2010 and 2011. Expanding the long-run aggregate supply through structural reforms will lead to further fall in general price levels. This will cause Japan to be stuck in a deflationary spiral where consumers expect prices to fall further and delay expenditure. It also reduces business confidence in the economy, further reducing investment levels. This will lead to a fall in AD and actual growth.
- By relaxing labour laws, this will increase competition for jobs → Lower wages → lower cost of production. While firms benefit from lower cost of production, Japanese employees may suffer from lower wages due to the loosening labour rules (Extract 7). Existing employees may be fired more easily leading to loss of income. This would lead to lower material standard of living for the Japanese. This could result in a fall in consumption expenditure by households and may lead to a fall in AD → fall in actual growth.

Synthesis:

- Structural reforms are likely to bring about more harm than good in the short run given that the current situation of Japanese economy is that of unhealthy low level of inflation and slow growth in Japan.
- However, since structural reforms is used together with other demand management policies, such as the first two arrows of expansionary fiscal policy and quantitative easing (as mentioned in extract 7), it may be beneficial to Japan in the long run. This is because it targets the root problem of poor expectations in the economy.

Level	Knowledge, Application, Understanding and Analysis	Marks
L3	<ul style="list-style-type: none"> • Well-developed and balanced explanation of both positive and negative impact of structural reforms on the Japanese economy • Impact on both AD and AS explained • Good reference to data and context given • Weighs the positive and negative impact of structural reforms to come to an overall conclusion 	5-6
L2	<ul style="list-style-type: none"> • Underdeveloped explanation of both positive and negative 	3-4

	<p>impact of structural reforms on the Japanese economy</p> <ul style="list-style-type: none"> • One-sided but developed explanation of either positive impact OR negative impact • Impact on either AD or AS explained • Some reference to the context given 	
L1	<ul style="list-style-type: none"> • Descriptive answer lacking economic analysis • Points are largely irrelevant • Pure listing of points 	1-2
E2	<ul style="list-style-type: none"> • Reasoned judgement weighing the positive and negative impact of structural reforms on the Japanese economy • E.g. Structural reforms is likely to bring more harm than good in the short run, if not complemented with other demand-management policies. 	2
E1	<ul style="list-style-type: none"> • Unreasoned judgement 	1

(d) With reference to the data, discuss whether Japan should adopt similar policies as Greece to reduce their public debt levels and achieve economic growth. [10]

Introduction:

- Explain the various policies that Greece currently adopts to reduce debt and achieve economic growth
 - Austerity measures therefore required to repay debts and also boost confidence in the government to achieve economic growth

Body:

Thesis: Japan should adopt similar policies as Greece.

- Explain the similarities in the problems faced by Greece and Japan that may hence require the same policy tools:
 - *Greece: (as seen in Table 4)*
 - High level of debt (up to 156%), debt is held externally which results in obligations to repay debts and to avoid loss due to interest payments.
 - Negative real GDP growth from 2010-2013
 - *Japan: (as seen in Table 3)*
 - High level of debt (up to 218%), but most of the debt is held domestically, therefore there is less leakage from the economy
 - Low Real GDP Growth at 1.6% in 2013
- In light of similar problems shared by both Japan and Greece, austerity measures seem appropriate for Japan to reduce debt and achieve economic growth.
 - Cutting government spending and increasing taxes seems more appropriate to reduce Japan's debt level. However, this will be

- contractionary and will result in negative growth in the short run.
- Yet by reducing public debt levels in Japan, this may start to improve business and consumer sentiments which will increase C and I and increase AD and NY in the long run (Extract 5).
- However, austerity measures will have a contractionary effect on Greece's economy and will result in negative growth in the short run. By cutting G and increasing T, this will cause a fall in AD and NY. Also, falling GDP will also cause debt-to-GDP ratio to look less favourable in Greece (Extract 5). Hence Japan should not adopt similar policies as Greece but adopt alternative policies to generate economic growth in both the short and long run instead.

Anti-thesis : Japan should not adopt similar policies to Greece but other policies that was mentioned in Abenomics in Extract 7

- Explain the various policies that Japan should adopt instead:

A: Japan should not adopt similar policies to Greece but instead adopt DD-management policies to reduce their public debt levels and achieve economic growth (Extract 7)

- Expansionary MP by increasing domestic money ss –Quantitative Easing or lowering domestic int rates – describe mechanism & its impact on C & I
 - The impact: Rise in AD would promote the level of economic activity that leads to greater employment of resources (esp labour – derived dd) leading to a magnified rise in NY due to the multiplier effect–achieving actual growth.
 - Contextualisation/Link to the question:
 - In light of Japan's high debt level, since monetary policy does not require government spending, it is an appropriate policy tool for the Japanese government to use in order to stimulate aggregate demand.
 - Though, expansionary interest rate policy may seem to work, but in reality the Japanese economy is facing a liquidity trap - interest rate is so low that it is currently in the negative region. Even with low interest rates, confidence in the economy remains low.

OR

- Expansionary exchange rate policy by depreciating the external value of the Yen – describe mechanism & its impact on net Xs
 - The impact: Rise in AD would promote the level of economic activity that leads to greater employment of resources (esp labour – derived dd) leading to a magnified rise in NY due to the multiplier effect, achieving economic growth.
 - Contextualisation/Link to the question:
 - Since expansionary interest rate policy will not be effective in Japan due to weak domestic confidence, exchange rate policy will be an alternative policy Japan can consider.
 - Exchange rate policy will be especially effective since Japan cannot rely on domestic demand for growth during a recession, when business and consumer confidence is weak.
 - Due to Japan's trade dependence, the most appropriate dd-mgt policy for Japan is expansionary exchange rate policy but the impact of this must be able to overcome the contractionary impact of the eroding market confidence - offsetting the fall in C & I.

- Expansionary FP by increasing G more than the contractionary impact of the sales tax (ie. fall in C & I) – describe mechanism & its net impact on AD
 - The impact: Rise in AD would promote the level of economic activity that leads to greater employment of resources (esp labour – derived dd) leading to a magnified rise in NY due to the multiplier effect, achieving economic growth.
 - Contextualisation/Link to the question:
 - But expansionary fiscal policy need not lead to a worsening of debt and hence it may still be appropriate. Since the economy is in recession, the government should not try to reduce its debt yet, but wait for the economy to recover, as growth will help to alleviate the debt levels.
- Hence it will be more appropriate for Japan to use expansionary demand management policies to reduce public debt and achieve economic growth. Growth will also help to reduce public debt levels in the long run. As the country experiences positive economic growth, national income increases and as a result, income tax revenue increases. In the same way, through increasing tax incentives/concessions, this will increase the profitability of firms, which will also increase tax revenue and thus reduce budget deficit. Also, as the country experiences increase in economic growth rates, this will lead to higher production and hence higher demand for labour, increasing employment levels. This will cause expenditure on unemployment benefits to fall, thus reducing the budget deficit and in turn, public debt level falls.
- Unlike Greece, most of Japan's debt is held domestically (Extract 8). This means that it is not so urgent to reduce their debt now. This is because domestic debt will not have an impact on Japan's BOP and will not lead to a depreciation of its currency. Contrary to Greece, Japan does not have to worry about its debt obligation to external parties and to pay back the interest for their loans. However in Japan's case, its priority will be to allow their economy to recover through expansionary DD-management policies first and to repay their debt later.
- Thus Japan should not adopt the austerity measures like Greece, but to implement DD-management policies to reduce their debt levels and achieve economic growth instead.

However, Japan needs to use SS-side policies to address the root problem of poor expectations in the economy in order to get out of the recession and ensure sustainable growth in the long run as well.

B: Japan should not adopt similar policies to Greece but instead *adopt structural reforms (SS-side policies) to reduce their public debt levels and achieve economic growth (Extract 7)*

- Structural reforms are necessary due to existing rigidities such as in the labour market.
 - Structural reform as mentioned in c (ii) will help to lower cost of production through lower wages. This will increase SRAS and help boost economic growth
 - Exports will be more competitive as well, increasing AD, achieving economic growth.
 - Technological improvements and relaxed immigration laws allow for potential growth which will help increase business confidence and grow the economy in the long run
- However, for an economy like Japan which is facing a chronic govt debt, as well as falling external demand, the odds are against Japan in being able to get the funds to incentivize retraining to enhance the labour productivity level or to generate adequate

domestic demand to pursue EG of both types.

- While some supply side policies may require spending by the government, they are able to solve the root problem in the long run and are more sustainable (Extract 6). These policies are more sustainable as they are self-financing. By channelling funds to training workers, this will increase productivity and generate higher income in the long-run. Hence even though these policies may incur higher spending in the short-run and worsen debt levels, this will generate higher income and economic growth in the long-run, which can be used to repay Japan's debt. Hence, expansionary fiscal and monetary policy are needed to complement these structural reforms to reduce public debt levels and achieve economic growth in both the short and long run.

Synthesis/Conclusion:

- Whether Japan should adopt similar policies as Greece or not depends on how similar their economic problems of slow growth and their nature of debt.
- Hence even though Japan is plagued with similar problems in Greece, their policies to reduce debt and achieve economic growth differs greatly. These diverging policies reflect different economic fundamentals, such as differing rates of economic growth and different nature of debt.
- As Greece's debt is mainly held externally while Japan's debt is held domestically, Japan's main priority will be to increase economic growth first instead of reducing public debt, while there was international pressure on Greece to prioritise in cutting its debt.
- Since Greece and Japan have differing economic fundamentals, thus Japan should not adopt the same policies as Greece to reduce debt and achieve economic growth.
- In Japan's case the most appropriate policy measure is not simply a choice between dd-side or ss-side, but whether any macroeconomic policy measure undertaken by the Japanese government would actually achieve any degree of EG that would create a positive ripple-effect (multiplier-accelerator effect) that would gain momentum to cure all the chronic components of the ailing economy albeit one at a time.

Level	Knowledge, Application, Understanding and Analysis	Marks
L3	<ul style="list-style-type: none"> • Balanced and developed discussion of whether Japan should adopt the same policies as Greece to reduce public debt levels and achieve economic growth • Answer exhibits consideration and comparison of the different characteristics of Japan and Greece i.e differing root causes of their debt and negative economic growth • Good reference to data and context given 	7-8
L2	<ul style="list-style-type: none"> • Developed but one-sided discussion of Japan should OR should not adopt the same policies as Greece • Undeveloped but balanced discussion of whether Japan should adopt the same policies as Greece • Answer lacks comparison of different characteristics of Japan and Greece. • Limited reference to data and context given 	4-6
L1	<ul style="list-style-type: none"> • Descriptive answer lacking economic analysis • Points are largely irrelevant • Pure listing of points 	1-3
E2	<ul style="list-style-type: none"> • Reasoned judgement on appropriateness of Greece's policies for 	2

	Japan based on comparison of different root causes of their debt and negative growth for e.g different sources of debt in Japan and Greece.	
E1	<ul style="list-style-type: none">• Unreasoned judgement	1

[Total: 30]

ANGLO-CHINESE JUNIOR COLLEGE
2015 JC2 PRELIMINARY EXAMINATIONS



ECONOMICS

9732/02

Higher 2

25 August 2015

Paper 2: Essay Questions

2 hours 15 minutes

Additional materials: Answer paper

READ THESE INSTRUCTIONS FIRST

Write your index number and name on all the work you hand in.
Write in dark blue or black pen on both sides of the paper.
You may use a soft pencil for any diagrams, graphs or rough working.
Do not use staples, paper clips, highlighters, glue or correction fluid/tape.

Answer **three** questions in total, of which **one** must be from Section A, **one** from Section B and **one** from **either** Section A or Section B.

Begin each question on a **fresh** sheet of paper.

The number of marks is given in brackets [] at the end of each question or part question.

At the end of the examination, arrange your answers in sequence of the question number.

Fasten your answers using the cover sheets provided.

This document consists of **3** printed pages and **1** blank page.
Please check that your question paper is complete.

Answer **three** questions in total.

Section A

One or two of your three chosen questions must be from this section.

- 1 The oil price has fallen by more than 40%. The Organisation of Petroleum Exporting Countries (OPEC) failed to reach an agreement on production curbs. Demand is low because of weak economic activities, and a growing switch away from oil to other fuels.

Source: *The Economist*, 8 December 2014

Using economic analysis, discuss how these events are likely to impact the market for oil and related markets. [25]

- 2 (a) Explain how society can benefit from mergers of firms. [10]

(b) Globalisation increases the level of competition among firms in a country, thereby making markets more competitive.
Discuss the extent to which merging is the best strategy for domestic firms to deal with the threat of globalization. [15]

- 3 The Gini coefficient decreased from 0.478 in 2012 to 0.463 in 2013. After adjusting for Government transfers and taxes, the Gini coefficient in 2013 fell from 0.463 to 0.412, reflecting the redistributive effect of Government transfers.

Source: Singapore Department of Statistics, 18 February 2014

(a) Explain how labour immobility and market dominance may lead to income inequality. [10]

(b) Discuss the economic role of the Singapore government in addressing income inequality. [15]

Section B

One or two of your three chosen questions must be from this section.

- 4 (a) Explain the possible causes of an increase in household consumption. [10]
- (b) Assess the view that raising household consumption is more effective than encouraging exports in achieving economic growth. [15]
- 5 As our economy develops and undergoes major demographic shifts, sustaining high productivity growth will become harder.

Source: Singapore Population White Paper, January 2013

- (a) Explain the consequences of ageing population and falling productivity growth on the Singapore economy. [10]
- (b) In view of these problems, assess the relevance of supply-side policy as Singapore continues to face the problems of ageing population and falling productivity growth. [15]
- 6 Assess the extent to which the improvement of standard of living in Singapore is dependent on the openness of the economy. [25]

- 1 The oil price has fallen by more than 40%. The Organisation of Petroleum Exporting Countries (OPEC) failed to reach an agreement on production curbs. Demand is low because of weak economic activities, and a growing switch away from oil to other fuels. Source: *The Economist*, 8 December 2014

Using economic analysis, discuss how these events are likely to impact the market for oil and related markets. [25]

Suggested approach

Events given:

- OPEC failed to agree on production curb – a short term / current impact
- Weak economic activities led to low demand for oil – short term / current impact
- Oil price fallen by more than 40% (should be an outcome of above two events)
- Growing switch away from oil to other fuels – short and long term impact

Only students who are familiar with the crude oil market and are able to identify the related markets should attempt this question. In fact, for all demand and supply questions, do not attempt them if you are not sure about the product. There is no room for a theoretical answer. This kind of question definitely weighs heavily on real life application and analysis.

Background knowledge:

- *OPEC member countries produce about 40 percent of the world's crude oil. Equally important to global prices, OPEC's oil exports represent about 60 percent of the total petroleum traded internationally. Because of this market share, OPEC's actions can, and do, influence international oil prices. In particular, indications of changes in crude oil production from Saudi Arabia, OPEC's largest producer, frequently affect oil prices. (from US Energy Information Analysis, EIA)*

Impact of events on oil market in the short term / current impact

- OPEC failed to agree on production curb
 - supply of crude oil will not decrease
 - neither will supply increase as price of oil is currently experiencing a decrease of more than 40%
 - world supply will remain largely unchanged – other oil exporting countries will not be able to influence world supply
 - supply of oil is price inelastic in demand as storage is costly and production cannot be easily increased or reduced as the rate of oil extracted from the oil wells cannot be controlled easily
 - supply curve remains at SS_0
- Weak economic activities led to low demand for oil
 - demand for oil is derived from demand for all goods and services as power and energy is needed to the produce of all goods and services
 - globalization has led to the economies to be interconnected and dependent on each other through trade and investment flows
 - weak economic activities in major economies like US, China and Eurozone will have ripple effect on other economies leading to weak global demand
 - the low of demand for goods and services will mean a low and falling demand for oil as most firms all over the world cut down on production
 - demand curve shifts right from DD_0 to DD_1
- Growing switch away from oil to other fuels
 - this happens mainly in the transportation industry, ground and air and also in

- the power generation industry
- many years of past and current research and development have led to the availability of alternative fuels for the above purposes, especially in the area of ground transportation and power generation
- demand for oil is likely to decrease as consumers switch to alternative fuels to power their vehicles and firms switch to cleaner forms of energy e.g. wind, gas, hydro and nuclear power
- contribute to shifting demand to DD_1
- conclude the above discussion using a demand and supply diagram to explain a situation of surplus at original price leading to a significant downward pressure on price (due to a price inelastic supply – unable to cut back sufficiently on quantity supplied as price falls) and a lower equilibrium quantity.
- a lower price and a lower quantity sold will mean a lower revenue for oil exporting countries but for buyers like oil refining firms, their expenditure on oil inputs will thus be lower

Impact of switch away from oil to other fuels on oil market in the long term

- extend discussion into the long term
- environmental degradation and global efforts in sustainable economic development led to Kyoto Protocol and C40 (C40 Cities Climate Leadership Group)
- governments in the world are committed to switching away from oil to other fuels
- continued efforts in R&D in search of cleaner alternative fuel will in future allow for less dependence and less use of oil for power and energy
- highly likely that such an event will contribute towards slowing the rate of increase in demand for oil when world demand for oil increases when economies get back on their long term economic growth path
- will have the impact of reducing rate of price increase and slow down the increase in oil consumption too

Markets related to oil market

Background knowledge:

Oil refineries buy crude oil to refine them into various petroleum products.

Petroleum products include transportation fuels, fuel oils for heating and electricity generation, asphalt and road oil, and the feedstocks used to make chemicals, plastics, and synthetic materials found in nearly everything we use today. About 74% of the 6.89 billion barrels of petroleum that we used in 2013 were gasoline (petrol), heating oil/diesel fuel, and jet fuel.

Petroleum products and their relative share of total U.S. petroleum consumption in 2013:

- Gasoline (petrol) 46%
- Heating Oil/Diesel Fuel 20%
- Jet Fuel (Kerosene) 8%
- Propane/Propylene 7%
- NGL & LRG¹ 6%
- Still Gas 4%
- Students need to identify at least two related markets that will allow them to apply different economic concepts and show different impacts the given events can have on different markets
- Oil being crude oil is not processed at all and so the buyers of crude oil will be oil refining firms like Shell. Oil refining firms are thus suppliers in many different petroleum product markets

- **Diesel / petrol market**

- input cost (oil price) has fallen by 40% which would mean the firm is able to supply much more at the same price, that is increase the supply of petrol and diesel
- weak economic activities will mean slow or negative economic growth where household incomes may be falling and unemployment rate increasing
- private transport is a normal good with positive income elasticity hence demands for petrol and diesel are likely to fall with a fall in income levels (make fewer journeys with private transport)
- with a decrease in demand and increase in supply of petrol and diesel, the prices for both products are likely to see a fall due to a surplus and less of both good will be purchased
- diesel, however, may have a different outcome
 - diesel cars can run on petroleum diesel or biodiesel
 - petroleum diesel may be an inferior good with negative income elasticity as clean fuel is more expensive and hence a luxury to be able to afford to be clean
 - decrease in income level will cause a switch from biodiesel to petroleum diesel, causing an increase in demand for petroleum diesel and a decrease in demand for biodiesel
 - increase in demand for petroleum diesel will be less than the increase in supply of diesel as the input cost has fallen drastically (40%) causing a significant increase in supply
 - eventually, the decrease in price of petroleum diesel will be less than the decrease in petrol prices
- suppliers are able to increase their supply significantly but they may not be willing to do so (do not want to pass the lower cost to consumers)
 - oil being a primary product is both price inelastic in demand and supply thereby causing oil price to fluctuate a great deal as historical oil price would attest to
 - suppliers need to hedge against such volatility in oil price and indirectly their cost of production
 - suppliers will not be willing to immediately increase their supply significantly but may increase supply nominally hence price of petrol will not fall as much as if no hedging was undertaken by suppliers
 - when the fall in oil price occurs over a longer period of time and suppliers feels they have sufficiently hedge against future oil price increase, only then will supply begin to increase further bringing about a larger decrease in price of petrol

- **Aviation / air travel market**

- Jet fuel used for aviation industry
- Likewise, lower oil price will lower production cost of jet fuel thereby increasing the supply of it
- Oil refiners will most likely pass the cost savings to airlines as they know that in times of oil price hike, they are able to pass higher cost to the airlines which will then pass the higher fuel cost to consumers in the form of higher fuel charge
- again, weak economic activities will cause demand for air travel to decrease (positive income elastic demand for air travel)
- significant increase in supply of air travel (follow through the discussion)

- **Jet fuel market**

- **switch away from oil to other fuels**
 - with more economies developing and global trade and investments set to

increase in the future, demand for air travel is predicted to increase significantly, fear of pollution

- aviation industry has committed themselves to a plan to reduce emission significantly through the use of greener biojet fuel
- R&D in this area has been encouraging and some airlines and airport are already using biojet fuel
- In future, demand for jet fuel will decline and if supply remains, there will be less jet fuel bought and sold at a lower price

Other markets that students may consider

- Biofuel market (for both diesel and biojet diesel)
- Power generation market i.e. market for generation of electricity
 - Power and energy generation from oil, biofuel, wind, hydro (water), solar
- Plastics market

	Descriptors	Marks
L3	<ul style="list-style-type: none"> • consistently accurate use of economic concepts • has good variety of impact of all events on at least three different markets • links between related markets are clearly established and explained • able to distinguish between long term and short term impacts 	19-21
	<ul style="list-style-type: none"> • good and accurate use of demand, supply and elasticity concepts • choice of markets allows for a discussion of different impacts of events given in the stem • impact of markets well linked to different events given • considers long term vs short term impacts 	15-18
L2	<ul style="list-style-type: none"> • Oil market and a related market • accurate use of basic demand and supply concepts • may include elasticity concepts but application of these concepts are superficial • analysis of impact on various markets lack depth (one dimensional e.g. one event on one market) • may discuss long term and short term impacts 	12-14
	<ul style="list-style-type: none"> • correctly applies basic demand and supply concepts shifts and movement along demand and supply • applied events on markets where answer as a whole is generally relevant but stated rather than explained • conceptual explanation contains some inaccuracies 	10-11
L1	<ul style="list-style-type: none"> • answers may refer to demand and supply but with poor understanding of the concepts • basic errors in demand and supply concepts especially demand and quantity demanded and supply and quantity supplied • largely superficial understanding of demand and supply concepts • does not address all events given in the stem 	5-9
	<ul style="list-style-type: none"> • Most parts of answer irrelevant or illogical in reasoning • No use of demand and supply concepts 	1-4
E2	<ul style="list-style-type: none"> • a reasoned judgement of what would be the impact on the markets 	3-4
E1	<ul style="list-style-type: none"> • a statement of what may happen without good reasoning 	1-2

- 2 (a) Explain how society can benefit from mergers of firms. [10]
- (b) Globalisation increases the level of competition among firms in a country, thereby making markets more competitive. Discuss the extent to which merging is the best strategy for domestic firms to deal with the threat of globalization. [15]

Introduction

Society: consumers, the merged firms and other firms

Definition of Mergers: A voluntary agreement between two or more firms to combine their assets into a single firm.

Types of mergers: Horizontal and vertical mergers; lateral integration and conglomeration

Benefits of mergers: Producers of the merged firms may gain higher revenue and lower COP while consumers could benefit in the form of lower price, better and more variety products.

BodyLower average COP and Price

Mergers of firms could lead to internal EOS benefitting both consumers and producers. When firms such as US Airways and American Airlines merged, the newly merged firm is now larger in size and could enjoy internal EOS, which is cost savings arising from the benefits of expanding the size of the firm. The new airline company could enjoy marketing EOS where the firm can promote sales through bulk advertising of the multiple flights available within the country and between countries. This allows the new merged airline company to achieve larger customer base and higher sales. Thus, the large firm's advertising costs can be spread over a larger output sold, lowering the average COP benefitting the merged firms with higher profit. Consumers will also gain from such mergers too. As the average COP is lowered, the new airline could pass on the cost saving to the consumers in the form of lower price, increasing consumer surplus. Thus mergers could benefit both consumers and producers.

Dynamic efficiency

In addition to lower average COP and pricing, society may also benefit from more variety of products. The newly merged firm will acquire existing brand loyalty and gain larger consumer base brought along by the original firms. The overall larger consumer base could bring about higher total revenue for the merged firm, which could be used to carry out research and development on better products. The larger market share of the merged firm and better product produced from R&D may prompt other firms to also conduct R&D which will further increase the variety of goods and services in the country, benefitting the consumers. This situation is present in the airline industry when we see how the merger of US Airways and American Airlines prompt many competitor airlines such as Delta Airlines and Phoenix Air reviewing their airline services to improve their services and providing attractive loyalty program for their customers.

While both producer of the merged firm and consumer may benefit from the merger, it is likely that the merged firms may gain more out of the merger. The better products from the R&D and few competitors in the market could make the demand for their products more price inelastic. Thus the merged firm with their stronger market power and price inelastic demand curve could increase their price, leading to a less than proportionate fall in quantity demanded for the products and hence an increase in total revenue and possibly profit, assuming no change in the COP. Overall we would see that the merged firm benefited from such merger. However, consumer may also benefit despite this increase in the price. With increase profit, there is also a possibility that the merged firm use it for further R&D creating better products for the consumers, benefitting the consumers at the same time.

Conclusion

Mergers could benefit the society in various ways such as lower COP and price as well as more variety of products and higher profit. However, the merged firms would likely benefit more out of the merger as they are likely to enjoy lower COP, higher TR and hence increased profit. Consumers may possibly gain from the merger but the extent of the benefits would depend on the competitiveness as well as the contestability of the market. If the merged firms exist in a highly competitive market and/or contestability, the merged firms may most likely pass on the lower COP to the consumer in the form of lower price and carry out R&D.

Level Descriptors for 2(a)		
L3	For a comprehensive and well-developed answer explaining the benefits of mergers to both the consumers and producers, supported with appropriate examples.	7 – 10
L2	For an answer that shows understanding of the benefits of mergers but is lacking in elaboration. <u>Or</u> Well-developed answer explaining the benefits of mergers to either the consumers or producers, supported with appropriate examples.	5 – 6
L1	For an answer that is too general and mere listing of benefits without elaboration. Answer contains conceptual errors.	1 – 4

- b) Globalization increases the level of competition among firms in a country, thereby making markets more competitive.
Discuss the extent to which merging is the best strategy for domestic firms to deal with the threat of globalization. [15]

Introduction

Globalization sees the development of an increasingly global economy marked especially by free trade, free flow of capital, and the tapping of cheaper foreign labour markets. With globalisation, countries see an expansion of the volume and variety of cross-border transactions of goods and services, and in international capital flows, as well as greater mobility of labour between countries. As a result of globalization, domestic firms may find themselves facing stronger competition when the country allows for a greater volume and variety of goods and services into the country and foreign firms setting up their companies in the country. In response to this stronger competition from larger foreign firms, domestic firms may consider merger as a possible strategy to deal with such competition.

Body

Argument: Merger could be the best strategy

1. Threats of competition: Lower price & better products

- Foreign firms tend to be larger and able to better exploit EOS. Thus they are capable of pricing their goods at a relatively lower price than smaller domestic firms. Furthermore, the foreign firms are likely to have larger consumer base, allowing the firms to earn higher TR and possibly higher profit. This means that those foreign firms are in a better position than those domestic firms to engage in price competition to drive out competition. Given such threat, it may be a better option for domestic firms to merge to order to better compete against foreign firms.
- Domestic firms do not just face competition in the form of lower price. They may also face competition in the form of possible better quality product brought over by the foreign firms. Foreign firms with their sufficient profit could carry out R&D which might lead to better efficient production method and products. This would make foreign products better and possibly cheaper substitutes to domestic products.

2. Benefits of mergers: Increase competitiveness (lower price & better products)

- In face of with such competition, it would be better for domestic firms to merge to so that they could better exploit EOS. In Singapore, domestic banks were encouraged to merge when Singapore government was contemplating the move to allow foreign banks into the country. And subsequently, banks such as OCBC and Keppel Bank, UOB and OUB, DBS and POSB merged before entry of foreign banks. Such merger between banks would allow the firms to better enjoy internal EOS allowing domestic banks to provide banking service at a competitive rate compare to foreign banks.

- In addition to lower cost, the merged banks will likely have larger revenue and profit allowing domestic firms to face any potential price competition by foreign firms.
- The merged firms could also utilise their larger profit for R&D and possibly produce better products and more efficient production method. This would allow domestic firms to thrive when faced with foreign competition. Hence merger would be a good strategy to adopt when face with foreign competition.

Evaluation

Given the threat of lower price and better product from the foreign firms, it could be the best approach as this method of growth allows the firms to grow large quickly given a short time. Internal growth through higher sales and profit without merger would take a longer time especially if the government has removed the barriers to trade, allowing inflow of foreign products and foreign firms. Thus mergers could be the best approach when faced by competition.

Counter Argument: May not be the best approach (Disadvantage of mergers)

- i) Furthermore the larger domestic firms may not be able to respond quickly to the changing needs of the consumers. Small firms may be able to provide personalised services to meet the needs of the consumers which would put them at an advantage compare to the foreign firms who may be larger and unable to response quickly to the needs of consumers. The small domestic firms can therefore target niche domestic markets to lower their PED and raise their demand to be profitable. Hence merger may not suite such firms.
- ii) While benefits such as internal EOS and higher profit could be reaped through merger, not all merged firms will thrive and survive. Merger between firms may lead to dis-EOS where firms experience cost disadvantages from the expansion. The larger firm may be bogged down by rules, regulations and standard procedures and as such decision making is slowed down by red-tape and bureaucracy. This results in low productivity and increased costs which then prevents domestic firms from competing effectively against foreign firms. Hence mergers may not be the best strategy to deal with competition.
- iii) Not all domestic firms should see merger as the best approach to compete against foreign firms. It would depend on the types of industry and the MES of the firms. The MES gives us a rough measure of the appropriate degree of competition in an industry. Expressing MES as a percentage of total output gives an indication of how competitive the industry could be. If the MES is small relative to industry demand, the degree of competition in that industry is likely to be high because there is room for many efficient small sized plants. Such firms should not merge and should adopt alternative approach to compete against foreign firms. Mergers would only cause them to incur diseconomies of scale.
- iv) In additional to these potential problems, the merged firms will be holding larger market share, possibly becoming a dominant firm or even a monopoly in the market. Such large firm may be perceived as a potential threat to the welfare of the society and could be forced to adhere to stricter control and scrutinization of the government and/or anti-competition bodies. Such stricter control may prevent the merged firms from focusing their attention on increasing their competitiveness against the foreign competitors.

5. Other strateies

Internal growth – price and non-price competition

- Since not all firms should merge, such firms should consider alternative approach internal growth through higher sales and lower cost. Firms can increase R&D on cost efficient production process and better products. Alternatively, firms could also advertise their products increasing their brand loyalty and capturing new markets. On one hand, it would increase the quantity and sales of the product, increasing the firms' revenue.
- On the other hand, it would make the demand for the firms' products more price inelastic and cross elastic as the foreign products would be perceived as a weaker substitutes to domestic

products. This would reduce the possibility of consumers switching to foreign demand when foreign firms reduce the price of their products. Hence when prices of foreign products decrease, quantity demanded for domestic goods will reduce by less than proportionate and this prevents the huge loss of revenue and hence profit. This will allow the domestic firms to survive against foreign firms without having to merge.

Conclusion

While domestic firms can grow internally, it will definitely take time for it grow larger and to carry out R&D. This would have been possible if there is additional help or intervention by the government. Subsidies could be given to firms to help increase their competitiveness. These alternative approaches of R&D and advertisement are possible strategies which firms can turn to instead of merger.

The success and benefits from the merger also depends on the type of industry and type of merger. For example, firm’s that are involved in horizontal mergers are more likely to gain economies of scale as opposed to those involved in lateral mergers.

	Descriptors	Marks
L3	Accurate, well-developed and balanced analysis which considers these: <ul style="list-style-type: none"> ▪ The threats pose to domestic firms due to globalization ▪ Mergers allow domestic firms to better deal with the threats of globalization ▪ Alternative strategies could be adopted to deal with the threats of globalization ▪ Able to recognize that mergers may and may not be the best strategy. 	9-11
L2	<ul style="list-style-type: none"> ▪ Balanced but primarily undeveloped arguments OR <ul style="list-style-type: none"> ▪ Developed analysis but one-sided 	6-8
L1	<ul style="list-style-type: none"> ▪ Primarily descriptive, not using economic concepts/terms in reasoning ▪ Limited explanation and elaboration. ▪ Major errors although there is relevance to question 	3-5
	<ul style="list-style-type: none"> ▪ Most parts irrelevant to question 	1-2
E2	Well-reasoned and supported judgement, using valid factors/criteria to assess whether merger is the best approach.	3-4
E1	<ul style="list-style-type: none"> • Lack of clarity in focus of evaluation • Making some judgement, but mainly not supported 	1-2

- 3 The Gini coefficient decreased from 0.478 in 2012 to 0.463 in 2013. After adjusting for Government transfers and taxes, the Gini coefficient in 2013 fell from 0.463 to 0.412, reflecting the redistributive effect of Government transfers.

Source: Singapore Department of Statistics, 18 February 2014

- (a) Explain how labour immobility and market dominance may lead to income inequality. [10]
- (b) Discuss the economic role of the Singapore government in addressing income inequality. [15]

Define the concepts of labour immobility, market dominance and income inequality.

- Labour immobility:
Movements of factors of production, in this case, labour movement are limited due to lack of skills to enter different industries (occupational labour immobility) or hindered by geographical barriers (geographical immobility) → labour not efficiently allocated across industries or country.
- Market dominance:
Due to lack of competition, firms have the ability to charge higher price and reduce output → under-allocation of resources.
- Income inequality:
Refers to the extent to which income is distributed in an uneven manner among a population (illustrating the gap between the rich and poor). Unequal distribution of income and wealth adversely affect the ability of lower income group to consume goods while high income group is able to pay and obtain the goods → market failed to achieve equitable distribution of goods → Gini coefficient can be used to assess disparity in income inequality.

Explain how labour immobility lead to income inequality

Occupational immobility

- **Rapid technological advancement** → gives rise to jobs requiring new skills while making other jobs obsolete → rise in the demand for skilled labour (as shown in Figure 1) and fall in the demand for the unskilled labour (as shown in Figure 2). E.g. Singapore economy transited from low-value adding manufacturing to an economy that demands for knowledge, innovation and service-based economy.

Labours face difficulty in seeking employment opportunities in other industries when **economy undergoes structural changes** → skills that labour possesses are not needed in growing industries → mismatch between skills required from unemployed labour and skills required by industries/employers → structural unemployment.

Wages like any other product markets are determined by the forces of demand and supply.

Wages of skilled labour tend to be higher than unskilled labour → because **demand for skilled labour from higher-value adding industry increases more rapidly** (DD for skilled labour shift right in Figure 1) while the **demand for the low-skilled labour falls** (DD for unskilled labour shift left in Figure 2).

Figure 1

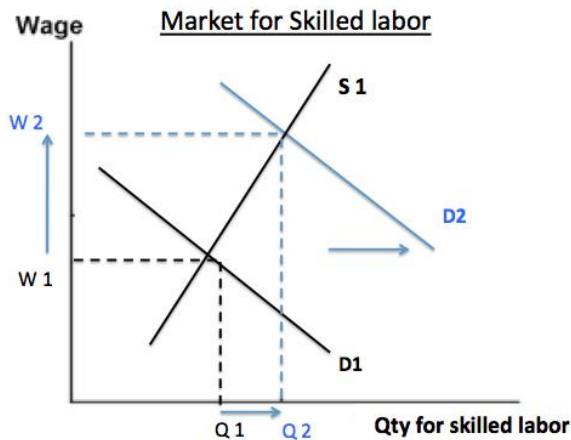
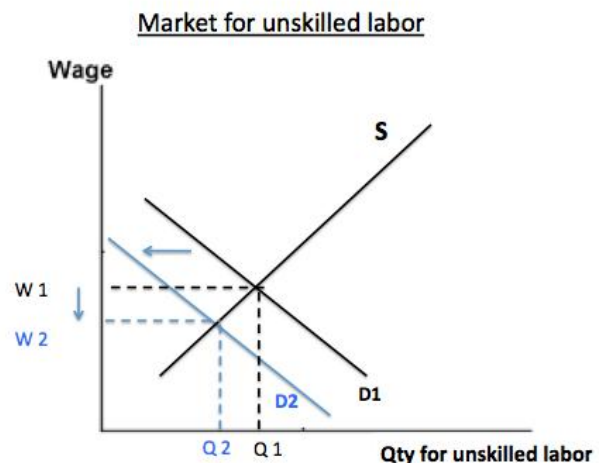


Figure 2



- **Wage gap widen further given that the supply of skilled labour tend to be more price inelastic** as unskilled labour unable to take on higher demand jobs in higher-value added industries. Given the increase in DD for skilled labour, lead to a more than proportionate increase in wages (vice versa for the low-skilled labour market where the supply of unskilled labour tend to be more price elastic given a fall in the demand for unskilled labour).

[Without the explanation of PES, answer can still attain L3]

Geographical immobility

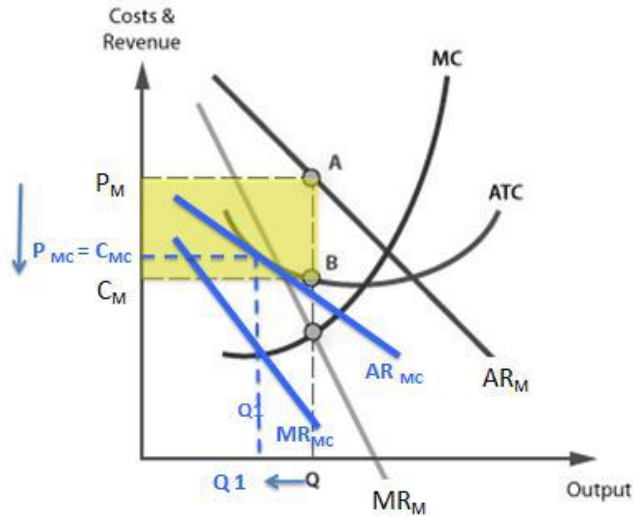
- Workers are **not willing or able to move from area to another** → due to language & cultural barriers, financial difficulty, migration controls by government or strong family ties. There are still countries such as India and China etc. where geographical immobility remains evident.

E.g. in India, the attachment among the native locale remain deep, the caste system in India can impede movement of people, thus, people tend to avoid moving too far from the family → income gap still exist between rural and urbanised areas, and may even widen as wages of labour in urbanised areas tend to rise more rapidly than those in rural areas that focuses mainly on lower-paid jobs such as farming.

Explain how market dominance lead to income inequality

- Market dominated by large firms, in the case of monopoly has high BTE which prevent entry of firms → since there is no close substitutes → firm is able to price its goods highly given its demand is price inelastic → thus able to **enjoy supernormal profit even in the long run**. (Represented by the shaded area in Figure 3). **This widens the income gap between shareholders or asset/ firms owners and the wage earners.**
- Income disparity tends to also widen **among producers of different market structure**. **Firm owners of monopoly would be able to earn supernormal profit** (represented by the shaded area in Figure 3) **in the long run while monopolistic competitive (MC) firm owners face with lower BTE tend to earn normal profits** (as shown in Figure 3 where the shaded region representing the supernormal profit was eroded as MC firms are only able to price the goods at P_{MC} which coincide with cost, C_{MC}). Thus at new equilibrium output and price, MC firm earns normal profit given that price per unit = cost per unit). Thus, with more markets that have dominant firms, income inequality may worsen.

Figure 3



With the growing concern of income inequality issue, caused by factors such as labor immobility and market dominance, it is important for government to intervene to prevent the worsening of income inequality.

Marking scheme:

Knowledge, Application, Understanding, Analysis		
L3	<ul style="list-style-type: none"> Well-developed explanation on labour immobility AND market dominance leading to income inequality. Answer uses accurate economic concepts. Appropriate examples provided and examples are explained. 	7-10
L2	<ul style="list-style-type: none"> Under-developed explanation on the labour immobility AND income inequality leading to income inequality. Some conceptual errors in explanation but economic concepts used are appropriate. Some examples provided but not well-elaborated. One-sided answer but well-developed explanation on EITHER labour immobility OR income inequality leading to income inequality. With the support of relevant examples. [max. 5m] 	5-6
L1	<ul style="list-style-type: none"> Little / no usage of economic concepts. Answer is descriptive with major conceptual errors. No example given 	1-4

- (b) Discuss the economic role of the Singapore government in addressing income inequality. [15]

Introduction:

Globalization and technological advancements that enabled rapid economic growth → have led to many changes in Singapore's labour market. While Singapore on average have gain from Singapore economic growth, the low-income group may not have enjoyed the fair share of the economic pie. Singapore's Gini coefficient currently hovering at 0.463 to 0.412 (between 2012 to 2013) → suggesting Singapore has relatively high income inequality issues. Thus, this calls for government to take on the role in addressing income inequality issues. The degree of government intervention could range from **direct intervention, joint provider** or even **regulator** in ensuring resources are allocated and redistributed more equitably. This can be done by:

1. **Improving labour mobility** (raise labour productivity by encouraging retraining & education as well as maintain a healthy workforce),
2. **Reducing market dominance** (legislation to raise market competitiveness)
3. **Increasing availability of essential goods (such as merit goods)** to everyone, especially to the lower-income households
4. Other domestic measure include having a more **progressive tax system**

Body Paragraph: Explain and evaluate how govt. measures can tackle income inequality in Singapore

1. Improving labour mobility

Rapid technological advancement and growing trend of urbanisation globally → lead to some skills being obsoleted more easily (occupational immobility) and Singaporeans labour increasingly shunning away from some industries. To improve labour mobility, government can:

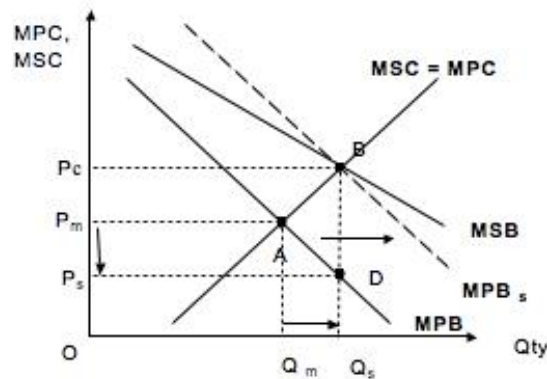
- a) Subsidy re-training & education to tighten income gap between skilled & unskilled labour.
- b) Encouraging firms to redesign jobs to attract more Singaporeans to enter some industries

a) Subsidy re-training & education:

- To **help low-skilled labours equip with required skills to transit into the sun-rise or growth industries** → subsidise retraining & education programmes to increase affordability and incentivises labours to take-up these programmes (price lowered from P_m to P_s, in Figure 4) → the improvement in the labour productivity enable low-skilled labour to demand for higher wages (greater occupational mobility) → reduce wage - gap between low-skilled and high-skilled labour
- **Role of the government: an enabler by directly providing subsidies to encourage and spearhead the training programmes in getting labours to take up these training programmes**
 - E.g.: Workforce Development Agency (WDA) provides programme such as Workfare Training Support (WTS) scheme for low-wage workers with enhanced support of up to 95% of course fee funding
OR Continuing Education and Training (CET) to enable acquiring of new skills by raising labour employability in emerging and growth industries such as healthcare, tourism and manufacturing sectors; Chemicals and Biomedical, Aerospace and Marine & Offshore.

- Evaluation: However, the effectiveness of these measures is subjected to the receptiveness of labours towards education and retraining. In Singapore, retraining programmes is likely to be well-received given
 - Positive attitude towards lifelong learning among many Singaporeans → the culture of lifelong learning developed across the years through measures such as Lifelong Endowment fund set up to encourage continuous learning
 - An educational system that provides up-to-date training materials to narrow gap between skills required in workforce and skills taught in educational institutions

Figure 4



b) Subsidy to firms in redesigning jobs to attract more Singaporeans to enter some industries

- Singaporeans tend to shun away from harsher working environments jobs such as construction, marine and waste management industries, cleaning industry etc. → resulting in many of these industries having little local supply of labour.
- **Role of government: an enabler by directly providing financial support to assist firms in redesigning work processes and mechanisation as well as equipping labour with the skills to fit into redesigned jobs (e.g. the use of machineries)** → this may enable previously deemed “unpopular” sectors to be restructured to raise labour productivity → labour would be able to work more efficiently in such redesigned work environment and command for higher wages → able to attract more locals to take up these jobs with higher wages and a more professional image.
 - E.g.: WorkPro, a one-stop scheme to help employers adopt progressive workplace age management practices, facilitate job redesign and improve workplace practices, as well as to encourage employers to recruit and retain back-to-work locals and mature workers to meet their manpower needs.
OR Enhanced Productivity and Innovation Credit Scheme (PIC) setting aside \$2 billion to the National Productivity Fund (NPF) for more targeted support to industries in restructuring → increase competitiveness of firms
- **Evaluate:** However, to effectively redesign jobs, it **requires the cooperation of firms**. It may not be easy to convince firms to do so as firms may be concern about business disrupting/ rising cost of production in redesigning workplace and production mechanism, in turns hurts profit margins.
 Hence, important for such measures to be **widely publicised among firms** in raising awareness of measures available and should be **well-thought out** to convince firms about the long- term benefits; enhancement in firm’s competitive

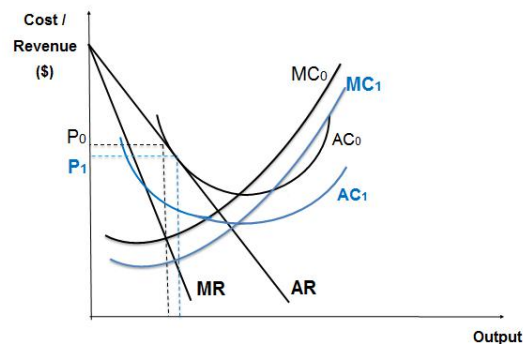
edge and profit margins.

2. Reduces market dominance to prevent consumers from being exploited

Legislation:

- **Role of government: the regulator by having legislations such as Competition Law to promote efficient functioning of Singapore's markets** → by **enhancing the competitiveness of the economy** and encouraging privatisation to raise degree of competition in market → this can **prevent firms from exploiting consumers by setting high prices and even seek ways to be more cost-efficient** → cost-savings enjoyed can be passed on to consumers in terms of lower prices → ensure goods is more affordability for consumers especially the lower-income households → improve income inequality. Thus, it is important that government to maintain close monitoring and ensure legislations are enforced.

Figure 5



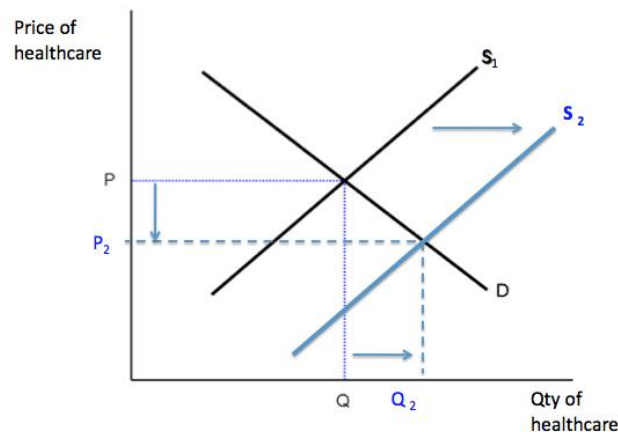
- E.g. Public bus services in Singapore has been structured to have two major operators (duopoly), SBS Transit Ltd (SBST) and SMRT Buses Ltd (SMRTB) → encourage greater competition in public bus services market → ensures companies compete to provide consumers with affordable and quality bus ride services. Apart from the use of legislation, government also monitor firms' behaviour closely by having independent regulatory body such as Public Transport Council (PTC) to ensure high quality bus services and affordability of fares. Especially since public transport is an essential mode of transport for many, including the lower-income households.
- **Evaluate:** However, in the case of **natural monopolist**, it **would not be appropriate to encourage the entry of more firms** → one firm is sufficient to supply for the entire market's demand instead of having two or more firms in the markets which would like to little EOS enjoyed. This would result in consumers paying higher prices. Thus, in the case of natural monopolist, where firm's production is usually highly capital-intensive with high cost of production, **economies of scale** are very significant such that minimum efficient scale is not reached until firm has become very large in relation to the meeting the total demand of the market. These are often essentials industries such as utilities → e.g. Public Utilities Board (PUB) in Singapore that coordinates the supply of electricity, piped gas, and water. Because there is the potential to exploit monopoly power, governments tend to **nationalise** or **heavily regulate** them.

3. Availability of essential goods to everyone (especially the lower-income

households)Subsidising healthcare services (merit goods)

Role of government: joint provider of healthcare services by providing subsidised healthcare services → leads to lower price of healthcare services that consumers have to pay (P_m to P_s , in Figure 4) thus, encourage higher consumption level as MPB curve shifts to the right to MPB_s (demand increases) → market-optimal output now coincides with the social-optimal output → more consumers can afford healthcare services after subsidy given. [OR Figure 6, SS shift to right as government provides subsidy to hospitals and polyclinics]. With greater affordability of healthcare services (especially to the lower-income households)

Figure 6

Social supports

- **Role of government: directly provision of financial assistance to lower-wage and low-skilled labours** → by strengthening social safety net but it is **important for government to ensure it does not results in disincentive to search for jobs and strain in government budget.**
 - E.g.: In Singapore, the Workfare Income Supplement (WIS) programme is structured such that labour must demonstrate efforts to upgrade their skills, seek employment and stay employed in order to be eligible for the programme → the aim is to enable labour raise their employability and thus the ability to demand for higher wages
OR Cash-transfer: direct cash payments such as GST offset packages – GST cash vouchers, seniors' bonus, medisave top-up, utility rebates for lower and middle income Singaporean households. **OR** Welfare programs: medifund, schools financial assistance for low-income households
- **Evaluation:**
 - Possibility of government failure as there may be over/under estimation of the social supports provided. Nevertheless, it is still essential that such safety net are made available to help to low-income households
 - To ensure government's spending to help the lower-wage and low-skilled labour's needs, instead of just providing cash pay-out, Singapore government also explore the use of food vouchers (in-kind transfers) → this enables government to have **greater direct control of the policy outcome**, in this case, ensuring low-income households spend the government's assistance on food

items.

- It is important to ensure that social support does **not provide disincentive for labour to work**. These **supports must be short-term measures** as it is not sustainable for government to constantly give out cash pay-outs. Hence, it should at best be provided as a temporary relief for low-income households' in-need of government assistance. Ultimately, a **more sustainable and long term measure would still be for the low-income and low-skilled individuals to improve on their employability through retraining**.

4. Others domestic measures to address income inequality:

Progressive tax system to enable redistributing of wealth

- o Higher income earners pay a proportionately higher tax → **tax revenue collected enables government to finance various measures** such as access to subsidised housing, a good education and high quality health care, financing of training programmes **for everyone (inclusive of lower-income households) to progress up the social ladder** → address income inequality and enable more lower-income households to maintain a decent standard of living
 - E.g. Singapore adopts a progressive tax system → highest personal income tax rate at 22% and the bottom-end labour earning less than \$20,000 per annum would be exempted from the paying of personal income tax.
- o **Evaluation:** Excessive government spending on redistributive programmes can increase pressure to raise income tax rate for middle and/or higher-income, leading to disincentive to work. It is important to avoid overly raising personal income tax rate → may lead to brain drain issue where professionals migrate abroad to countries with lower cost-of living and lower tax rates. *This was the case in UK (where tax rates are among the highest in the world); business leaders blamed high rates of income tax as the reason for the rise in professionals leaving Britain.* Hence, it is important that Singapore learn from others and past lessons, especially since Singapore have to rely heavily on skilled-labour in the higher-value-adding industries for its economic growth.

Conclusion:

Government needs to recognise that **there is a limit to how much direct control government has in creating employment for the unskilled labour (and even the skilled labour)**. It can play the role of being a **direct provider, joint provider** or even **regulator** in ensuring resources are allocated more equitably to address income inequality. But at best, government could only *hire people to do government jobs and provide assistance*, government is unable to directly influence the increase in the private sector job creation in the near or medium term and provide financial assistance in the long term.

Ultimately, it **requires the efforts of not only the government but also the firms and labours to address income inequality**. Hence, it is utmost important that government: encourage firms to play their parts to retain their workers and redesign their jobs.

- o In the case of Singapore, there are already presences of many measures that have been in placed to address income inequality. Perhaps, it is **not just about designing measures but awareness of existing measures need to be raised** → to increase the take-up rates by the firms and labours (i.e. reducing imperfect information)

Marking Scheme:

Knowledge, Application, Understanding, Analysis		
L3	<ul style="list-style-type: none"> ○ Well-explained (of at least 2) measures to illustrate how income inequality can be improved. (<i>students should be encouraged to give 3 measures</i>) ○ Answer should make explicit reference to the roles of government. ○ Well-explained examples provided. ○ Answers able to contextualise to Singapore economy. 	9-11
L2	<ul style="list-style-type: none"> ○ Under-developed explanation in illustrating how measures can improve income inequality. ○ Answer made some weak attempt to consider the roles of government. ○ Some conceptual errors in explanation but economic concepts used are appropriate. ○ Some examples provided but not well-explained. ○ Some attempt to contextualise but under-developed. 	6-8
L1	<ul style="list-style-type: none"> ○ Little / no usage of economic concepts. ○ Answer is descriptive with major conceptual errors. ○ No examples given. ○ Little or no contextualisation. 	1-5
E2	<ul style="list-style-type: none"> ○ Judgment with clear justification <i>For instance, showing understanding that while government can improve the issue of income inequality, it would be more effective if firms and individuals recognise that they have a role to play in addressing the issue of income inequality.</i> 	3-4
E1	<ul style="list-style-type: none"> ○ Judgement with unclear justification 	1-2

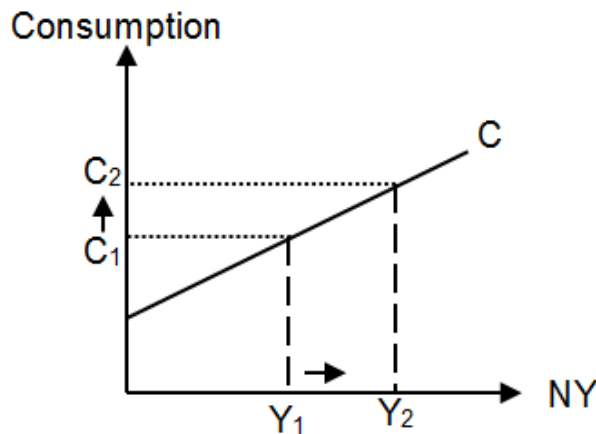
- 4 (a) Explain the possible causes of an increase in household consumption. [10]
- (b) Assess the view that raising household consumption is more effective than encouraging exports in achieving economic growth. [15]

a) Explain the possible causes of an increase in household consumption. [10]

Introduction

Household consumption refers to expenditure by households on goods and services. Consumption can be induced by income changes (induced consumption) or influenced by non-income factors (autonomous consumption).

A change in any one of the determinants will lead to a change in consumption expenditure; reflected in a pivoting of C and AE (if induced consumption changes) or a shift of C and AE (if autonomous consumption changes, or both a pivot and shift if both autonomous and induced consumption were to change. Consumption depends on the **willingness** and **ability** of the households to consume. And there are various factors which determine the willingness and ability of households to consume.



Body Paragraph

Income factor (price factor):

Change in national income will induce a change in consumption.

- The Singapore economy has been enjoying a healthy average annual growth of 6% since 2000.
- As a result, the average income in Singapore has risen. The higher income would mean higher purchasing power for Singaporeans, thus **greater ability** to consume more goods and services, or to spend more on luxury goods and big-ticket items in addition to necessities.
- All these would result in a higher level of consumption expenditure.
- This is represented by a movement along the C function from C1 to C2 when income increases from Y1 to Y2.

Hence a change in level of national income will change the household expenditure in Singapore.

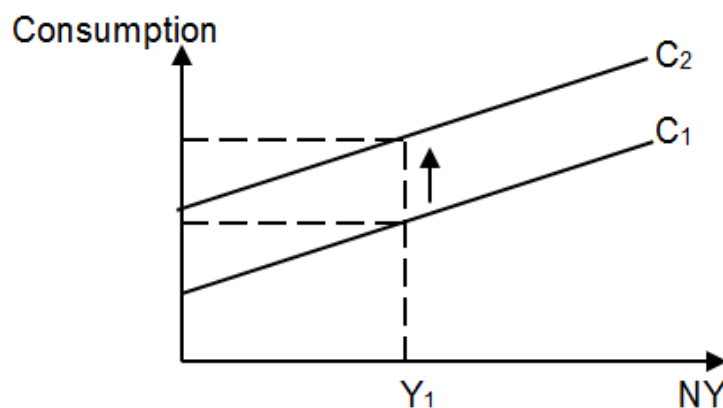
Wealth (non-price factor):

When households spend, they would consider the level of income earned as well as the amount of wealth available. Quite a number of households possess wealth such as assets, both physical (e.g. houses, cars, art pieces, etc.) and financial (e.g. shares, bonds, etc.).

Thus changes in the wealth of the household could also influence the ability of households to consume.

- A change in the value of assets will affect the purchasing power of households thus affecting their **ability to consume**.
- An increase in the value of financial assets can result from a global boom which improves the confidence in the economy thus prices of shares of companies will increase. With the increase in share prices, value of financial assets will increase leading to higher purchasing power. Individuals will thus increase consumption of goods and services.
- On the other hand, during the 2008 Global Financial Crisis, many households in Singapore find their wealth shrinking due to the falling values and returns of shares and bonds while some lost all their financial investment in risky shares and bonds. The fall in wealth may force households to tighten their belt, reducing their autonomous consumption.

Thus a change in wealth of households will shift the C function.



Expectation of future income (non-price factor):

While a change in current NY will induce a change in consumption, **consumers' expectation** about the future economic outlook and performance will affect their **willingness and ability** to consume as well.

- If future economic conditions are expected to be good, that is employment and national income are expected to improve, households will expect to maintain their current income or even see an increase in income and thus their **ability** to consume, thus consumption spending will increase.
- This increase in consumption spending is represented by an upward shift of the C function.
- Singapore's economic growth for 2015 is estimated to be about 3.1 per cent and it is expected to be a bumpy year ahead for Singapore's small and trade-dependent economy due to the tight labour market and slow global growth. Such uncertain economic outlook would prompt household to be more cautious in their spending.
- Prolonged recession → pessimistic outlook of the economy → less willing to spend → may cause a fall in MPC
- While on the other hand, when economic recovery is insight → more optimistic outlook → more willing to spend → MPC may ↑

Hence expectation of future economic performance can determine the household expenditure in Singapore.

Interest rate & availability of credit facilities (non-price factor):

Household consumption is limited by their income and wealth but banks allow households to consume beyond the limit by offering low interest rates. While first two factors play a large role in determining consumption, households' ability to consume is also influenced by external factors such as interest rate and availability of credit.

- Low interest rates encourage Singaporean to spend on luxury goods and big-ticket items.
- Low interest rates discourage saving by decreasing the returns from saving and encourage spending now as the cost of borrowing is low.
- With the low interest rates, households would be keener to take up a loan for big ticket items like housing and cars as the opportunity cost of borrowing is lower.
- In addition to the low interest rates, banks lower the minimum income requirement to own a credit card and provide many benefits, such as rebates and loyalty points, for the use of the cards. Such change has encouraged more households to take the offer of a credit card and spend, increasing consumption.
- Some retailers are making it easier for households to access their goods by providing zero or low interest rate instalment when they purchase goods from them.
- For example furniture retailer like Courts offer a Flexi Zero Plan and Flexi Lite Plan which allow household to pay for their goods in instalment at zero interest rates and 10.9% p.a. respectively. Such actions will encourage household to consume.

Hence, the low interest rates coupled with availability of credit will increase the autonomous consumption, shifting the C function upward from C1 to C2

Government intervention (non-price factor):

External factor such as government intervention plays a role in determining household consumption.

- Government intervention may come in different forms such as reduction in the income tax, redistributive measures and provision of better social security.
- In the 2015 Singapore Budget, the government has announced a one-off income tax rebate of 50% capped at \$1000. Such reduction in personal income taxes will increase households' disposable income, leading to higher purchasing power and thus a higher level of consumption.
- A redistribution of income from the rich to the poor through transfer payments will increase consumption in the country as a whole.
- In 2015 budget, Singapore government announced an increase of \$50 cash for the GST Vouchers for both the low and middle income households while a higher income tax rate for the top 20% of income earners.
- Lower income group generally has higher MPC than higher income group
- Therefore, tax on higher income \rightarrow their disposable $Y \downarrow \rightarrow \downarrow C$ by a smaller extent due to lower MPC.
- And the transfer payments to lower income group \rightarrow their disposable income $\uparrow \rightarrow \uparrow C$ by a larger extent due to higher MPC. Hence the country's overall $C \uparrow$
- Improvement in social security: 2015 Singapore Government Budget
 - Silver Support Scheme: Singapore government will be providing income supplement for Singaporean age 65 & above. These Singaporean will obtain a cash supplement of \$300 to \$750 every three month
 - Full fee waiver for examinations

- Higher healthcare subsidies for healthcare
- Such improvement in social safety net provide more confidence among the households
→ ↑consumption & MPC

Given such intervention, government may be able to influence the ability and willing of households to spend, determining the level of household expenditures in the country.

	Level Descriptors for 4(a)	Marks
L3	For a comprehensive and well-developed answer explaining the causes of an increase in consumption, both income factor and non-income factors, supported with appropriate examples.	7 – 10
L2	For an answer that shows understanding of the causes of an increase in consumption but is lacking in elaboration.	5 – 6
L1	For an answer that is too general and mere listing of factors without elaboration. Answer contains conceptual errors.	1 – 4

b) Assess the view that raising household consumption is more effective than encouraging exports in achieving economic growth.

Introduction

- Unpack conceptual terms in the question
 - Definition of household consumption: expenditure on goods and services by households, inclusive of import content in the expenditure.
 - Components in consumption: (1) autonomous consumption (rise in consumption due non-income factors) and (2) induced components (rise in consumption due to rising national income).
- Actual economic growth: rate of increase in real GDP. Economic growth in a country is due to growth in aggregate demand (AD) or aggregate AE
- Raising household consumption and encouraging exports are possible approaches to increase AD (or AE) and stimulating EG.

Body Paragraph

Raising consumption

- Growing through raising consumption refers to growth strategy that is domestic-led, possibly through continuous expansionary fiscal and monetary policies which encourage household spending on domestic goods
- Increasing households' consumption to achieving economic growth is indicated by an increase in autonomous and induced C

Encouraging export

- Government could encourage exports to foreign markets possibly through various policies such devaluation of exchange rates, signing of free trade agreement, domestic subsidies and even supply-side policies to make export more competitive.
- Encouraging exports would see exports becoming a larger proportion of GDP

Thesis: Raising household consumption may be more effective than encouraging exports in achieving economic growth

Argument 1: Raising household consumption will **reduce vulnerability** of the economy to external shocks unlike raising exports to foreign countries.

- Raising consumption on domestic consumption could reduce vulnerability of the economy to external shocks such as the Global Recession in 2008-09.
- Thus should there be an external shock, the impact on domestic growth would be reduced as the domestic consumption is able to support EG - the extent of fall in national income could be minimal due to the high APC in the country.
- However, by encouraging export, the export will constitute a larger proportion of GDP. Thus economic growth is largely dependent on external demand and performance. When there is strong external demand, export and AD will increase, increasing NY and hence EG in the country. However, when there is an external shock such as Global Recession in 2008-09, fall in external demand will lead to a **significant** fall in AD and NY leading to recession in the country. Thus countries who are raising export to achieve EG in the country are susceptible to external shocks.
- Given the danger of relying on exports for EG, countries should consider turning to raising domestic C since raising consumption could reduce the vulnerability of the country to external shock. Hence raising household consumption is more effective than encouraging exports in achieving economic growth.

Argument 2: Raising household consumption will increase the effectiveness of domestic management policies making it a better approach than encouraging export to achieve EG

- The size of multiplier depends on size of MPC.
- In order to raise consumption level in the country, government may need to implement policies that will raise the purchasing power of households so that households could consume. Government could raise the minimum wage, reduce tax and raise social security to encourage householders to consume more and save less. Such measures would raise the MPC while reducing the MPS and MPT. A larger MPC would mean that household would spend a larger proportion of the **increase** in income for consumption.
- Conversely, a smaller MPT and MPS would mean that household would save and be taxed a smaller proportion of the **increase** in income. This smaller MPS and MPT would mean that at each time the leakage out of the circular flow of income will be smaller.
- The larger multiplier will make the domestic policies such as fiscal and interest rate policies more effective as a counter cyclical approach to reducing volatility in economic growth.
- Thus during recession, when government implement expansionary domestic demand management policies, AD will increase causing an increase in NY by multiple time. However, countries like USA and Indonesia with a larger multiplier would see their NY increase by larger extent compare to countries such as Singapore with small multiplier.
- Unlike raising consumption, increasing exports to foreign countries will not increase the effectiveness of domestic management policies. By encouraging exports, countries like Japan and Singapore would find that expansionary domestic demand management policies have no impact on AD since exports constitute a larger proportion of the GDP than domestic C and I.

- Given the limitation of encouraging exports, countries would be better off at raising household consumption which could increase the effectiveness of domestic management policies and hence a better approach to achieve EG.

Anti-thesis: Raising household consumption may not be more effective than encouraging exports in achieving economic growth

Counter Argument: Effectiveness of raising consumption is limited by the small population size which means that encouraging exports would be a more effective approach to achieving economic growth.

- While there are definitely benefits of raising consumption to achieving EG, it may not be feasible for all countries especially when some countries like Singapore who has a small population. The smaller population size would mean that consumption as a proportion of GDP would still remain relatively small despite effort to increase it and hence limit the effectiveness of raising consumption to achieve EG.
- Whereas exporting goods and services to the rest of the world would see small countries selling their goods and services to a larger market compare to the domestic market. The larger foreign market would mean that encouraging export would see a larger increase in AD and hence NY compare to increasing C.
- Hence encouraging exports would be a more effective approach to achieving EG.

Counter Argument: Effectiveness of raising consumption is limited by the high import content which limits the effectiveness of increasing consumption. Hence encouraging exports would be a more effective approach to achieving economic growth.

- If the countries have limited resources and depend on imports, raising consumption may increase leakages as households may increase consumption of largely imported goods instead. Hence raising consumption may not obtain the desirable results.
- Given this context, encouraging export would be more effective in increase AD to achieve higher NY.

Conclusion

- Whether raising consumption or increasing export is more effective in achieving EG depends on the nature of the economy.
- For small economies like Singapore, Ireland and Japan, raising export may be a better approach than increasing consumption. And the aging population in Singapore and Japan make raising consumption even more difficult. Hence for such countries with small domestic markets and aging population, encouraging exports may be a more feasible and effective approach.
- Larger countries such as USA may have the options to choose which approach is better at encouraging EG as they could depend on their large population size as well as foreign demand. But given the nature of large economies like USA, it would be more feasible to increase their consumption to achieve EG as it would reduce the vulnerability to external shocks.

	Descriptors	Marks
L3	<ul style="list-style-type: none"> ▪ Balanced argument. ▪ Compares both approaches and provides a conclusion on whether and how increasing consumption is more/less appropriate than increasing exports in achieving growth. ▪ Conceptually sound and well-elaborated explanation using economic concepts/terms. 	9-11
L2	<ul style="list-style-type: none"> • Conceptually accurate and elaborated but non-comparative: only explaining how both policies work on achieving economic growth • not attempting to consider whether and how increasing consumption is more appropriate than increasing exports. 	6-8
L1	<ul style="list-style-type: none"> ▪ Primarily descriptive, not using economic concepts/terms in reasoning ▪ Limited explanation and elaboration. ▪ Major errors although there is relevance to question 	3-5
	<ul style="list-style-type: none"> ▪ Most parts irrelevant to question 	1-2
E2	<p>Uses criterion/criteria for comparative evaluation and giving a considered judgment at closure.</p> <p>Example: Whether raising consumption or encouraging export is more effective depends on the countries. Larger economies with potential large domestic consumption may have more options to choose from compared to small economies.</p>	3-4
E1	<ul style="list-style-type: none"> • Evaluation of the two approaches, without criterion/criteria. Leaves two sides of arguments suspended without considered judgement at the end. • Evaluation is not justified or supported with analysis. 	1-2

- 5 As our economy develops and undergoes major demographic shifts, sustaining high productivity growth will become harder.

Source: Singapore Population White Paper, January 2013

- (a) Explain the consequences of ageing population and falling productivity growth on the Singapore economy. [10]
- (b) In view of these problems, assess the relevance of supply-side policy as Singapore continues to face the problems of ageing population and falling productivity growth. [15]

a). Explain the consequences of ageing population and falling productivity growth on the Singapore economy. (10m)

Introduction: Explain nature of Singapore economy; accounting for its' ageing population and falling productivity growth.

Ageing population is a phenomenon where the median age of a country or region rises. The biggest challenge for Singapore today is to support its ageing population and sustain economic growth through increases in productivity.

Reasons for ageing population and falling productivity growth:

Ageing population:

Declining birth rates due to rising singlehood, later marriages, higher education opportunities which also delayed entry into the workforce and family formation.

- Increase in Singapore's life expectancy from 72 years in 1980 to 82 years in 2010 → leading to larger proportion of elderly.

Falling Productivity:

- Ageing population means a smaller proportion of population is in the labour force and increasingly less energetic workforce, causing falling productivity growth.
- Older workers may find it more difficult to learn new skills and may not be very receptive to changes in technology, reducing efficiency in production
- Past policy of fuelling growth through importing large number of cheap, low skilled foreign workers also results in lower productivity.

Development:

Explain consequences of ageing population and falling productivity growth on Singapore economy.

1. Employment

- Singapore will continue to face a tight labour market as retirees leave the labour market and government continues to tighten the inflow of foreign workers.
- As Singaporeans continue to upgrade and retrain themselves, there will be greater shortages of the manual and low skilled workers.
- A rise in dependency ratio (ratio of those not in labour force over those in labour force) means an increasing tax and economic burden on our working-age population. This implies the need to retain the older workers longer in the workforce.
- The retirement age may need to be raised further from the present 62 years old and employers may need to accommodate older workers in their organisations.
- A larger proportion of the elderly will probably be employed in the low skilled, manual service sectors.

- Average weekly and/or annual working times could also be increased. Fewer workers have to work more hours. This implies, among other things, a higher share of women in the workforce or greater numbers in part-time jobs switching over to full-time positions.
- Singapore, apart from facing a smaller labour force will also face changes in the structure and composition of its labour force.

2. Economic Growth

- Declining number of population in the working age group. This could lead to lower consumption and investment expenditure in the future as society save up to prepare for retirement. AD may fall or increase more slowly, reducing or slowing down Actual Growth.
- Ageing population results in lower innovation and lower productivity as technical expertise is largely generated by young workers. Older workers are also usually less flexible and mobile than their younger counterparts. This restricted mobility of the labour force will in future slow down structural change, since it is mainly younger workers who facilitate the implementation of new product, process and management ideas. Productive capacity may stagnate or increase even more slowly than AD.

Hence, it will become even more difficult for Singapore to support productivity and economic growth. If AS lags behind AD, there could even be inflationary pressure, making it even harder to sustain EG in the LR.

3. Balance of Payment

- A less vibrant and less innovative workforce as the elderly are not willing to take risks may result in less competitive exports and less attractive place for tourists and investors. This may result in a worsening of our balance of payment.

4. Standard of Living

- Government revenue comes mostly from income taxes, consumption taxes and asset taxes, all of which are dependent on economic growth. A shrinking and ageing population and workforce will make it more difficult to sustain previous surpluses in public finance, especially when this is coupled with increasing needs for higher expenditure to support a much larger elderly population.
- The need to increase productivity also means greater spending to support training, higher education and skills development.
- As the economy stagnates, it will be a strain on our resources to invest in infrastructure, or to address the needs of lower-income Singaporeans. Without economic growth, social and welfare programmes can quickly become unsustainable. Hence, spending in some other areas may have to be foregone or taxes may need to be raised and these may mean a lower quality of life in the future.
- While Singaporeans can rely on their Central Provident Fund (CPF) savings to fund their retirement, the rising cost of living and higher cost of healthcare may result in such funds being inadequate to sustain their previous standard of living.

In conclusion: An ageing population and falling productivity will pose several challenges for the economy. There will be a slowing down of Economic Growth and with it a lower Standard of Living. A sustainable, albeit slower growth can still be achieved, depending on how responsive the labour and employers are to such demographic changes. The structure of the economy will change, principally to the benefit of the healthcare sector and other business

lines such as asset management, pharmaceuticals, bio-technology, medical technology, support and social services.

Level	Descriptors	Marks
L 3	Effective explanation of consequences of both ageing population and falling productivity using economic analysis (explaining in terms of macro- economic problems) Good application to Singapore economy	7-10
L 2	Adequate explanation of consequences of ageing population and falling productivity but not consistently using economic analysis (not explaining in terms of macro- economic problems) Inadequate application to Singapore economy	5 – 6
L 1	Descriptive and generalised answer with not much application to Singapore economy	1-4

b) In view of these problems, assess the relevance of supply side policy as Singapore continues to face the problems of ageing population and falling productivity growth (15m)

Intro: Brief explanation of Supply side policy.

- Short term policy that encourages competition through privatisation and liberalisation. Mainly aiming to reduce production cost, causing SRAS curve to move downwards.
- Long term policy that aims to increase efficiency and productivity, mainly aimed at shifting LRAS to the right.

Question Analysis: In view of the challenges faced by Singapore due to its ageing population and falling productivity, (as in part a), students are to evaluate if supply side policy is still relevant. In other words, can such policy help to tackle the problems of slow economic growth, lower living standards and falling government budget surpluses. Answer should also consider the relevance of other alternative policy in tackling such challenges.

Development:

Supply side policy is largely relevant:

1. Productivity improvements are necessary to sustain economic and real wage growth, as our workforce growth slows. Government has launched various programmes to help companies restructure and improve their productivity. For example, the enhanced Productivity and Innovation Credit Scheme (PIC) provides tax benefits to businesses which invest in productivity improvements and training for their workers. The 30% Corporate Income tax rebate to help companies restructure and innovate was extended for another two years. Workfare Training Support (WTS) Scheme and the Workfare Income Supplement (WIS) are avenues for older low wage workers to improve their employability, upgrade to better jobs and earn more.

2. Recognising the importance of continuing education and training (CET), the Government has committed in 2010 to invest \$2.5 billion over the next five years. In 2015, the government introduced new initiatives to support life-long learning and deepening of skills. The SkillsFuture Credit is available for all Singaporeans above 25 to enhance their skills in work related areas.
3. Top up national research fund by \$1bn to help companies develop new products.
4. Investing in infrastructure to meet growing and changing economic and social needs such as improving public transport and healthcare, particularly community hospital beds and nursing home capacity.
5. Other policies that enhance labour mobility such as providing flexible working arrangements for those with care-giving responsibilities but would like to work, and for older persons who prefer shorter and more flexible hours.
6. Labour policies: The government will have to continue to welcome immigration to slow down our projected shrinking population. This is to prevent an acute labour shortage which would cause a hike in labour cost,

Evaluation: These will ensure that our LRAS will continue to increase, so that wage can continue to increase without causing inflationary pressures and slow down economic growth further. Continual upgrading and improving the infrastructure capacity would help to and avoid congestions and lowered healthcare standards, maintaining a sustainable living environment.

However, the question is 1. whether the government finances can continue to support such spending and whether we can afford to keep on drawing down on past public sector surpluses. Shrinking labour force reduces government's ability to collect taxes and ageing population increases demand on government's welfare spending. Less government reserves would reduce government's ability to fight future economic downturns.

2. Spending on education, training and R&D are long term in nature where success is uncertain and not guaranteed. The elderly may not be very receptive to new methods of production or may be slow in adapting to new technology. In fact, Singapore's productivity growth had been quite dismal and in 2014 there was a fall in productivity growth.

3. Employers are willing to reemploy elderly workers and train them.

The counterargument is that it is precisely the long term nature of such policy that the result cannot be seen immediately. As firms are incentivised to upgrade and automate and workers are encouraged to upgrade their skills, if productivity can be increased, workers will move up the value chain and get better pay, increasing national income. This would enable government to keep a healthy budget balance, despite the smaller workforce.

Hence, supply side policies are largely relevant to help the economy overcome the problems of ageing population and falling productivity. *However, the type of supply side measures may have to vary and government may have to rely more on population and immigration policy to try to sustain the size of its labour force. The role of the employers also become important as they need to see the importance of making relevant changes to allow more mothers and elderly to re-join the labour force.*

Other policies required: (dd management policies)

1. Redistributive Fiscal policy to ensure an inclusive society. Government has to take care of the lower-income earners and outline strategies to assist them and help older workers stay in the workforce. Higher healthcare subsidy for the elderly, GST credits,

waiver for exams etc. The latest budget proposes to raise the top marginal tax rate (to 22%) to fund a social welfare programme for the poor and elderly -The emphasis of Singapore's growth policy on strengthening total factor productivity is also achieved partly through fiscal incentives. These include extending a wage credit scheme and corporate income tax rebates.

2. Fiscal Policy in the form of lowering corporate tax rate or grants to attract foreign investors into Singapore. This will not only increase AD and stimulate Actual growth but will help increase productive capacity in the long run if the investments are in real capital and technology.
3. Exchange rate policy- Allowing currency to weaken to boost exports or strengthening currency to overcome inflation due to inflationary pressures created by shrinking labour force.

Evaluation: While supply side policies directly tackle the productive capacity affected by ageing population, these demand management policies are useful in tackling more directly, the problems of slow actual growth and falling export competitiveness. However ability to attract foreign investors also depends on other pull factors like political stability and quality of labour force. Hence foreign investors may be deterred by the shrinking and less productive workforce.

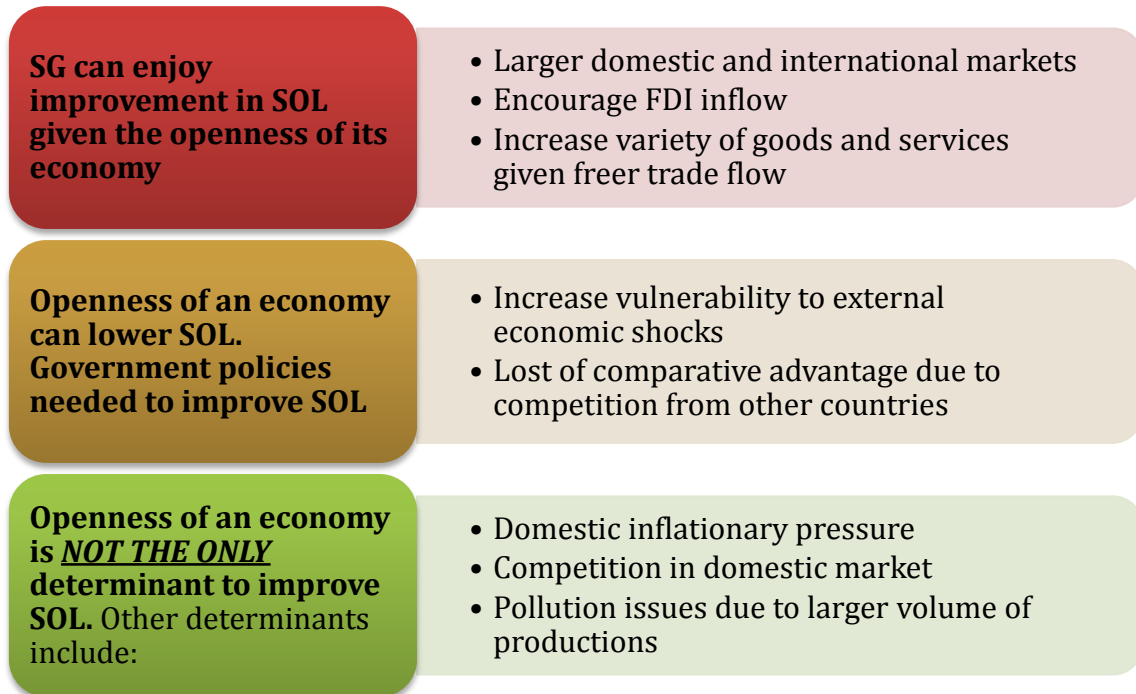
Similar to supply side policies, Fiscal policy puts further strain on government's budget which is already limited by the shrinking workforce.

Synthesis: Supply side policy remains an important policy in the face of ageing population and falling productivity. Despite the financial constraint imposed on government, such policy is necessary to avoid a stagnant or a shrinking economy. To fully tackle all the challenges, some form of demand management policy is still required to boost the AD.

Level	Descriptors	Marks
L 3	Effective explanation of 2 or more supply side measures Good attempt at evaluating relevance of supply side measures in the context of Singapore Explain and assessed more than one other measure apart from supply side policy.	9-11
L 2	Adequate explanation of 2 or more supply side measures Some attempt at evaluating relevance of supply side measures but assessment is not consistently applying to Singapore context Explain at least one other measure apart from supply side policy but may not assessed it's importance or relevance	6-8
L 1	A one-sided answer – only looking at supply side policy Inadequate coverage of supply side measures- only 1 or 2 Not really evaluating the relevance of supply side policy in tackling the mentioned problems in the context of Singapore.	1-5
E1	Attempt to provide a reasoned conclusion as to whether supply side policy is relevant in tackling the problems Rehearsed evaluation of ss side policies, not particularly addressing the main issues discussed.	1-2
E2	A developed evaluation with good justification of the conclusion as to whether supply side policy is relevant. Good judgement/ evaluation specific to issues discussed.	3-4

- 6 Assess the extent to which the improvement of standard of living in Singapore is dependent on the openness of the economy. [25]

Overview of approach:



Suggested response:

I. Introduction, explanation of key terms & contexts:

Consider the economic characteristics of Singapore economy

- SOL: Comprises of both the material (income per capita) and non-material well-being (infrastructure etc.)
- Openness to the global economy varies based on the degree of government control over the movement of goods, labour and capital.

Singapore a small country with limited resources and market size. It is thus crucial for Singapore to maintain its openness so as to benefit from international trade and foreign investment to achieve its macroeconomics objectives which in turn, would have significant impact on the standard of living.

II. Thesis: Openness of Singapore economy can improve the SOL

1. **Larger domestic and international markets**

- Enable domestic firms to enjoy **economies of scale** with increase in production → increase cost-efficiency → consumers may gain from lower-priced goods (assume: firms passed cost-savings to consumers) → improve material SOL
- Greater trade specialization** according to the principle of comparative advantage i.e. production of goods and services at a lower opportunity cost than its trading partners. Singapore focuses on the production of **High valued-added productions and service sectors** (such as Biomedical

products, computer equipment, machinery, petroleum products etc.) → enable skilled labours in sun-rise industries to gain from higher labour capability/mobility → ability to demand for higher wages → improve material SOL

- Widen export market for Singapore exporting firms given greater access to international market → increase in AD → achieve **actual growth** and generates **more employment opportunities** (assume: labours possess necessary skills to enter the growing export-industries; such as pharmaceutical, bio-medical, oil-refinery industries etc.) → improve SOL - higher material SOL due to higher purchasing power & higher non-material SOL due to lower unemployment rate hence greater **social stability**

2. Encourage greater FDI inflow

Attract foreign firms to invest in Singapore (one of the most favourable locations for investors globally) → **higher Foreign Direct Investment (FDI)**

- Transfer skills and technology to domestic country and raises competition in the domestic market + Higher investment funds and capital → encourage investment and boost productivity & efficiency → increase in AD and LRAS → enable actual EG and potential EG, raise unN → improve SOL

3. Increase greater variety of goods and services given freer trade flow

- Openness enable **freer flow of imports of goods and services across borders** → more varieties/ choices of goods and services enjoyed (domestic and imported goods) and imports prices could even be relatively cheaper → larger consumer surplus → improve SOL

Anti- Thesis: Openness of an economy can lower SOL. Thus, government policies needed to improve SOL

1. Increase vulnerability to external economic shocks

- More susceptibility to fluctuations due to **greater dependence on external trade and inflows of foreign funds and investment** → investors pessimism about future economy prospect can have adverse impact on SG → postpone investment plans/ reduce scale of production / foreign firms pull out of SG market → fall in I → fall in AD → fall in economic growth → cyclical unemployment → lower SOL
 - E.g. recent years, many downturns experienced: 2008 Global Financial Crisis- SG was the first Asian country to slip into a technical recession due to its heavy reliance on exports **OR** Euro Crisis- Sovereign debt crisis in the euro zone & weak growth in the US economy crimped SG demand for goods and service → threaten SG's economic growth **OR** Oil shock in 2007 where oil prices increased significantly causing cost of production to increase significantly and prices of general goods and services to climb
- Policy needed to mitigate adverse impact due to openness:

Expansionary Fiscal Policy:

 - Increase government expenditure and ensure tax rates remain low (competitive) → **Smart targeting of fiscal measures is needed to mitigate adverse impacts of external shocks despite the openness has reduced the effects of fiscal policy on AD.** E.g. In 2009- massive S\$20.5 billion Resilience Package aims to help Singaporeans keep jobs

and viable companies stay afloat → but will not get SG out of the recession so long as the global economy continues to contract.

- Ev: Nevertheless, using expansionary fiscal policy is essential to help avert sharp downturn which is more damaging to the economy. The use of expansionary fiscal policy in Singapore was possible due to significant accumulation of past budget surplus for rainy days. Without sufficient reserves, borrowing would be required and this may lead to lowering of future SOL.

OR

Modest & gradual appreciation → affordability of relative cheaper imported inputs, goods and services

- Modest & gradual appreciation enable Singapore to manage imported inflation
 - Raise consumers' purchasing power to purchase imports goods and service hence improve SOL
 - Enable firms relying on imported inputs to lower cost of production → maintain comparative advantage → stimulate EG and employment → improve SOL

2. Competition from other countries leading to loss of comparative advantage

- Increase global competition given rapid technological advancement & low-cost countries (such as China, India with lower labour cost) → Failure to adjust to structural changes in technological advances → **loss of Comparative Advantages (cost-efficiency)** → fall in export-competitiveness and rise in unemployment → lower SOL. Hence, it is important Singapore continue to improvise on its competitive edge.
- Policy needed to mitigate adverse impact due to openness:
 - **Trade policy → gain from larger domestic and international markets**
 - By active engagement in **Free Trade with more countries** → continuous gain in accessing into new international exports markets as well as to purchase relatively cheaper imported inputs for production.

OR

Supply-side policy

→ **Improvement on labour productivity to attract greater FDI inflow**

- Strong emphasis on the need to **raise labour productivity by skills upgrading, re-training and education** as well as spending of improving the infrastructure in key sectors → enable more cost-efficient production thus lower per unit labour cost → enable Singapore to continue to attract specific higher value-adding foreign firms into SG → stimulate EG and employment → improve SOL

→ **Maintain competitiveness of products in domestic and international market**

- Raise productivity by engaging in **R&D to improve on production methods** as well as spur **product innovation** → improve firms' competitive edge and explore new areas of comparative advantage → failure to do so would even result in firms shutting down → raise unemployment → lower SOL
- Ev: However, should inefficient not be able maintain its competitiveness in the market; allowing the firms to shut down may be beneficial as it can improve on the allocation of the resources.

III. Anti-thesis: Openness of Singapore economy is not the only determinant to improve the SOL.

Other determinants include:

1. Domestic inflationary pressure

→ Inflation can erode the purchasing power of consumers and hence lower SOL. Hence, with growing concern of inflationary pressure that stems from **domestic factors such as:**

- **High consumption of cars and houses;** It is important to tame domestic inflationary pressure to ensure SOL is not eroded. In achieving this, government has been using measures such as **macro-prudential policy** (tighten the loan-to-value, uses additional buyer stamp duty etc.).
- **Wage-push inflation;** It is important that labour continue to **improve on their skills through retraining and education to raise labour productivity** → enable to demand for higher income to prevent erosion of income → increase SOL

E.g. SkillsFuture in Budget 2015 to help labour increase their productivity **OR** Workfare Income Supplement (WIS) to help lower-skilled workers acquire skills & employability to enjoy sustainable wage increases. Although retraining may take a longer time to improve SOL → labour are likely to do so as government has heavily subsidised many of these programmes.

2. Degree of competition in domestic market that can influence the quality and pricing of goods

→ Countries that ensure imperfect firms do not exploit the consumers would also see consumers' SOL being higher as well. In Singapore, government has used **legislation** such as having **Competition Law to protect the consumer welfare** and regulatory body such as Competition Commission of Singapore (CCS) to encourage market competitiveness

- E.g. SISTIC ticketing company was found to have abuse its market dominance by negotiating for exclusive agreement to be the sole ticketing providers. It was given a financial penalty for the infringement of the Competition Law. This has helped the market to be open and competitive, and has even encourage innovations such as print-at-home tickets → raising consumer welfare → high SOL
- Ev: in order for the legislation to work well, it is essential that there are **reliable and efficient regulatory bodies that consumers can seek help from** when being exploited/ harmed by firms' unfair practices.

3. Level of pollution

→ Pollution such as air, noise, water pollutions can adversely affect the quality of lives (negative externality). **With population size increasing, there are greater demand for more goods and services to be produced** → lead to **greater level of air pollutions etc. when firms increase in its productions** →

lower non-material SOL

- In Singapore, the main sources of air pollution in Singapore are from the burning of fossil fuel for heat generation in industries, electricity generation and transportation → poorer living environment → lower quality of life (non-material well-being) → lower SOL
- Thus, it is important that **firms, consumers and government are taking more proactive actions to conserve the environment**. In Singapore, firms and consumers are increase taking greater social responsibility to protect the environment by using less biodegradable materials and supporting recycling efforts.
 - E.g. More firms and consumers are participating in the annual event 'Earth Hour' to conserve the use of electricity as well as on-going programmes such as 'Bring Your Own Bag (BYOB)' to discourage consumers from using plastic bags. Such events are increasing welcoming and have garner much support and awareness among Singaporeans. **OR** Government has also implemented **legislation** to manage the pollution problems. Legislation such as 'The Hazardous Waste (Control of Export, Import and Transit) Act and its Regulations' are put in-placed to regulate the control of export, import and transit of hazardous wastes. Industries are also required to conduct source emission tests to ensure that industries monitor their exhaust emissions regularly and take remedial measures where necessary to comply with the air emission standards.
- Ev: While it is important for firms, consumers and government to play active roles to protect the environment so as improve the non-material SOL. There is **some pollution that requires cooperation between countries**. For instance, the air pollution (haze crisis in 2013 that hit Singapore) was caused by pulpwood, palm oil, and logging firms burning land to clear land for agriculture. Without the help of Indonesian government to crack down on such illegal practices, the air pollution would intensify → reducing the non-material SOL of neighbouring countries such as Singapore.

Conclusion:

Given that Singapore has no natural resources, the key to its survival is the openness of its economy. While the openness of Singapore economy can enable Singaporeans to enjoy improvement in the SOL. It is essential that Singapore not only continues to maintain its competitive edge through the use of appropriate policies, but also consider what are some (internal) domestic factors that need to be dealt with to improve Singaporeans' current and future SOL.

Marking Scheme:

Level	Marking Description
High L3 (18-21)	<ul style="list-style-type: none"> • Balanced answer providing well-developed explanation on positive and negative implications of openness in relation to trade, investment and economic well-being etc. of Singaporeans, with consideration of Singapore's measures to improve of SOL given its openness of the economy. • Good consideration of other factors that can improve the SOL apart from the degree of openness of economy. • Answer is well contextualised to Singapore. • Examples provided are relevant and well explained.
Low L3 (15-17)	<ul style="list-style-type: none"> • Balanced answer provided but under-developed in explanation for either positive or negative implications of openness

	<ul style="list-style-type: none"> • Some consideration of measures to improve of SOL given its openness of the economy but may contain some incoherence or inappropriate in explanation. • Some consideration of other factors that can improve the SOL apart from the degree of openness of economy. • Answer is contextualised to Singapore. • Examples provided are relevant but may not be well- explained.
High L2 (12-14)	<ul style="list-style-type: none"> • Balanced answer provided but under-developed in explanation for positive and negative implications of openness. Answer had critical arguments on the openness of the economy and linked to the improvement of Singaporeans SOL. • Some consideration of measures to improve of SOL but little explanation. • Answer provides other factors that can improve the SOL apart from the degree of openness of economy but under-developed. • Some errors, but does not reduce the validity of the overall conclusion • Some attempt to contextualize to Singapore. • Examples provided are relevant but may not be well explained.
Low L2 (10-11)	<ul style="list-style-type: none"> • Balanced answer provided but under-developed in explanation for positive and negative implications of openness. • Little consideration of measures to improve SOL • Little consideration other factors that can improve the SOL apart from the degree of openness of economy. • Points are relevant, but superficial and may not be well organized. • Little/no contextualization. • Examples provided are relevant but little explanation.
High L1 (6-9)	<ul style="list-style-type: none"> • Answers provide basic analyses on the benefits/ costs of openness without linking to SOL • Answers does not mention about how measures used to improve SOL. • No consideration other factors that can improve the SOL apart from the degree of openness of economy. • Answers show a narrow view about openness.
Low L1 (1-5)	<ul style="list-style-type: none"> • Analyses are error-strewn and incoherent • Grossly inadequate answers.
E2 (3-4)	<ul style="list-style-type: none"> • The answer shows evaluation of the approach of being an open economy taken by the government to enhance the SOL in Singapore. • The answer makes critical judgment on the need for Singapore to maintain its openness while maintaining the argument that openness is NOT the only factor that would enable the improvement of SOL.
E1 (1-2)	<ul style="list-style-type: none"> • Some evaluation present, but mostly superficially mentioned and directed narrowly at the effects of globalization on improving SOL.



CATHOLIC JUNIOR COLLEGE
JC2 PRELIMINARY EXAMINATIONS
In preparation for
General Certificate of Education Advanced Level
Higher 1

ECONOMICS

8819/01

Paper 1

21 Aug 2015

1400 - 1700

Additional Materials : Writing Paper

3 hours

READ THESE INSTRUCTIONS FIRST

Write your name, class and question number on **all** the work you hand in.

Write in dark blue or black pen on both sides of the paper.

You may use a soft pencil for any diagrams, graphs or rough working.

Do not use highlighters, glue or correction fluid.

Begin each question on a new sheet of paper.

Section A

Answer **ALL** questions.

Section B

Answer **one** question.

At the end of the examination, **hand in EACH question separately.**

The number of marks is given in brackets [] at the end of each question or part question.

Section A

Answer **all** questions in this section

Question 1: The bitter truth about sugar**Extract 1: Sugar updates**

Global sugar prices have been on a downward trend – and there is no end in sight. Worldwide, sugar stocks are at record levels, and high stocks have been bolstered even further after better than expected sugar production from India and Thailand. Current prices are below the cost of production for most producers. The three key drivers of consumption in emerging markets are rising population, rising levels of real incomes and shift in emerging markets toward urbanization. This year's final production from India and Thailand caught most of the industry by surprise, even though it is widely known that weather is a key driver behind these seasonal swings. This further highlights just how precarious output predictions can be. With an El Nino event expected to hit major commodities this year, there was "much debate as to what extent the weather risk has not been priced into the market."

Source: adapted from *foodnavigator.com*, July 2015

Extract 2: Britain in nutrition recession

Britain is experiencing a nutritional recession. Rising food prices and shrinking incomes are driving up consumption of fatty foods, reducing the amount of fruit and vegetables we buy, and condemning people on the lowest incomes to an increasingly unhealthy diet. Detailed data compiled for the Guardian, shows that consumption of fat, sugar and saturates has soared since 2010, particularly among the poorest households, despite the overall volume of food bought remaining almost static. The data show consumption of high-fat and processed foods such as instant noodles, coated chicken, meat balls, tinned pies, baked beans, pizza and fried food has grown among households with an income of less than £25,000 a year as hard-pressed consumers increasingly choose products perceived to be cheaper and more "filling".

Source: adapted from *The Guardian*, November 2012

Extract 3: Health recommendations to cut child obesity

A "sugar tax" should be introduced by the UK government to help curb obesity in childhood, a campaign group says. Action on Sugar has produced a seven-point plan, following a request from the government, to discourage children from consuming foods and soft drinks with high levels of added sugar.

The seven-point plan includes:

- Reduce added sugars in food by 40% by 2020
- Ban all forms of targeted marketing of unhealthy foods and drinks to children
- Disassociate physical activity with obesity by banning sponsorships of sporting events by junk food corporations
- Reduce fat by 15% in ultra-processed foods by 2020
- Limit the availability of ultra-processed foods and sweetened soft drinks
- Reducing portion sizes of ultra-processed foods and sweetened soft drinks
- Introduce a sugar tax to incentivise consumers to switch to healthier food

Current policies are not working and obesity could be prevented if the food environment is changed. The UK needs to start by setting incremental sugar reduction targets for soft drinks this summer as the food industry continues to spend billions in junk food advertising targeting children.

Source: *BBC*, June 2014

Extract 4: Sugar tax enacted in Mexico

Mexico has become the standard bearer in the global fight against obesity, after authorities passed a law imposing significant new taxes on junk food and sugary drinks. Mexico has resisted tough lobbying and warnings that raising prices would do nothing to help the country's economy. But the government has taken the long term view – that the short term potential economic harm from reduced junk food and soft drink sales now is insignificant compared with the long term damage in 10 years time if obesity continues at the current rate. The healthcare burden of diabetes and heart disease in Mexico is already huge and increasing. Some 9.2% of children in Mexico now have diabetes. The taxes will increase the price of junk foods by 8%. The money raised is intended to go towards health programmes and increased access to drinking water in schools. The government will also introduce a nutritional stamp of approval for healthier foods on sale in supermarkets.

The food industry claims such taxes are a burden on the consumers and do not work. They cite the Danish example. In 2011, the Danish government imposed a tax on all foods containing more than 2.3% saturated fat, which hit popular staples such as butter and bacon. It was unpopular partly because it was introduced by the treasury as a fundraiser, rather than being presented as a measure to improve population health. Newspapers ran stories about Danes stockpiling and crossing the border to buy cheaper butter. Eventually the government fell, and the tax was withdrawn after six months. In the end, the short-lived measure has only increased companies' administrative costs, with none of its benefits materialised.

Source: *The Guardian*, November 2013

Extract 5: Sugar policies in EU

The European Union (EU) is the world's main importer of sugar. Domestic sugar producers have a quota on how much sugar they can sell in the EU. These quotas restrict EU production of sugar to 13 million metric tons a year. The shortfall in local demand must be met by duty-free shipments from the developing countries of African, Caribbean and Pacific states (ACP)¹ that have preferential access to the EU market. These countries have benefited from the export of cane sugar to the EU market as currently, the EU imports 60 percent of their demand for cane sugar under a duty-free agreement for sugar from these ACP countries. This has resulted in occasional sugar shortages when imports from ACP nations fell due to poor production levels.

The EU Common Agricultural Policy (CAP) is a production quota on EU producers – a protectionism in favour of developing countries. There is a push for reform of the EU CAP, to end production quota imposed on EU producers. The reform could lead to an increase in EU domestic production of sugar, while imports of sugar are estimated to decline by 42.6 percent, mainly due to the replacement of imports from developing countries by domestic production. The reform is also likely to result in the EU move from being a net importer of sugar to a net sugar exporter.

Source: *www.tralac.org and Bloomberg*, April 2013

¹ African, Caribbean, and Pacific states (ACP) was created with the aim of coordinating cooperation between EU and its members. Malawi, Zimbabwe, Lesotho and Swaziland are some member states.

Extract 6: France concerned about liberalisation of EU sugar market

According to a report by the French parliament, ending European quota of domestic sugar production will harm developing countries that rely on sugar production. Many people in the developing countries depend on the sugar industry. The sugar sector directly or indirectly employs approximately 20,000 people in these countries.

The reform of the sugar quota policy is likely to benefit the large EU sugar producers, the most competitive producers. However, it is clear that there will be winners and losers. The reform should make European prices conform to world prices, which are currently lower, and increase the competitiveness of the European sector.

Increased competitiveness is a significant economic and social burden in places where the production is not yet completely mechanised. Some developing countries sugar sectors are not likely to survive the increased competitiveness.

Nevertheless, European sugar producers might not be the only ones to benefit from opening the market. The expanding global trade in sugar, now worth about \$47 billion, has been helping to fuel land grabs in developing countries. Rising consumer demand have encouraged more large-scale production operations at the expense of smaller farms. At least 4 million hectares have changed hands in large-scale deals since 2000. These deals have been linked to human rights violations, loss of livelihoods and hunger for small-scale food producers and their families. Small-scale producers are side-lined as the market offers companies huge rewards for exploiting land, but without safeguarding people's rights. The reforms might cause a change in events.

Source: *Bloomberg, Oct 2013 and Euractiv, May 2014*

Table 1: Global Sugar Price Index (Base year 2008)

2006	2007	2008	2009	2010	2011	2012	2013	2014	2015*
139	93	100	105	182	255	206	162	135	129

Note: *till July 2015

Source: *NASDAQ, accessed 29 July 2015*

Questions

- (a) (i) Describe the trend in sugar prices between 2010 and 2015. [2]
- (ii) Account for the overall trend in (ai). [4]
- (b) (i) Using a diagram, explain the economic case for the imposition of a sugar tax to curb obesity. [4]
- (ii) Discuss whether a tax is the most appropriate policy to tackle the ills of obesity. [8]
- (c) Explain why consumers have to bear a greater burden of the sugar tax. [4]
- (d) Discuss the impacts of the 'reform of the EU Common Agricultural Policy (CAP)' on developing and developed countries. [8]

[Total: 30]

Question 2: Generating and sustaining economic growth**Extract 7: China's economy grows robust 7.7% but signs of slow down emerge**

China's economy grew by a robust 7.7% last year, one of the strongest performances globally, although signs of a slowdown emerged late in the year as authorities tried to rein in a debt-fuelled investment growth binge. China's economy has cooled since recording double-digit growth rates in the run-up to the financial crisis of 2008, but it has been propped by a surge in investment in infrastructure and real estate. Amid concern that the debt burden was rising to dangerous levels, authorities tightened credit at the end of 2013, and investment growth slowed.

The Communist Party has been aiming to maintain a fast pace of economic growth. But this growth-at-all-costs strategy has not only wrought damage on the environment but has also allowed imbalances to build up within the economy, which relies more on investment than domestic consumption. Experts say the investment binge cannot be sustained without wasteful spending and a mountain of debt

Slowing the growth in credit is just the first step in that reform journey, economists say. The government needs to rein in politically powerful state-owned enterprises and create a more level playing field for the private sector. In addition, the authorities should look into boosting social safety nets so that its citizens are encouraged to spend more of their income rather than saving it, given China's high savings rate. None of that will be easy and will require taking on powerful vested interests within the party.

Source: *Washington Post*, 20 January 2014

Extract 8: Catching the dragon

Economists have tentatively suggested that within a year or two, India's economy might be growing more quickly than China's. Indeed, the India economy has been doing better after Mr Modi's pro-growth government took charge since last May's elections. Foreign investment inflows remain steady with the rupee maintaining its strength. The central bank has even expanded its foreign-exchange reserves to a record \$330 billion—thus keeping the rupee from rising by more.

The economy is likely to pick up further. The recent falls in commodity prices, which have hurt raw-material exporters such as Brazil, Russia and South Africa, are a boon for India, which imports 80% of the oil it consumes. Rich economies may fret about the dangers of falling prices around the world; Indians, on the other hand, are pleased they no longer have double-digit inflation at home. The diminishing threat from inflation has already prompted India's central bank to reduce interest rates in January, from 8% to 7.75%. More cuts are expected this year.

Source: *The Economist*, 9 February 2015

Extract 9: Singapore exports slow on global demand

The surprisingly slow global economic recovery was the cue for local economists to drastically cut their forecasts for Singapore's export performance this year. Exports had earlier been expected to climb 4.1% for the year but that prediction was slashed to -1.1%.

Economists said the dramatic turnaround in their estimates stemmed from falling demand for the type of electronic products made here. And although economic restructuring efforts are making services a bigger component of the economy, activity in this sector is not reflected in export data.

Economist Song Seng Wun said that Singapore's electronic exports in particular continued to struggle, partly due to weaker demand for products such as disk drives and semi-conductors. The electronic industry makes up about a third of the manufacturing sector, which in turn accounts for a fifth of economic output. It would take an "almighty lift" from non-electronic exports for overall non-oil domestic exports to grow this year, he noted.

Economist Chua Hak Bin said that pharmaceutical exports have also been poor, although that has been somewhat mitigated by a better showing in petrochemicals and chemical products.

The more optimistic forecast of 4.1% growth in exports was based on an expected pick-up in external demand but that has been slower than expected. Recovery in the United States has been less import-intensive, not providing as strong a lift to Asian exports as in the past. Slower China growth is also weighing on Asia's and Singapore's export performance. A strong Singapore dollar also led to falling non-domestic exports to the European Union, South Korea, Japan and Malaysia.

Another issue is that economic restructuring and stricter foreign worker policies are also hurting labour-intensive industries such as manufacturing, which may be losing competitiveness. But other economists note that some manufacturers still continue to invest here even though they know Singapore is not the cheapest place, indicating that the country still retains some of its competitive edge.

Analysts noted that economic restructuring and innovation will become more important to improve efficiency as Singapore cannot count on a pickup in global demand to drive the economy. Growth in the advanced world may remain sluggish as some major economies have yet to see solid recovery after the global financial crisis.

Source: *The Straits Times*, 15 September 2014

Extract 10: Monetary Authority of Singapore (MAS) maintains appreciation of Sing Dollar

The global economy should continue to expand, but at an uneven pace across countries. The US economy will lead the recovery but growth in the core Eurozone economies and Japan is likely to remain weak. In Asia, the ASEAN economies should benefit from the US recovery and the mild upturn in the global IT industry, while China is expected to stay on its moderating growth path.

MAS Core Inflation, which excludes private road transport and accommodation costs, averaged 2.2% year-on-year in July–August, up from Q1 2014. This was largely due to higher wages and other business costs that led to higher prices of consumer services. Imported food inflation was also elevated because of the higher cost of food from the region, which in turn partly reflected the effects of supply disruptions.

MAS will maintain its policy of a modest and gradual appreciation of the S\$NEER (Singapore dollar nominal effective exchange rate) policy band. This policy stance is assessed to be appropriate for containing domestic and imported sources of inflationary pressures.

Source: *MAS Monetary Policy Statement*, 14 Oct 2014

Table 2: Real GDP Growth (% Change)

Country	2013	2014	2015*
India	6.9	7.2	7.5
China	7.7	7.4	6.8

*forecasted data

Source: *IMF World Economic Outlook*, accessed July 2015

Table 3:
Ranking by GDP per capita, current US\$

Country	2014
United States	54,596
Germany	47,590
China	7,589
Vietnam	2,052
India	1,627
Myanmar	1,221

Table 4:
Ranking by GDP per capita, current PPP\$

Country	2014
United States	54,596
Germany	45,888
China	12,879
India	5,855
Vietnam	5,634
Myanmar	4,706

Source: *IMF World Economic Outlook*, accessed July 2015

Questions

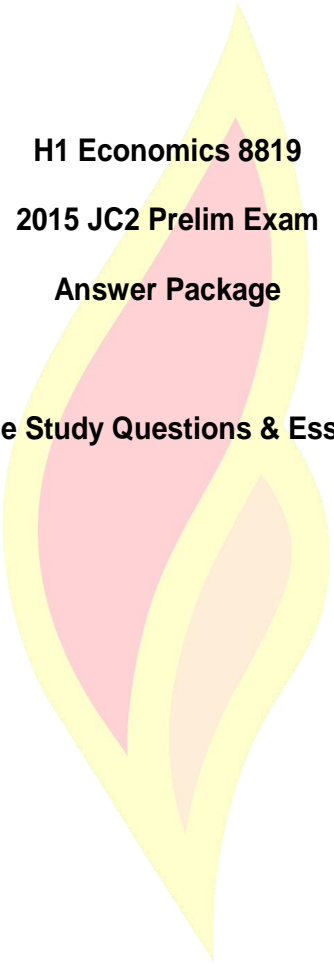
- (a) (i) Using Table 2, compare the real GDP growth rates of India and China from 2013 to 2015. [2]
- (ii) Using Extract 8, account for India's growth rate. [4]
- (b) Using Tables 3 and 4, explain one possible reason for the difference in the ranking of India. [2]
- (c) Explain why China should 'look into boosting social safety nets'. [4]
- (d) Discuss the impacts of China's 'growth-at-all-costs strategy' on her economy. [6]
- (e) Explain Singapore's stance on maintaining a strong dollar to retain price stability. [4]
- (f) Assess the view that 'an almighty lift from non-electronic exports' is needed for Singapore's economy. [8]

[Total: 30]

Section B

Answer **one** question from this section.

- 3 (a) Explain why government intervention in the case of positive externalities may not lead to an efficient allocation of resources. [10]
- (b) Discuss whether positive externalities, rather than any other potential market failure, is the main reason for government intervention. [15]
- 4 (a) Explain why there is a need for governments to engage in protectionism. [10]
- (b) Discuss the extent to which globalization helps to achieve sustained economic growth. [15]



H1 Economics 8819
2015 JC2 Prelim Exam
Answer Package
Case Study Questions & Essays

CJC

CSQ 1 Suggested Answer Scheme

- (a) (i) **Describe the trend in sugar prices between 2010 and 2015.** [2]

Overall [1m]

The trend of sugar prices is generally decreasing.

Refinement [1m]

There is an increase in sugar price in 2011.

OR Sugar price is highest in 2011.

•

- (ii) **Account for the overall trend in (ai)** [4]

The favourable seasonal weather condition for sugar leads to an increase in the supply of sugar from S_1 to S_2 . [Evidence & Knowledge]

It is stated in extract 1 that there is “rising population, rising levels of incomes – real income and shift in emerging markets toward urbanization”. Hence this leads to an increase in demand from D_1 to D_2 . [Evidence & Knowledge]

The above explanation will get a maximum of [3m].

When the increase in supply is more than the increase in demand, price will fall from P_1 to P_2 , thus accounting for the decrease in sugar prices. [1m]

•

- (b) (i) **Using a diagram, explain the economic case for the imposition of a sugar tax to curb obesity.** [4]

Answers that identify the source of market failure due to negative externalities or imperfect information are accepted.

Market Failure due to Negative Externalities

1. Divergence (MEC associated with obesity e.g. burden on healthcare system)
2. Evidence from extract 4: “Burden of diabetes and heart disease”
3. Overproduction/overconsumption of unhealthy food and drinks (QsQf from the diagram)
4. Deadweight loss, as seen in shaded area from diagram
5. Diagram (answer must refer to the diagram)

Points 1 to 4 will gain a maximum of 3m and point 5 will be allocated 1m.

Market Failure due to Imperfect Information

1. Divergence (perceived MPC vs actual MPC associated with obesity e.g. burden on healthcare)

2. Evidence from extract 4: “Burden of diabetes and heart disease”
 3. Overproduction/overconsumption of unhealthy food and drinks (QsQf perceived from the diagram)
 4. Deadweight loss, as seen in shaded area from diagram
 5. Diagram (answer must refer to the diagram)
- Points 1 to 4 will gain a maximum of 3m and point 5 will be allocated 1m.

(ii) Discuss whether a tax is the most appropriate policy to tackle the ills of obesity. [8]

Question Analysis

Command	Discuss - to provide at least 2 different perspectives of the issue.
Content	Market Failure and Government Intervention - Policies to rectify negative externalities
Context	Obesity due to high sugar intake in various countries such as the UK
Approach	<p>Students need to discuss whether the sugar tax is the most appropriate policy to tackle the ills of obesity.</p> <p>TAS Structure</p> <ul style="list-style-type: none"> ▪ Thesis: Sugar tax is an appropriate policy to tackle the ills of obesity – explain how the sugar tax works and weigh the pros and cons. ▪ Anti-Thesis: There are other appropriate policies (regulation, ban, moral suasion...etc.) that can tackle the ills of obesity. <p>Synthesis: Weigh all 3 policies and come to a justified conclusion, with linkage back to the question.</p>

Essay Outline

Introduction	<ul style="list-style-type: none"> ▪ Define market failure ▪ Context of the essay – Sugar tax as a policy to tackle obesity in various countries e.g. UK ▪ Overview of the essay
Body	<p>Thesis</p> <ul style="list-style-type: none"> ▪ Tax and how it works in increasing the MPC (effective in solving negative externalities/imperfect information) ▪ Limitations of a tax <p>Anti-Thesis</p> <ul style="list-style-type: none"> ▪ Other policies (refer to extract 3 & 4) – Regulation

	(restrict the added sugar in food) and moral suasion (increase information) <ul style="list-style-type: none"> ▪ Limitations of each relevant policy
Conclusion	Synthesis <ul style="list-style-type: none"> ▪ Make and justify a stand – Tax can be or not be the most appropriate policy depending on the scenario – SR vs LR, different countries etc. ▪ A combination of policies works better – explain how the policies complement each other when used together.

Suggested Answer

In this question, from extract 3, we see that a country like UK wants to implement a sugar tax policy to tackle the ills of obesity as aforementioned in part (b), due to the presence of negative externalities which is a source of market failure. In this answer, I will discuss as to whether such a tax is the most appropriate policy in tackling the ills of obesity.

When the government implements a policy of sugar taxes to tackle the ills of obesity, the MPC increases to MPC^* , where $MPC^* = MPC + \text{tax}$ and the tax per unit = MEC at Q_s . This is shown in figure 1, where the MPC curve shifts to the left to MPC^* . The new equilibrium will then be at $MPC^* = MPB$, where Q_s , the socially optimal output level, is achieved, hence the overconsumption of food high in sugar is reduced, and deadweight loss is eliminated, thus tackling the ills of obesity. The policy of taxation is beneficial to the government as it will obtain greater government revenue where it can spend on improving infrastructure...etc. Taxes are also easy to implemented and still allow free market forces to operate – consumers who can afford to pay the taxes will still continue to consumer such processed food, whereas those who can no longer afford to pay the taxes to stop consuming the processed food. Unfortunately in reality, it is very hard for the government to identify the MEC at Q_s , hence under-taxation would still present the problem of overconsumption and deadweight loss will still exist. Over-taxation might lead to under-consumption and a whole new deadweight loss will be present. Moreover, such processed food with high sugar content might be very addictive and hence the demand for such foods will be relatively more price inelastic. Thus, a very large amount of taxes need to be implemented in order for the quantity demanded to drastically be reduced. As such, the policy of taxes might not be the most appropriate policy to tackle the ills of obesity.

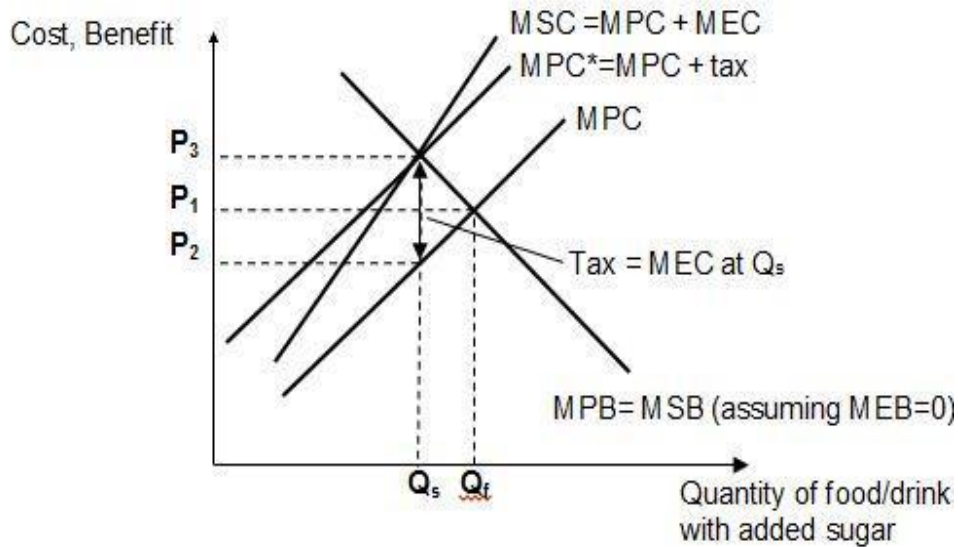


Figure 1: Tax on Sugar

An implementation of a regulation, such as limiting the availability of ultra-processed foods and sweetened soft drinks, would also be appropriate in tackling the ills of obesity. By reducing availability of unhealthy processed foods, this will help to reduce the overconsumption problem mentioned in part b, thus achieving Q_s , the social optimal output level and hence the deadweight loss will be eliminated. A regulation can be easy to implement, however such a regulation could be seen as a blunt tool, as compared to taxation or moral suasion, and the cost of monitoring and enforcing will be high. Such a regulation could also lead to people 'smuggling' into the country/creation of black markets to solve possible shortages.

Moral suasion could also be an appropriate policy to help tackle the ills of obesity. Educational campaigns will help to correct consumers' imperfect information with regards to the actual MPC of consuming processed foods with high sugar levels/educate them about the external costs, MEC. As such, through moral suasion, the negative externalities will be internalised, and Q_s the social optimal output level will be achieved with the elimination of the deadweight loss. In the long run, this policy is very appropriate as the people willingly reduce their consumption of such processed food, thus tackling the ills of obesity. On the other hand, such a policy will take a long time to come into effect, as compared to taxes or regulation, as it takes time to change people's perspectives and change their eating habits. Moreover, such a policy does not guarantee results as it depends on consumers' initiatives to change their dietary habits, rather than an enforcement of policy like taxation or regulation.

To conclude, a tax alone is definitely not the most appropriate policy to tackle the ills of obesity. For best and most appropriate results, it is

recommended that the government implements the tax for short-run effectiveness due to the immediacy of the policy implementation. The government can then channel the tax revenue collected into educational campaigns to educate the society about the ills of obesity in hopes that the external costs will be internalised/the imperfect information will be corrected for long-run effectiveness. Should the PED of such foods be relatively price inelastic, regulations as mentioned in the seven-point plan, such as limiting the availability of ultra-processed foods and sweetened soft drinks or reducing added sugars in food by 40% can also be implemented alongside the tax and moral suasion for guaranteed best results. This will then ensure that the ills of obesity will best be tackled most appropriately both in the short run and long run.

Marks Scheme

Level	Description	Marks
2	Provided a well-balanced 2-sided answer with sufficient elaboration and use of analytical framework, with evidence.	4—6
1	Only considered a one-sided effect of taxes OR A two-sided descriptive answer that merely listed and lacked economic analysis, with little or no use of evidence.	1—3
E	Overall stand on the issue with/without justifications based on economic analysis.	1—2

c) **Explain why consumers have to bear a greater burden of the sugar tax.** [4]

- PED of sugar is inelastic as only a small portion of income is spent on sugar. [1m]
- PES of sugar is elastic as sugar is a manufactured product or preservative. [1m]
- Hence, PED is more inelastic relative to PES. [1m]
- Diagram illustrating consumers bearing a greater burden of sugar tax. [1m]

(d) **Discuss the impacts of the 'reform of the EU Common Agricultural Policy (CAP)' on developing and developed countries.** [8]

Question Analysis

Command	Discuss – to provide at least 2 different perspectives of the issue.
Content	'Impacts of... on developing and developed countries' – something to do with interconnected nature of economy → quite open.

Context	'Reform for EU CAP' – EU cap is a quota imposed on domestic producers (Extract 5) and a 'push for reform of EU CAP' is the end of the quota. (Extract 5).
Approach	<p>Students need to discuss the impacts of the reform on CAP. Since context specifies developing and developed countries, you will need to discuss impacts on both developed (EU) and developing (ACP). Since the command word is 'discuss', the TAS will also need to be included.</p> <p>As it is a [8m] question and not a 15m essay, answer will need to show 3 points out of the following 4 to give you a TAS structure:</p> <ul style="list-style-type: none"> • Positive impact on LDC • Positive impact on DC • Negative impact on LDC • Negative impact on DC

Note that EU will represent the DC while ACP or any other reference to developing countries in extract will represent the LDC.

Some Possible Impacts

EU (DC)	ACP (LDC)
<p>With the removal of EU CAP → increase in domestic production of sugar → increase in domestic supply of sugar → fall in price of sugar → increase in consumer surplus (+) → increase in quantity of sugar → increase sugar consumption → worsening obesity and market failure (-)</p> <p>With the removal of EU CAP → EU becomes a net exporter → increase in export earnings → increase in (X-M) → increase in AD → increase in GDP → increase in actual economic growth (+) → increase in employment (+) → improve in BOT/BOP (+) → increase in inflation (-)</p>	<p>With the removal of EU CAP → less demand for land in developing countries → reduce land grabs → allowing small scale producers to survive (+) BUT can erode of livelihood as dependent on the sugar trade (-)</p> <p>With the removal of EU CAP → lose preferential access to EU → decrease in exports earnings → decrease in (X-M) → decrease in AD → decrease in GDP → decrease in actual economic growth (-) → decrease in employment (-) → worsen in BOT/BOP (-) → lower inflation (+)</p>

F

Suggested Answer

Introduction

Currently, there is a quota on EU domestic sugar production. The shortfall in local demand is met by developing countries. A reform of the Common Agricultural Policy (CAP) will lead to an end of the quota. According to

Extract 6, large sugar producers in EU are the most competitive producers. Thus, a reform of CAP is likely to lead to many changes in the world market for sugar. This essay serves to discuss the impacts of the reform on developing and developed countries.

Body

EU stands to gain from the reform of CAP. Because of the reforms, EU domestic sugar producers will now be able to increase production of sugar. As they are the most competitive sugar producers, they will likely move from being a net sugar importer to a net sugar exporter, as reported in Extract 5. As a result, this will increase their net exports, a component of aggregate demand (AD), and increase the AD as well. Through the multiplier process, the increase in net exports will lead to an increase in incomes, as seen in the graph below.

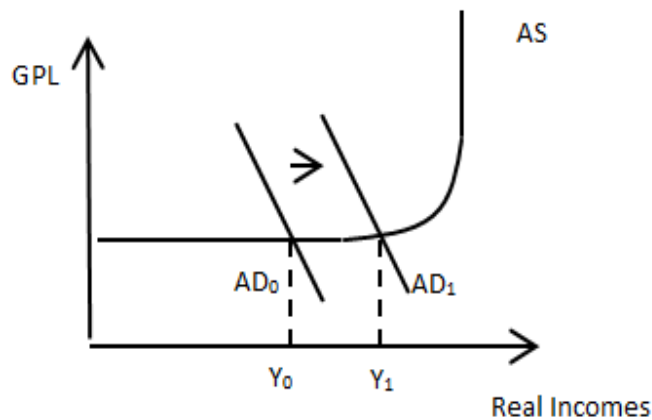


Figure 1

As a result, EU will see higher incomes due to the reform of CAP.

However, this might not be entirely good for EU. According to extract 6, EU sugar prices will fall and conform to the world prices. This will lead to increase consumption of sugar and sugar related foods. In UK for example, the consumption of sugar has risen and obesity and other sugar related issues have risen due to rising sugar consumption. Hence, a fall in sugar price will actually lead to a worsening of the market failure associated with the consumption of sugar. (for H2, I would probably add the market failure graph here).

For developing countries, this reform of the CAP might not be a bad thing. Although this will mean that it will lose export revenue and affect the livelihood of many people, there could be some positive outcomes. Because of the CAP, there has been an increase in large scale deals in developing countries. These deals often occur at the expense of smaller farms, as seen in extract 6. Large firms will end up exploiting the land,

small producers and create problems for domestic producers. A reform of the CAP will see a fall in demand for sugar production in developing countries, leading to a fall in demand for land and less exploitation of workers and land in developing nations.

Conclusion

Overall, a reform in CAP will likely be positive for EU as a developed country with better sugar production, and while CAP can have positive effects on developing countries, it is likely that its overall effects on developing countries will be negative. However, the effects are only temporary. With the removal of protectionist measures, the market can then work to reallocate resources efficiently. In the long run, the developing countries could develop comparative advantage in sugar production as they continue to mechanise and develop. This might mean a reversal of the effects.

Marks Scheme

Level	Description	Marks
2	Well-developed answer that provides sufficient economic elaboration on the issue. Well-developed means 3 points out of the following 4: <ul style="list-style-type: none"> • Positive impact on LDC • Positive impact on DC • Negative impact on LDC • Negative impact on DC To achieve top marks, answers must also use an economic framework (DDSS, market failure or ADAS). If ONLY positive or negative impacts considered, marks will be capped at 4.	4-6
1	1 sided discussion, either in terms of analysing impacts on developed or developing countries ONLY.	1-3

Evaluation

Level	Description	Marks
1	Overall stand on the issue. For 2m, an economic justification is needed. Stands can include: magnitude of impact, outcomes of impacts, the reform's relative importance to each country etc.	1-2

CSQ 2 Suggested Answer Scheme

(a) (i)	Using Table 2, compare the real GDP growth rates of India and China from 2013 to 2015.	[2]
	<p><u>Suggested Answer:</u> Real GDP growth rates of both India and China is positive [1] but India's real GDP growth rate is rising while China's real GDP growth rate is declining. [1]</p>	
(ii)	Using Extract 8, account for India's growth rate.	[4]
	<p><u>Suggested Answer:</u></p> <p><u>Observation:</u> India's growth rate is rising and projected to rise further in the future.</p> <p>Any 2 Reasons behind India's faster growth rate</p> <ul style="list-style-type: none"> - Lower commodity prices (evidence), (India may be importing more commodities), lower COP AS shifts right, higher GDP (knowledge) - Lower interest rates (evidence); sparking faster AD growth, higher GDP (knowledge), - Steady inflow of foreign investment (evidence); higher AD, higher GDP (knowledge) - Prevent Rupee from rising (evidence) to maintain/increase export competitiveness, hence higher AD, higher GDP (knowledge) <p>2m for each point: knowledge & evidence needed for full credit.</p>	
(b)	Using Tables 3 and 4, explain one possible reason for the difference in the ranking of India.	[2]
	<p><u>Suggested Answer:</u></p> <p><u>Observation:</u> India's ranking rose from 5th position in table 2 to 4th position in table 3. [1]</p> <p>OR India & Vietnam swapped places.</p> <p><u>Reason:</u> This may be due to lower cost of living in India. After accounting for PPP, Indian citizens would be able to enjoy a larger basket of goods and services. [1]</p>	
(c)	Explain why China should 'look into boosting social safety nets'.	[4]
	<p><u>Suggested Answer:</u></p> <ul style="list-style-type: none"> • Consumers need to feel that they are taken care of by the state and be more inclined to spend rather than save. • This will help to fuel consumption and drive economic growth as AD rises (knowledge) rather than have the economy be over-reliant on an 'investment binge' (evidence) • Lower savings as opposed to high savings rate (evidence) is preferred as there will be lesser withdrawals from China's circular flow of income. • Given that MPS is part of the multiplier, if MPS becomes smaller, then the multiplier value can grow and any rises in AD will bring about a larger increase to China's national income. (knowledge) 	

	<p><u>Examiners' Comments:</u> Most students were able to relate the boosting of social safety nets to impact on consumption, AD and economic growth. Evidence was also used to support this government's stance. However, few students were able to pick out the impact on the country's savings and link it to the level of withdrawals on the economy.</p>										
(d)	<p>Discuss the impacts of China's 'growth-at-all-costs strategy' on her economy.</p> <p><u>Suggested Answer:</u></p> <p>Thesis: Positive impacts of China's 'growth-at-all-costs strategy' on the economy.</p> <ul style="list-style-type: none"> - <u>Evidence:</u> Table 2 on China's growth rate. <u>Knowledge:</u> This strategy has been propelling China's growth in national income well so far. (AD rising via export led growth), providing jobs for China's population (reduction in unemployment) - <u>Evidence:</u> It has put China on the world map for being it low cost, cheap labour advantages. <u>Knowledge:</u> China possessing CA in manufacturing, AS shifts right, falling prices - Helps bolster Chinese firms to better compete with MNCs in their own domestic markets as well as international ones. <p>Anti-thesis: Negative impacts of China's 'growth-at-all-costs strategy' on the economy.</p> <ul style="list-style-type: none"> - <u>Evidence:</u> Extract 8 "wrought damage on the environment". <u>Knowledge:</u> higher growth will lead to market failure without government intervention as firms strive to up production increase profits without care for environment. Also lead to fall in non-material SOL and lower quality of life. - <u>Evidence:</u> Growth was 'propped by surge in investment in infrastructure and real estate that led to dangerous debt levels'. <u>Knowledge:</u> Such growth was overheating the economy and is fuelled by credit. This will lead to demand pull inflation. - <u>Evidence:</u> Imbalance of economy fuelled more by investment. <u>Knowledge:</u> Not sustainable with 'issues of wasteful spending and mountain of debt'. Growth was not channelled into proper areas (quality of growth/composition of GDP growth argument) <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Level</th> <th style="width: 70%;">Description</th> <th style="width: 20%;">Marks</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td>For identification and explanation of only positive or negative impacts on China's economy. Did not bring in any macroeconomic objectives or standard of living.</td> <td style="text-align: center;">1 – 3</td> </tr> <tr> <td style="text-align: center;">2</td> <td>For identification and explanation of both positive and negative impacts on China's macroeconomic objectives. Reasoned stand as to the overall impact on China.</td> <td style="text-align: center;">4 – 6</td> </tr> </tbody> </table>	Level	Description	Marks	1	For identification and explanation of only positive or negative impacts on China's economy. Did not bring in any macroeconomic objectives or standard of living.	1 – 3	2	For identification and explanation of both positive and negative impacts on China's macroeconomic objectives. Reasoned stand as to the overall impact on China.	4 – 6	[6]
Level	Description	Marks									
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2	For identification and explanation of both positive and negative impacts on China's macroeconomic objectives. Reasoned stand as to the overall impact on China.	4 – 6									
(e)	<p>Explain Singapore's stance on maintaining a strong dollar to retain price stability.</p> <p><u>Suggested Answer:</u></p> <ul style="list-style-type: none"> • <u>To correct imported inflation:</u> a strong dollar helps to maintain the prices of imported goods and services and counter imported food inflation (evidence) which is helpful to Singapore, a resource poor country. • <u>To correct demand pull inflation:</u> a strong dollar would raise the relative price of 	[4]									

	<p>exports from Singapore, and lower the relative price of imports. This would result in a fall in net exports, leading to a fall in AD which can help to resolve demand pull inflation evident in the rise to MAS core inflation (evidence), in Singapore.</p> <ul style="list-style-type: none"> • <u>To correct cost push inflation</u>: a strong dollar helps to lower prices of imported inputs, lower costs of production and result in production of cheaper final goods and services in Singapore. 	
(f)	<p>Assess the view that ‘an almighty lift from non-electronic exports’ is needed for Singapore’s economy.</p>	[8]
	<p><u>Suggested Outline</u>:</p> <p>Current economic conditions prevailing in SG economy: <u>Evidence</u>: Extract 9: Slower than expected export demand hence export revenue expected to dip by 1.1%. (<u>Knowledge</u>) With export revenue falling, Singapore’s economic growth is likely to slow or fall, AD falling.</p> <p><u>Evidence</u>: Extract 9: Economic restructuring and tighter foreign worker policies expected to drive up costs of production, AS may fall (<u>knowledge</u>).</p> <p>Challenges: Sustained Economic Growth</p> <p>Thesis: Why an almighty lift from non-electronic exports is needed for Singapore’s economy</p> <ul style="list-style-type: none"> - A rise in non-electronics exports will help fill the gap left by the fall in manufacturing exports, this will help to maintain AD and national income. (AD rising back to normal position) - <p>Anti-thesis 1: Why an almighty lift from non-electronic exports is insufficient for Singapore’s economy</p> <ul style="list-style-type: none"> - <u>However</u>, evidence show that this area is also not performing well, ‘pharmaceutical exports’ have also been poor. - <u>Furthermore</u>, the main issue is that export demand is not picking up as it should as recovery in US is ‘less import intensive’. <p>Anti-thesis 2: Other factors may need to be considered besides an almighty lift from non-electronic exports</p> <ul style="list-style-type: none"> - Singapore management of her policies may be crucial in driving sustained economic growth, such as the stricter foreign worker policies. It can improve labour productivity in the long run but may lead to firms suffering losses in the short term. Hence government may need to offer subsidies to firms and retraining for the workers. <p>Synthesis: Arrive at a reasoned conclusion as to whether such a method will indeed benefit Singapore.</p> <ul style="list-style-type: none"> - An almighty lift in non-electronic exports may be needed to provide that push in AD for Singapore’s economy but needs to be supported by sound government policies as well. <p>Introduction: Highlight the Current Challenges faced by Singapore: According to extract 9, Singapore was faced with slower than expected export demand with export revenue expected to dip by 1.1%. With export revenue falling, Singapore’s economic growth is likely to slow or fall, with her AD falling. The impact on national income would be significant given Singapore’s export oriented economy. Furthermore,</p>	

the government is embarking on economic restructuring and tighter foreign worker policies as evidenced in extract 9. This is expected to drive up costs of production and AS may fall. Hence the main challenge to Singapore would be how to sustain her economic growth.

Body

An almighty lift from non-electronic exports is needed for Singapore's economy. A rise in non-electronics exports will help fill the gap left by the fall in manufacturing exports, this will help to maintain AD and national income, hence protecting economic growth.

However an almighty lift from non-electronic exports may be insufficient for Singapore's economy because evidence showed that this area is also not performing well. In extract 9, 'pharmaceutical exports' have also been poor. Furthermore, the main issue is that export demand is not picking up as it should as recovery in US is 'less import intensive'. Therefore exports revenue will still be slow and decline, Singapore's AD will continue to fall and Singapore may enter into a recession with her national income falling.

Other factors are needed for Singapore's economy. Singapore's management of her policies may be crucial in driving sustained economic growth, such as the stricter foreign worker policies. It can improve labour productivity in the long run but may lead to firms suffering losses in the short term. Hence government may need to offer subsidies to firms and retraining for the workers.

Conclusion (Time & Space)

Whether or not Singapore's economy will benefit from an almighty lift from non-electronic exports depends on the impact on Singapore's national income and supporting policies the government would also be pursuing. It would be a sound policy with short term positive effects but in the long term, this needs to be considered with other government policies as well so that economic growth can be achieved both in the short and long term.

Level	Description	Marks
1	For superficially explaining how an almighty lift from non-electronic exports will help Singapore's economy without bringing in macroeconomic objectives and/or standard of living.	1 – 3
2	For a thorough explanation and evaluation of how an almighty lift from non-electronic exports will help the Singapore's achieve her macroeconomic objectives. A reasoned judgement of whether the above will benefit Singapore or not.	4 – 8

Essay Question 3 Suggested Answer Scheme

- 3 (a) Explain why government intervention in the case of positive externalities may not lead to efficient allocation of resources. [10]
- (b) Discuss whether positive externalities, rather than any other potential market failure, is the main reason for government intervention. [15]

3 (a) Explain why government intervention in the case of positive externalities may not lead to efficient allocation of resources. [10]

Question Analysis

Command	Explain why: Using relevant economic facts, describe clearly and in detail, the reasons contributing towards said circumstances.
Content	Positive externalities; government intervention for positive externalities; government failure; efficiency concepts (AE/PE)
Context	Positive externalities; government intervention. No specific context –use relevant context for relevant government intervention
Approach	Students have to concentrate on the area of positive externalities, and present an answer to provide clear reasons as to why government intervention to correct the market failure, due to presence of positive externalities, will not lead to efficient allocation of resources.

Essay Outline

Introduction	<ul style="list-style-type: none"> ▪ Definition: Efficient allocation of resources ▪ Contextualisation: Explain briefly how positive externalities lead to partial market failure, and hence the need for government intervention in the first place. ▪ Overview of the essay: Government Interventions (Subsidies, Direct Provision, Moral Suasion)
Body	<p>Para 1</p> <ul style="list-style-type: none"> ▪ Explain how the government implements subsidies to solve the market failure problem arising from presence of positive externalities. ▪ Explain how government failure in the implementation of subsidies leads to inefficient allocation of resources. <ul style="list-style-type: none"> » Over/under-estimation of MEB (= subsidies) which will lead to inefficient allocation of resources (information failure)
	<p>Para 2</p> <ul style="list-style-type: none"> ▪ Explain how the government directly provides for the good to solve the market failure problem arising from presence of positive externalities. ▪ Explain how government failure in the implementation of direct provision leads to inefficient allocation of resources. <ul style="list-style-type: none"> » Direct provision –takes up a large proportion of government revenue which might cause a reallocation of resources from

		other sectors where there are large opportunity cost; cannot accurately identify Qs (information failure); could lead to overconsumption because good is provided for free.
	Para 3	<ul style="list-style-type: none"> ▪ Explain how the government implements subsidies to solve the market failure problem arising from presence of positive externalities. ▪ Explain how government failure in the implementation of subsidies leads to inefficient allocation of resources. <ul style="list-style-type: none"> » Moral suasion: rely on voluntarism to achieve Qs
Conclusion		Thus, although government failure is never avoidable, we can do our best to minimise the effects of government failure on the inefficient allocation of goods.

Detailed Answer

Allocative efficiency is the situation in which the society produces and consumes a combination of goods and services that maximises its welfare. It is achieved when goods and services wanted by the economy are produced in the right quantities – where there is an efficient allocation of resources. Market failure exists in the case of positive externalities due to the presence of marginal external benefits, where there is a divergence between marginal private benefits and marginal social benefits. Hence in the free market equilibrium, goods with positive externalities, for example healthcare services, will be under-consumed and hence deadweight loss will be present. Where allocative efficiency is not achieved due to market failure, there will be a need for the government to intervene. However, due to imperfect information, the government faces significant challenges in estimating the real costs of the market failure. As a result, policy implementations are often made with imperfect information and uncertainty, and therefore not lead to an efficient allocation of resources. This essay will serve to focus on 3 government intervention methods, namely subsidies, direct provision and moral suasion.

In order to solve the under-consumption present in healthcare, the government can decide to subsidize healthcare services for all citizens. As seen in figure 1, an implementation of the subsidy would cause MPC to be lowered, where MPC shifts to the right to MPC*. The new $MPC^* = MPC + \text{Subsidy}$, where subsidy per unit = MEB at Qs = P3P2. The consumer will still maximise one's net private benefits and consume healthcare services at $MPC^* = MPB$ at Qs, hence the under-consumption is resolved and deadweight loss will be eliminated.

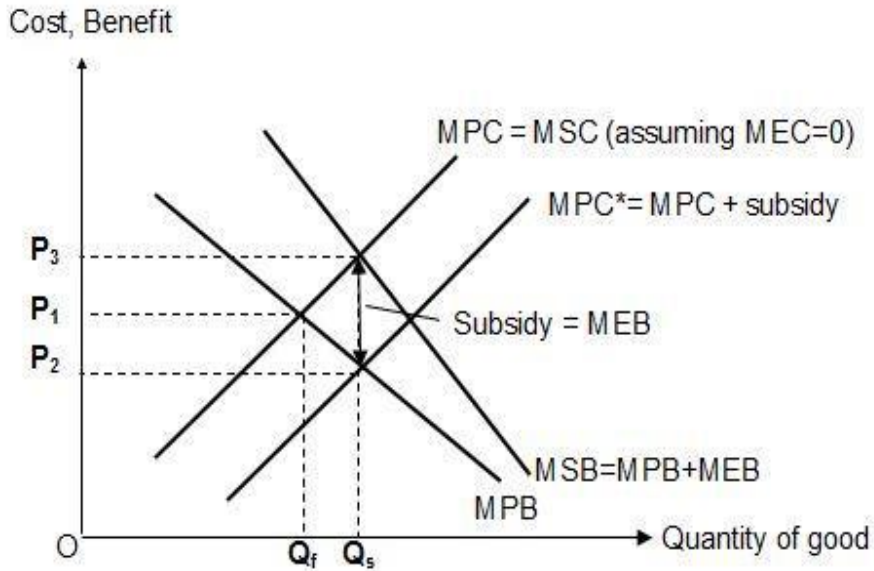


Figure 1: Subsidies

Unfortunately, in reality, government failure exists. The subsidy = MEB at $Q_s = P_3P_2$ is very hard to estimate. This may lead to over-subsidisation where over-consumption of healthcare services will result, for example clinics and hospitals will therefore be overcrowded and thus emergency responses will become less efficient or may also lead to under-subsidisation, where under-consumption of healthcare services and the deadweight loss will still be present, leading to inefficient allocation of resources. In addition, providing subsidies for all citizens can be very draining on the government, leading to a lot of red tape and bureaucracies which will further lead to inefficient allocation of resources.

Alternatively, the government can also intervene in the case of healthcare services, by directly providing the good for free. By targeting the social optimal output level, this direct provision will ensure that Q_s is achieved and ensure that under-consumption and the deadweight loss are eliminated. When healthcare services are provided for free, consumers' MPC will now be zero and hence consumers will now maximise their net private benefits where $MPC=MPB=0$. With reference to figure 2, consumers will now consume at Q' , which is greater than Q_s . This over-consumption results in a greater deadweight loss as represented by area A, as compared to the deadweight loss that resulted in the free market equilibrium without government intervention, as represented by area B. Since deadweight loss area A is larger than deadweight loss area B, this shows that government intervention in fact leads to greater inefficient allocation of resources.



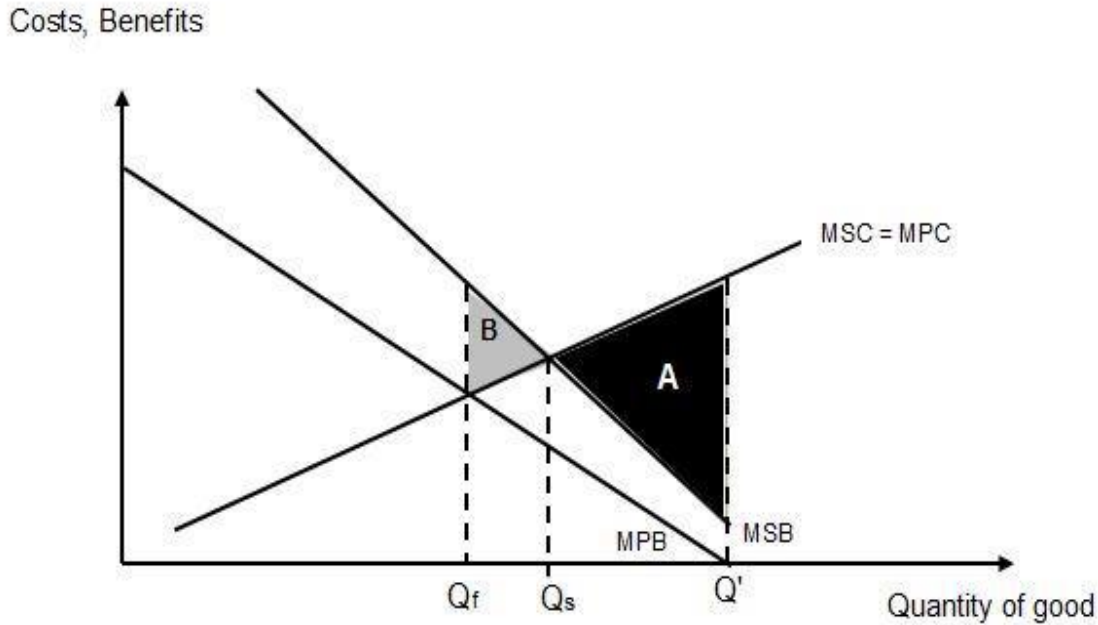


Figure 2: Overconsumption of a zero-priced good (Direct Provision)

The government can also engage in moral suasion, to educate the public about the positive externalities present in healthcare services. With moral suasion, consumers will then be able to internalise the positive externalities, and thus consumers' MPB will now be equal to MSB and hence consume at Q_s , the socially optimal output level where under-consumption is corrected and the deadweight loss eliminated. Due to government failure, the government again may have imperfect information with regards to where Q_s is, and how much moral suasion to engage in. The government is unable to guarantee 100% results with moral suasion. Due to time lags, for example the time taken to recognise the market failure problem to the time it takes to decide and implement the policy, it can also affect the efficiency of results and lead to inefficient allocation of resources. In addition, moral suasion can be a rather costly method, where the government may have to reallocate resources away from other sectors into healthcare services, which may lead to further inefficient allocation of resources.

To conclude, as seen in the government intervention methods aforementioned, the presence of government failure in the case of positive externalities, will therefore not lead to an efficient allocation of resources.

Knowledge, Application, Understanding and Analysis		
L3	A thorough knowledge of facts and theory with excellent analytical ability to describe and explain in a precise, logical and reasoned manner. Accurate use of facts and theories regarding government intervention methods dealing with positive externalities, substantiated with good diagrams and examples.	8 – 10
L2	Answer shows ability to identify the government failure when intervening with regards to the partial market failure due to presence of positive externalities.	4 – 7

	Undeveloped explanations of facts and theory, with some ability at graphs, and some application to examples.	
L1	<p>Answer did not address question or address in an incidental manner.</p> <p>The answer is mostly irrelevant and contains only a few valid points made about the source of market failure with little or no elaboration, disregarding the context of government failure when intervening.</p> <p>None or very little applications made to examples.</p>	1 – 3

3 Discuss whether positive externalities, rather than any other potential market failure, is the main reason for government intervention. [15]
(b)

Question Analysis

Command	Discuss whether: Provide relevant arguments for and against an issue. Generally, the issues raised have some normative aspect, or have unspoken assumptions that can be challenged. Come to a judgment after reviewing the issue.
Content	<p>Sources of market failure (Any 3)</p> <ul style="list-style-type: none"> » Positive & negative externalities » Imperfect information (merit/demerit goods) » Public goods » Income inequality
Context	<p>Positive externalities, amongst other sources of market failure.</p> <p>No specific context –use relevant contexts for the relevant sources of market failure.</p>
Approach	Students must compare across all sources of market failure to decide is positive externalities is the main reason for government intervention.

Essay Outline

Introduction	<ul style="list-style-type: none"> ▪ Definition: Market Failure ▪ Overview of the essay 	
Body	Thesis 1	Explain how positive externalities leads to partial market failure and hence why the government needs to intervene to correct it.
	Anti-Thesis 1	Merit and demerit goods provide greater impetus for government intervention due to presence of imperfect information as well.
	Anti-Thesis 2	Explain how public goods, because it leads to complete market failure due to missing market signals (no effective demand and producers having an inability to charge a price), requires government intervention no matter what and hence is the main reason for government intervention.

Conclusion	Compare across all 3 sources of market failure, and make a stand with justification, providing insights.
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Detailed Answer

Market failure occurs when free markets fail to bring about an efficient allocation of resources where marginal social benefits do not equal marginal social costs. It can also occur due to inequitable distribution of income. In this essay, we will discuss whether positive externalities is the main reason for government intervention, where we will be comparing across various sources of market failure, namely positive externalities, imperfect information and public goods.

In the case of positive externalities, the government will intervene due to the presence of market failure. With reference to figure 3, in the free market equilibrium, the consumer will maximise net private benefits where $MPC=MPB$ at Q_f . The MPC of consuming healthcare services for example would be the cost of the medical services like vaccinations and medicine that one has to take. The MPB of healthcare services would be the healthier and sick-free lifestyle that one enjoys. We assume that there are no external costs, hence $MPC=MSC$. Due to the presence of positive externalities, there is a divergence between MPB and MSB, where MSB is larger than MPB for all output levels due to the presence of MEB. An example of MEB would be the greater protection from sicknesses and lower spread of diseases that the consumer's loved ones will enjoy and benefit from, when the consumer consumes healthcare services. The socially efficient equilibrium is at Q_s , where $MSC = MSB$. Since Q_s is greater than Q_f , there exists an under-consumption of $Q_f Q_s$, thus resulting in a deadweight loss which is represented by the shaded area in figure 3. As such, in the case of positive externalities, partial market failure exists and hence there will be a need for the government to intervene to correct this market failure and achieve allocative efficiency.

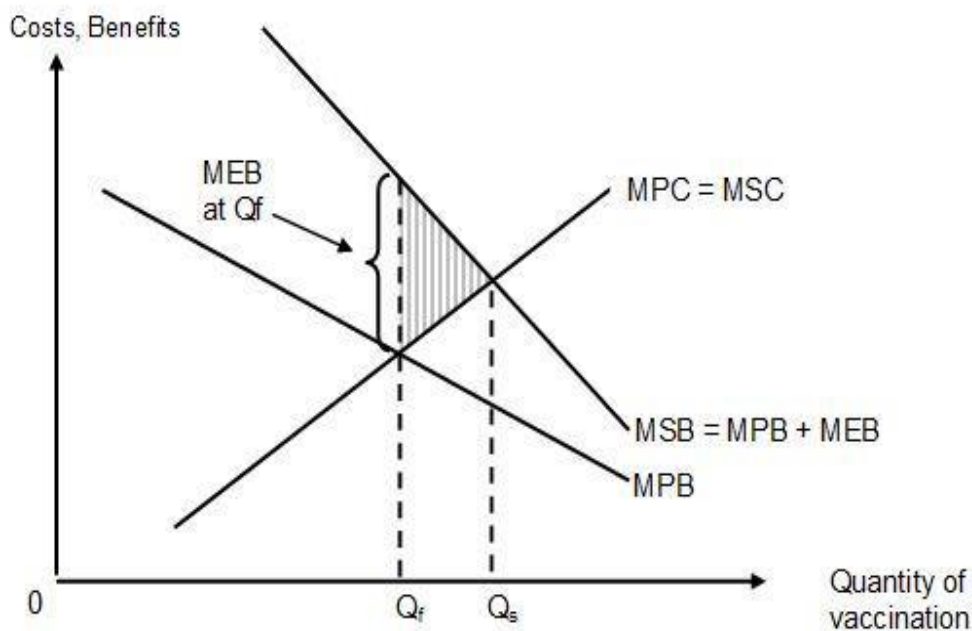


Figure 3: Presence of Positive Externalities

However, merit goods might provide greater impetus for government intervention. Education, for example, is considered by the government to be socially desirable and under-consumed due to

the presence of not just positive externalities, but also imperfect information. As seen in figure 4, the perceived MPB is lower than that of actual MPB due to the presence of imperfect information, where some families, especially the lower income ones, may think that pursuing a university education is less important than finding a job to help contribute to the monthly household income. As such, one would then consume where perceived MPB meets MPC at perceived Q_f which is even lower than that of the actual Q_f . This leads to an even greater under-consumption of merit goods, leading to a greater deadweight loss of Areas A and B, as compared to the original deadweight loss aforementioned, of area A. This therefore provides a more urgent need for government intervention than merely goods with positive externalities.

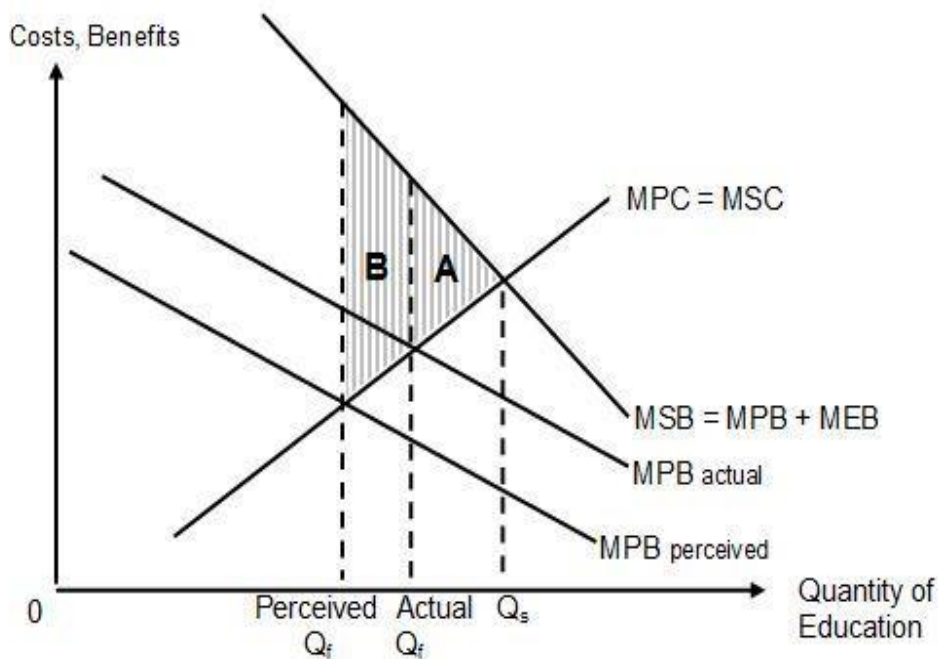


Figure 4: Presence of Imperfect Information in Merit Goods

Public goods are yet another source of market failure. Public goods are non-excludability and non-rivalry in consumption. An example of a public good is national defence. Due to its non-excludability characteristic, non-payers cannot be excluded from consuming such a good. As such, this leads to the problem of free-ridership. Hence, there will be no effective demand because nobody will be willing to pay for a good that is non-excludable in consumption. Furthermore, its non-rivalry in consumption means that the consumption of the good by an additional consumer will not leave less for others to consume. This means that the marginal cost (MC) of provision to an additional consumer will be zero. To achieve allocative efficiency, $P=MC$ which is zero. No producer will charge a zero price due to non-profitability. Hence, this will lead to producers having the inability to charge a price. As such, there exist missing market signals in the market for national defence, thus leading to complete market failure where the public good will not be produced at all.

There exists a spectrum of market failure, where positive externalities and merit goods lead to partial market failure, where the goods are still being consumed in the free market equilibrium, whilst public goods lead to complete market failure. Since public goods will not be produced/consumed at all in the free market equilibrium as compared to goods with positive externalities or merit goods, I feel that this therefore provides the government with the greatest impetus to intervene in the market of public goods, as compared to merit goods or goods with positive externalities. This is so that the government can directly provide national defence, ensuring that national defence will be produced, and its citizens will be able to enjoy the security

it provides. Ultimately, I believe that whether positive externalities, rather than any other potential market failure, is the main reason for government intervention also depends on the government's objectives and short-term versus long-term plans for the country. For a small vulnerable country like Singapore, obviously the development of national defence to provide a safe and secure environment would definitely be of top priority, before the government can think long-term and built up the labour force through education. As such, positive externalities will not be the main reason for government intervention.

Knowledge, Application, Understanding and Analysis		
Level	Descriptors	Marks
L3	For an excellent rigorous and analytic discussion of which source of market failure is the main reason for government intervention, with good application to relevant examples including well explained diagrams. No conceptual errors.	9—11
L2	For an undeveloped discussion that uses economic analysis to explain which source of market failure is the main reason for government intervention, with some application to relevant examples and drawn diagrams. Some conceptual errors in explanation.	6—8
L1	Answer shows some knowledge of sources of market failure, but discussion is weak/not well explained, with little/irrelevant examples. Major conceptual errors in explanation are present, with weak linkages to diagrams/lack of diagrams.	1—5
Evaluation		
E2	Good evaluative comments present in response - mini-synthesis, consideration of other factors, reality/contextual consideration, questioning of assumptions etc. with valid justifications and insights	3—4
E1	For an unexplained stand, without justification. OR Some evaluative comments present in response - mini-synthesis, consideration of other factors, reality/contextual consideration, questioning of assumptions etc	1—2

Essay Question 4 Suggested Answer Scheme

- 4 (a) Explain why there is a need for governments to engage in protectionism. [10]
- (b) Discuss the extent to which globalisation helps to achieve sustained economic growth [15]

4 (a) Explain why there is a need for government to engage in protectionism. [10]

Question Analysis

Command	Explain why: to give reasons why there is a need for protectionism
Content	Protectionism
Context	No particular context but some Singapore examples will be helpful
Approach	This is a simple and straightforward question. Time management is important here as the amount of material is extensive but the time available is only about 20 mins. Students therefore need to select only 3 points. Students should provide adequate reasons for protectionism and to get good marks, reasons should be accompanied with examples and evaluative comments.

Detailed Answer

Introduction:

Define protectionism: Protectionism is the economic policy of restricting trade between countries through a variety of government regulations designed to discourage free trade. It is a policy of sheltering domestic industries from foreign competition through the imposition of trade barriers on imports. A country would wish to restrict imports due to the benefits of protectionism which includes the protection of infant industries, reducing BOP deficits, protection against unfair competition and dumping and certain social benefits.

Overview

This essay will explain reasons for protectionism supported with examples and evaluative comments for each reason.

Body

Paragraph 1

P: Governments may engage in protectionism when there **is a need to protect infant industries in the country.**

E: Newly established industries need help in initial stages due to heavy initial costs. They need time to develop skilled management, reputation and exploit efficient technologies to be able to compete with developed competitors in other countries. These industries may have comparative

advantage but they need time to develop it. Without protectionism, a potentially efficient source of supply may be cut off. Protectionism buys these industries some time to grow, develop and gain efficiency as if a country learns enough through producing products in which it currently has a comparative disadvantage and has lower costs in the long run.

E: In the 1980s, Malaysia Prime Minister Mahathir Mohamad launched the national automobile company, Proton. Proton would be protected by massive subsidies, in order to help it attain the same economies of scale and other advantages enjoyed by established automobile exporters. Protectionism also allows countries to diversify into new niche areas of potential comparative advantage e.g. Singapore into the services sector.

E: The difficulty here is in choosing industries to protect, and again the political backlash that may be faced when removing these barriers.

L: Nevertheless without protection infant industries may not get off ground despite being potentially profitable in the long run.

Paragraph 2

P: Another reason why there is a need for protectionism is to reduce the BOP deficit

E: It is caused by the excessive import which is undesirable as it may lead to depletion of foreign reserves. Thus protectionism is put in place to restrict the amount of imports so as to correct the BOP disequilibrium. This is especially true during an economic downturn where unemployment rates would increase and dependency on imports may lead to demand for local goods to fall further aggravating the problem of unemployment.

E: For example US expenditures on laptop computers made in Taiwan count towards a deficit in the US current account. To correct its BOP deficit, the government might implement a protectionist measure on imports. UK had a persistent current account deficit since the mid 1980s and there may be a need for the British government to impose protectionist measure on imports and "Buy British goods."

E: However, the effectiveness of protectionism to correct the BOP disequilibrium is dependent on the price elasticity of demand and supply of imports and exports. If the demand for the good is price inelastic, it would drive up the cost and not only will the problem of BOP disequilibrium continue to persist, there will be another problem of inflation.

L: Thus it would be better if the government look at the root cause of the problem so that it will solve the problem in the long run.

Paragraph 3:

P: A government may engage in protectionism to protect industries against unfair competition and dumping

E: Dumping refers to the selling of goods in overseas markets below costs of production. The objective of dumping is to drive out rivals in importing country and eventually monopolise the market there. This also known as predatory dumping. This is detrimental as it would lead to reduction in domestic output and employment as domestic industries may be unable to compete

against foreign exporters. Additionally it is likely that prices would be increased after the collapse of the home industry, leading to welfare loss. Furthermore with some foreign production subsidised by their governments, this leads to unfair competition with producers in importing countries as they take on a higher cost of production.

E: In the past, the EU has used antidumping measures to slap higher import duties on, for example, shoes from China, plastic bags from Thailand, bed linens from Pakistan, television sets from Korea and salmon from Norway. In 2012, the US filed a complaint that China was given excess subsidies to its car industry resulting in unfair competitive advantage.

E: It is difficult to prove that foreign producers are subsidizing their exports so it will be difficult to know when to impose trade barriers. The differences in price could be due to price discrimination or lower production costs rather than export subsidies. Dumping causes price distortion and thus prices no longer reflect comparative advantage. A country may even export goods in which it has a comparative disadvantage.

L: Thus to counteract such practices, trade restrictions such as tariffs might actually be beneficial.

Extra

P: Another strong argument for protectionism would be to prevent over-specialisation of an economy.

E: In a recession, certain industries may be badly hit than others. These would often be industries producing essentials such as tourism. Being non-necessity goods and services, they would be largest hit with the largest fall in demand as income falls. Consequently, if a country is overly dependent on such industries, it would face detrimental outcomes in the long run. It is therefore important to protect other industries and cultivate them to reduce over-reliance on this one single industry. This is even more urgent in a recession if that one single industry has been badly hit and the entire economy sags because of it.

E: For example a country that specialises in commodities such as bananas and sugar may face large fluctuations in price in world markets, fall in price may cause large falls in standard of living. Trade barriers could be used to shelter these industries from foreign competition.

E: There are elements of reality in this argument however the gains of specialisation would be greater than the risks. Moreover it can also be argued that protectionism is not the most efficient method of preventing over specialisation. Again there is the problem of the “choosing” of industries and the timing of the removal of such protectionist measures. Once implemented, it is difficult to remove.

L: Thus the government needs to engage in protectionism to avoid over specialisation as it prevents an economy from becoming inflexible by overspecialising which means that it would be less vulnerable to external shocks.

Students can also write on argument to protect sunset industry etc.

Conclusion:

I feel that governments should engage in protectionism to some extent as it brings about social benefits for some countries. Protectionism is known to be used to protect and preserve traditional ways of life. Communities based on old traditional industries may be destroyed by foreign competition. Thus there is a need to restrict the amount of foreign competition and influence in traditional communities through protectionism, encouraging the locals to purchase domestic goods and preserving the culture and tradition.

Mark Scheme

Level	Description	Marks
1	Scanty description of reasons for protectionism. Stating reasons rather than explanation of reasons. Lacks depth.	1-4
2	At least 2 reasons. Adequate explanation of two reasons for protectionism. Some depth is seen but rather general with no evaluative comments and examples.	5-6
3	Three reasons. An acceptable level of explanation is seen. But this is not supported by examples. Good explanation of reasons supported by evaluative comments and examples.	7-8 9-10



4 (b) Discuss the extent to which globalisation helps to achieve sustained economic growth [15]

Question Analysis

Command	Discuss the extent” – Provide alternative(s) to the stated issue. Places emphasis on more than just having a two sided discussion but also to show the limit to which an argument has validity and to come to a reasoned conclusion.
Content	Globalisation and sustained economic growth
Context	No particular context. However students can make references to Singapore or any economy
Approach	TAS Approach. Address actual and potential growth using AD/AS analysis. All three flows (Trade, capital and labour) should be addressed and supported by examples, Balanced discussion about both benefits and costs of globalisation plus evaluation.

Detailed Answer

Introduction:

Define globalisation and sustained economic growth

Globalisation refers to the integration or inter-connectedness of national economies through trade of goods and services, foreign direct investment, capital flows, spread of technology and labour migration. Sustained economic growth refers to the increase in real output in the economy over time and this increase can be maintained. This is only achieved with both actual and potential growth. Economic growth could be the result of greater and better utilisation of existing resources (i.e. a rise in employment) or an increase in the capacity of the economy to produce goods and services. i.e. an increase in full-employment GDP. When the former happens, the economy is said to be experiencing actual growth; in the latter case, the economy is experiencing potential growth.

Overview

This essay aims to discuss whether globalisation helps to achieve sustained economic growth. I will use various examples of economies like Singapore, emerging economies like China and India and developed countries like USA in my essay.

Thesis 1

P: Globalisation helps to drive economic growth

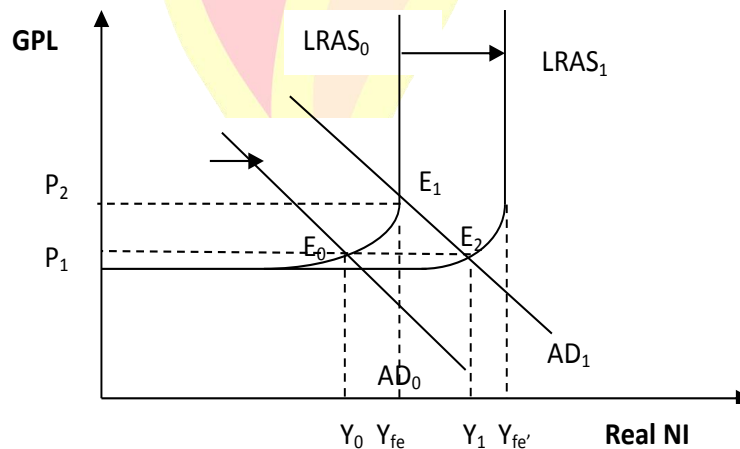
E: Countries with small domestic markets like Singapore face severe growth constraints. Once the domestic demand is saturated there is not much room for output to grow. However, globalisation overcomes this constraint by providing domestic producers access to large/huge global export markets. For this reason growth can be driven by exports (i.e. external demand).

E: Singapore is a good example of a country that has adopted an export-led or export-driven growth strategy. In fact, Singapore's X to GDP ratio is around 1.5. In fact, external demand for X constitutes 150% of Singapore's GDP. Together with imports, total trade to GDP ratio is around 3.5 to 4. This ratio clearly indicates the high degree of openness and dependence of the SG economy on external trade.

The intersection of the AD_0 and AS_0 curves represents the current equilibrium output or GDP. Let us assume initially the economy is in equilibrium at point E_0 , producing an output Y_0 .

The actual level of output can be expanded in the short run by increasing AD and being a small and open economy, the major component of AD comes from external demand. Whenever export increases due to say a global economic upturn, ceteris paribus, the AD_0 function shifts rightwards to AD_1 causing real GDP to expand to Y_1 leading to actual growth.

Figure 1:
Non-inflationary



L: Thus Singapore has benefitted from globalisation due to trade flows and have enjoyed sustainable economic growth.

Thesis 2

P: Globalisation enables countries with resource constraints to tap on foreign resources.

E: In a globalised world, countries can tap on foreign capital to drive growth through the influx of FDI. Any inflow of FDI resulting from globalization will stimulate AD via an increase in total Investment expenditure (I). Hence, in the short run, it will stimulate greater output and employment level until the economy reaches its full potential output. In the long run, more FDI inflows enhance the nation's productive capacity, thus shifting AS the potential output level rightwards. Such an expansion in **productive capacity** provides even more room for the economy to grow without overheating.

E: Globalisation has given countries like Singapore access to foreign resources for potential growth. Singapore has been relying on **imported inputs** (raw materials) to produce goods for

exports. In fact, the import-content of our exports is relatively high by international standards. For every \$1 of exports about \$0.60cents is made of imported inputs. Globalisation allows Singapore to benefit by increasing the ease of obtaining imported raw materials to increase our **productive capacity**.

L: Thus globalisation not only enables a country to achieve actual growth but potential growth as well. Both actual and potential growth can result in sustained economic growth.

Thesis 3:

P: Globalisation has enabled countries like Singapore to tap on foreign or imported labour to drive its economic growth.

E: In fact today about a third of our labour force is made up of foreign workers. At the same time, the influx of young migrants could help to rejuvenate our population and mitigate problems associated with an ageing population. The influx of foreign talent represents a brain gain to our economy, contributing to the development of a knowledge-based and innovation-driven economy. They also contribute significantly to our productive capacity. With the speed of the transfer of technology and information, it is easier for emerging economies to catch up with the developed economies. Poorer developing economies can now learn lessons and use technologies from the developed countries to catch up and narrow the “digital divide” between the rich and poor countries.

E: For example, the spread of the internet and mobile telephone has enabled people in poor countries to improve their daily lives in terms of access to information, education and business opportunities.

L: Through the inflow of both skilled and unskilled labour via globalisation, Singapore is able to achieve sustained economic growth.

Anti-thesis 1

P: Globalisation increases the threat of the contagion effect. As a result economies that are open to globalisation are vulnerable to external shocks. Such external shocks could destabilise the economy and derail growth.

E: In reality, the tide of globalization can recede or can be reversed anytime. For example, trade flows can be subject to various forms of protectionist measures (e.g. anti-dumping duties; quotas; anti-trade regulations). Capital movements can also be restricted by capital controls (e.g. tax may be imposed on funds taken out or coming into the country or subject to exchange controls). Countries can also restrict inflow or outflow of labour (e.g. Indonesia banning maids bound for Malaysia).

E: In a globalised world, any national economic crisis e.g. USA sub-prime mortgage crisis 2007-2009, can easily spread to other parts of the world. This **contagion effect** resulted in a sudden **collapse in external demand** for Singapore’s exports to USA and other major trade partners like the EU. As US home consumers cut back their spending, invariably it will affect also the demand for our exports to their country. Thus, workers employed in manufacturing goods for

these markets lost their jobs. Moreover, the banking crisis due to the sale of toxic assets also affected some local banks e.g. DBS sale of Lehman Brothers Minibonds. Many investors lost their hard earning savings. The more open an economy to the rest of the world, the greater the shock to its economy.

L: Thus countries such as Singapore that are overly dependent on external trade, capital or labour inflows may be subject to economic instability due to uncertainty; price volatility and sudden disruptions to growth.

Anti-thesis 2

P: There is also the constant threat of competition from new rivals for a share of global export markets, hence putting workers at risk of becoming structurally unemployed.

E: This may happen if the workers skills become obsolete e.g. low-skilled workers in advanced economies lose their jobs to cheaper workers in emerging economies via offshoring/relocation or outsourcing. In a globalised world, structural changes occur more frequently due to rapid changes in comparative advantage. As a result certain sectors of the economy which have lost their comparative advantage declined and become “sunset industries”. Unlike they are occupationally and geographically mobile, workers in these declining sectors face the threat of structural unemployment.

E: This is especially a problem in the developed countries such as USA where they have been losing their comparative advantage in various sectors such the steel sector and manufacturing sector to emerging economies like China and Vietnam due to their abundance of resources especially their lower labour cost.

L: Thus structural unemployment may disrupt economic growth due to a fall in productive capacity and hence aggregate supply.

Anti-thesis 3

P: Globalization may also lead to a worsening of the income disparities in the economy which may affect economic growth.

E: Low-skilled, uneducated or lowly-educated workers across the developed world are ‘losers’ for their real wages tend to stagnate or even fall. This is because in a globalised world employers have access to a vast pool of cheap unskilled labour coming mainly from poor developing countries. The abundance of an international pool of cheap labour makes it difficult for the real wages of such workers to rise in tandem with the rest of society.

On the other hand, the global demand for highly-skilled talented workers e.g. CEOs far exceed the available supply. Thus such talented skilled workers command very high wages. Thus, over time the income gap between the low-wage earners and the rest of society tends to widen. If the trend continues unabated the worsening income-disparity may reach the point where social harmony is threatened. Those at the bottom of the income ladder may feel disaffected, marginalised and “unfairly” treated and hence may resort to crime, violence and other anti-social acts to hit back at society.

E: This phenomenon has in recent years become an issue in Singapore. The **Gini-coefficient** is used by economist to measure income inequality. The lowest value is 0 (representing perfect equality) and the highest value is 1 (representing perfect inequality). In Singapore the Gini-Coefficient has risen to 0.48 in 2009, placing the country at the bottom

L: Worsening of the income disparities which may lead to social conflicts and discontent in turn may scare away foreign investors thus crippling economic growth.

Conclusion/Synthesis

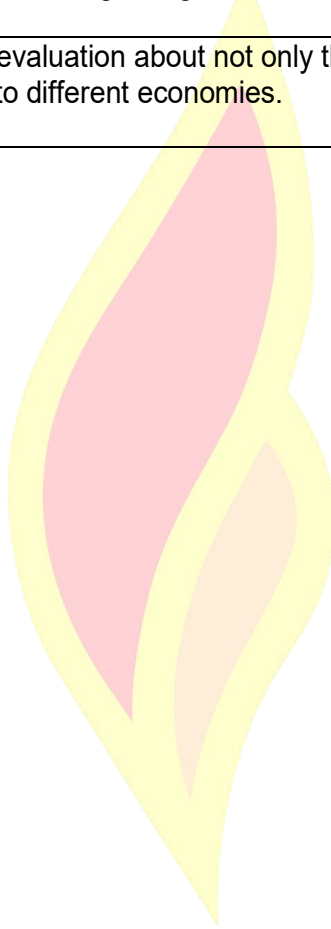
With the increasing globalised world, more economies are becoming integrated with other countries. Benefits to these economies such as China & India are significant in the areas of economic growth. By opening up their economies to the rest of the world, they have seen an increase in exports which encourages growth. They have also benefitted from an increase in imports which allows their consumers a wider choice of goods and services, increasing the standard of living in the countries.

However, given their big population (consumer base) and vast resources (potential for growth) they can weather external shocks better than Singapore. For example, in the light of the financial crisis and trade disputes with her trade partner USA, it is easier for China to reduce her dependence on export-led strategy and shift towards more reliance on domestic demand to power her economic growth. The relative abilities of the government to put in place to mitigate the costs of globalisation such as the ability to diversify trading and investment partners will greatly determine the benefits of globalisation on them. In summary, globalisation has been beneficial and in fact is essential for sustained economic growth for a small, open economy like Singapore.

Mark Scheme

Level	Descriptions	Marks
L1	Give a list of relevant factors without explanation	1-2
	Able to outline some impacts of globalisation but lacking in economic framework in explaining impacts.	3-4
L2	<ul style="list-style-type: none"> • Covers only impact of either trade or FDI (capped at 5 marks) • Analysis of impact on sustained economic growth is underdeveloped. • Lop-sided response to either benefits or costs of globalisation • Some comparison of different economies (6 marks) 	5-6
L3	<ul style="list-style-type: none"> • Able to cover impact due to any 2 flows of globalisation • Able to analyse well with economic framework the impact on sustained economic growth. 	7-9
	<ul style="list-style-type: none"> • Illustrate how different economies with different characteristics, state of economy would affect relative impact of globalisation • Balanced discussion of both benefits and costs of globalisation due to all 3 flows of globalisation with example. 	10-11

Evaluation		
E1	Able to provide a judgment regarding net benefits of globalisation	1-2
E2	Able to provide good evaluation about not only the net benefits but also relative benefits to different economies.	3-4





CATHOLIC JUNIOR COLLEGE
JC2 PRELIMINARY EXAMINATIONS
In preparation for
General Certificate of Education Advanced Level
Higher 2

ECONOMICS

9732/01

Paper 1

21 Aug 2015

1400 - 1615

Additional Materials : Writing Paper

2 hours 15 minutes

READ THESE INSTRUCTIONS FIRST

Write your name, class and question number on **all** the work you hand in.

Write in dark blue or black pen on both sides of the paper.

You may use a soft pencil for any diagrams, graphs or rough working.

Do not use highlighters, glue or correction fluid.

Begin each question on a new sheet of paper.

Answer **ALL** questions.

At the end of the examination, **hand in EACH question separately.**

The number of marks is given in brackets [] at the end of each question or part question.

Answer **all** questions

Question 1: The bitter truth about sugar**Extract 1: Sugar updates**

Global sugar prices have been on a downward trend – and there is no end in sight. Worldwide, sugar stocks are at record levels, and high stocks have been bolstered even further after better than expected sugar production from India and Thailand. Current prices are below the cost of production for most producers. The three key drivers of consumption in emerging markets are rising population, rising levels of real incomes and shift in emerging markets toward urbanization. This year's final production from India and Thailand caught most of the industry by surprise, even though it is widely known that weather is a key driver behind these seasonal swings. This further highlights just how precarious output predictions can be. With an El Nino event expected to hit major commodities this year, there was "much debate as to what extent the weather risk has not been priced into the market."

Source: adapted from *foodnavigator.com*, July 2015

Extract 2: Britain in nutrition recession

Britain is experiencing a nutritional recession. Rising food prices and shrinking incomes are driving up consumption of fatty foods, reducing the amount of fruit and vegetables we buy, and condemning people on the lowest incomes to an increasingly unhealthy diet. Detailed data compiled for the Guardian, shows that consumption of fat, sugar and saturates has soared since 2010, particularly among the poorest households, despite the overall volume of food bought remaining almost static. The data show consumption of high-fat and processed foods such as instant noodles, coated chicken, meat balls, tinned pies, baked beans, pizza and fried food has grown among households with an income of less than £25,000 a year as hard-pressed consumers increasingly choose products perceived to be cheaper and more "filling".

Source: adapted from *The Guardian*, November 2012

Extract 3: Health recommendations to cut child obesity

A "sugar tax" should be introduced by the UK government to help curb obesity in childhood, a campaign group says. Action on Sugar has produced a seven-point plan, following a request from the government, to discourage children from consuming foods and soft drinks with high levels of added sugar.

The seven-point plan includes:

- Reduce added sugars in food by 40% by 2020
- Ban all forms of targeted marketing of unhealthy foods and drinks to children
- Disassociate physical activity with obesity by banning sponsorships of sporting events by junk food corporations
- Reduce fat by 15% in ultra-processed foods by 2020
- Limit the availability of ultra-processed foods and sweetened soft drinks
- Reducing portion sizes of ultra-processed foods and sweetened soft drinks
- Introduce a sugar tax to incentivise consumers to switch to healthier food

Current policies are not working and obesity could be prevented if the food environment is changed. The UK needs to start by setting incremental sugar reduction targets for soft drinks this summer as the food industry continues to spend billions in junk food advertising targeting children.

Source: *BBC*, June 2014

Extract 4: Sugar tax enacted in Mexico

Mexico has become the standard bearer in the global fight against obesity, after authorities passed a law imposing significant new taxes on junk food and sugary drinks. Mexico has resisted tough lobbying and warnings that raising prices would do nothing to help the country's economy. But the government has taken the long term view – that the short term potential economic harm from reduced junk food and soft drink sales now is insignificant compared with the long term damage in 10 years time if obesity continues at the current rate. The healthcare burden of diabetes and heart disease in Mexico is already huge and increasing. Some 9.2% of children in Mexico now have diabetes. The taxes will increase the price of junk foods by 8%. The money raised is intended to go towards health programmes and increased access to drinking water in schools. The government will also introduce a nutritional stamp of approval for healthier foods on sale in supermarkets.

The food industry claims such taxes are a burden on the consumers and do not work. They cite the Danish example. In 2011, the Danish government imposed a tax on all foods containing more than 2.3% saturated fat, which hit popular staples such as butter and bacon. It was unpopular partly because it was introduced by the treasury as a fundraiser, rather than being presented as a measure to improve population health. Newspapers ran stories about Danes stockpiling and crossing the border to buy cheaper butter. Eventually the government fell, and the tax was withdrawn after six months. In the end, the short-lived measure has only increased companies' administrative costs, with none of its benefits materialised.

Source: *The Guardian, November 2013*

Extract 5: Sugar policies in EU

The European Union (EU) is the world's main importer of sugar. Domestic sugar producers have a quota on how much sugar they can sell in the EU. These quotas restrict EU production of sugar to 13 million metric tons a year. The shortfall in local demand must be met by duty-free shipments from the developing countries of African, Caribbean and Pacific states (ACP)¹ that have preferential access to the EU market. These countries have benefited from the export of cane sugar to the EU market as currently, the EU imports 60 percent of their demand for cane sugar under a duty-free agreement for sugar from these ACP countries. This has resulted in occasional sugar shortages when imports from ACP nations fell due to poor production levels.

The EU Common Agricultural Policy (CAP) is a production quota on EU producers – a protectionism in favour of developing countries. There is a push for reform of the EU CAP, to end production quota imposed on EU producers. The reform could lead to an increase in EU domestic production of sugar, while imports of sugar are estimated to decline by 42.6 percent, mainly due to the replacement of imports from developing countries by domestic production. The reform is also likely to result in the EU move from being a net importer of sugar to a net sugar exporter.

Source: *www.tralac.org and Bloomberg, April 2013*

¹ African, Caribbean, and Pacific states (ACP) was created with the aim of coordinating cooperation between EU and its members. Malawi, Zimbabwe, Lesotho and Swaziland are some member states.

Extract 6: France concerned about liberalisation of EU sugar market

According to a report by the French parliament, ending European quota of domestic sugar production will harm developing countries that rely on sugar production. Many people in the developing countries depend on the sugar industry. The sugar sector directly or indirectly employs approximately 20,000 people in these countries.

The reform of the sugar quota policy is likely to benefit the large EU sugar producers, the most competitive producers. However, it is clear that there will be winners and losers. The reform should make European prices conform to world prices, which are currently lower, and increase the competitiveness of the European sector.

Increased competitiveness is a significant economic and social burden in places where the production is not yet completely mechanised. Some developing countries sugar sectors are not likely to survive the increased competitiveness.

Nevertheless, European sugar producers might not be the only ones to benefit from opening the market. The expanding global trade in sugar, now worth about \$47 billion, has been helping to fuel land grabs in developing countries. Rising consumer demand have encouraged more large-scale production operations at the expense of smaller farms. At least 4 million hectares have changed hands in large-scale deals since 2000. These deals have been linked to human rights violations, loss of livelihoods and hunger for small-scale food producers and their families. Small-scale producers are side-lined as the market offers companies huge rewards for exploiting land, but without safeguarding people's rights. The reforms might cause a change in events.

Source: *Bloomberg, Oct 2013 and Euractiv, May 2014*

Table 1: Global Sugar Price Index (Base year 2008)

2006	2007	2008	2009	2010	2011	2012	2013	2014	2015*
139	93	100	105	182	255	206	162	135	129

Note: *till July 2015

Source: *NASDAQ, accessed 29 July 2015*

Questions

- (a) (i) Describe the trend in sugar prices between 2010 and 2015. [2]
- (ii) Account for the above overall trend in (ai). [4]
- (iii) What does the 'nutritional recession' suggest about the income elasticity of demand for processed food? [2]
- (b) Using a diagram, explain the economic case for the imposition of a sugar tax to curb obesity. [4]
- (c) Discuss whether a tax is the most appropriate policy to tackle the ills of obesity. [8]
- (d) Discuss the impacts of the 'reform of the EU Common Agricultural Policy (CAP)' on developing and developed countries. [10]

[Total: 30]

Question 2: Generating and sustaining economic growth**Extract 7: China's economy grows robust 7.7% but signs of slow down emerge**

China's economy grew by a robust 7.7% last year, one of the strongest performances globally, although signs of a slowdown emerged late in the year as authorities tried to rein in a debt-fuelled investment growth binge. China's economy has cooled since recording double-digit growth rates in the run-up to the financial crisis of 2008, but it has been propped by a surge in investment in infrastructure and real estate. Amid concern that the debt burden was rising to dangerous levels, authorities tightened credit at the end of 2013, and investment growth slowed.

The Communist Party has been aiming to maintain a fast pace of economic growth. But this growth-at-all-costs strategy has not only wrought damage on the environment but has also allowed imbalances to build up within the economy, which relies more on investment than domestic consumption. Experts say the investment binge cannot be sustained without wasteful spending and a mountain of debt

Slowing the growth in credit is just the first step in that reform journey, economists say. The government needs to rein in politically powerful state-owned enterprises and create a more level playing field for the private sector. In addition, the authorities should look into boosting social safety nets so that its citizens are encouraged to spend more of their income rather than saving it, given China's high savings rate. None of that will be easy and will require taking on powerful vested interests within the party.

Source: *Washington Post*, 20 January 2014

Extract 8: Catching the dragon

Economists have tentatively suggested that within a year or two, India's economy might be growing more quickly than China's. Indeed, the India economy has been doing better after Mr Modi's pro-growth government took charge since last May's elections. Foreign investment inflows remain steady with the rupee maintaining its strength. The central bank has even expanded its foreign-exchange reserves to a record \$330 billion—thus keeping the rupee from rising by more.

The economy is likely to pick up further. The recent falls in commodity prices, which have hurt raw-material exporters such as Brazil, Russia and South Africa, are a boon for India, which imports 80% of the oil it consumes. Rich economies may fret about the dangers of falling prices around the world; Indians, on the other hand, are pleased they no longer have double-digit inflation at home. The diminishing threat from inflation has already prompted India's central bank to reduce interest rates in January, from 8% to 7.75%. More cuts are expected this year.

Source: *The Economist*, 9 February 2015

Extract 9: Singapore exports slow on global demand

The surprisingly slow global economic recovery was the cue for local economists to drastically cut their forecasts for Singapore's export performance this year. Exports had earlier been expected to climb 4.1% for the year but that prediction was slashed to -1.1%.

Economists said the dramatic turnaround in their estimates stemmed from falling demand for the type of electronic products made here. And although economic restructuring efforts are making services a bigger component of the economy, activity in this sector is not reflected in export data.

Economist Song Seng Wun said that Singapore's electronic exports in particular continued to struggle, partly due to weaker demand for products such as disk drives and semi-conductors. The electronic industry makes up about a third of the manufacturing sector, which in turn accounts for a fifth of economic output. It would take an "almighty lift" from non-electronic exports for overall non-oil domestic exports to grow this year, he noted.

Economist Chua Hak Bin said that pharmaceutical exports have also been poor, although that has been somewhat mitigated by a better showing in petrochemicals and chemical products.

The more optimistic forecast of 4.1% growth in exports was based on an expected pick-up in external demand but that has been slower than expected. Recovery in the United States has been less import-intensive, not providing as strong a lift to Asian exports as in the past. Slower China growth is also weighing on Asia's and Singapore's export performance. A strong Singapore dollar also led to falling non-domestic exports to the European Union, South Korea, Japan and Malaysia.

Another issue is that economic restructuring and stricter foreign worker policies are also hurting labour-intensive industries such as manufacturing, which may be losing competitiveness. But other economists note that some manufacturers still continue to invest here even though they know Singapore is not the cheapest place, indicating that the country still retains some of its competitive edge.

Analysts noted that economic restructuring and innovation will become more important to improve efficiency as Singapore cannot count on a pickup in global demand to drive the economy. Growth in the advanced world may remain sluggish as some major economies have yet to see solid recovery after the global financial crisis.

Source: *The Straits Times*, 15 September 2014

Extract 10: Monetary Authority of Singapore (MAS) maintains appreciation of Sing Dollar

The global economy should continue to expand, but at an uneven pace across countries. The US economy will lead the recovery but growth in the core Eurozone economies and Japan is likely to remain weak. In Asia, the ASEAN economies should benefit from the US recovery and the mild upturn in the global IT industry, while China is expected to stay on its moderating growth path.

MAS Core Inflation, which excludes private road transport and accommodation costs, averaged 2.2% year-on-year in July–August, up from Q1 2014. This was largely due to higher wages and other business costs that led to higher prices of consumer services. Imported food inflation was also elevated because of the higher cost of food from the region, which in turn partly reflected the effects of supply disruptions.

MAS will maintain its policy of a modest and gradual appreciation of the S\$NEER (Singapore dollar nominal effective exchange rate) policy band. This policy stance is assessed to be appropriate for containing domestic and imported sources of inflationary pressures.

Source: *MAS Monetary Policy Statement*, 14 Oct 2014

Table 2: Real GDP Growth (% Change)

Country	2013	2014	2015*
India	6.9	7.2	7.5
China	7.7	7.4	6.8

*forecasted data

Source: *IMF World Economic Outlook*, accessed July 2015

Table 3:
Ranking by GDP per capita, current US\$

Country	2014
United States	54,596
Germany	47,590
China	7,589
Vietnam	2,052
India	1,627
Myanmar	1,221

Table 4:
Ranking by GDP per capita, current PPP\$

Country	2014
United States	54,596
Germany	45,888
China	12,879
India	5,855
Vietnam	5,634
Myanmar	4,706

Source: *IMF World Economic Outlook*, accessed July 2015

Questions

- (a) (i) Using Table 2, compare the real GDP growth rates of India and China from 2013 to 2015. [2]
- (ii) Using Extracts 7 and 8, account for India's difference in growth rate from China. [4]
- (b) Using Tables 3 and 4, explain one possible reason for the difference in the ranking of India. [2]
- (c) Assess if China should move away from her 'growth-at-all-costs strategy' towards 'boosting social safety nets'. [8]
- (d) Justify the stance of maintaining a strong Singapore dollar to retain price stability. [4]
- (e) To what extent will the change in policies to sustain economic growth benefit Singapore? [10]

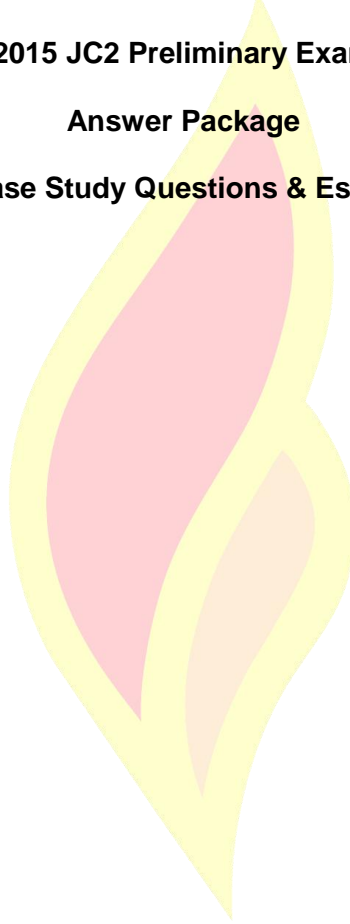
[Total: 30]

H2 Economics 9732

2015 JC2 Preliminary Exam

Answer Package

Case Study Questions & Essay



CJC

Paper 1: CSQ 1

Answers

- (a) (i) Describe the trend in sugar prices between 2010 and 2015. [2]

Overall [1m]

The trend of sugar prices is generally decreasing.

Refinement [1m]

There is an increase in sugar price in 2011. OR Sugar price is highest in 2011.

- (ii) Account for the above overall trend in (ai) [4]

The favourable seasonal weather condition for sugar leads to an increase in the supply of sugar from S_1 to S_2 . [Evidence & Knowledge]

It is stated in extract 1 that there is “rising population, rising levels of incomes – real income and shift in emerging markets toward urbanization”. Hence this leads to an increase in demand from D_1 to D_2 . [Evidence & Knowledge]

The above explanation will get a maximum of [3m].

When the increase in supply is more than the increase in demand, price will fall from P_1 to P_2 , thus accounting for the decrease in sugar prices. [1m]

- (a) (iii) What does the ‘nutritional recession’ suggest about the income elasticity of demand for processed food? [2]

- Definition: Income elasticity of demand (YED) measures the degree of responsiveness of the change in demand due to a change in income, ceteris paribus.
- Evidence: Consumers facing “shrinking income” and “consumption of high-fat and processed foods increasing” → implies that processed food is an inferior good where $YED < 0$ (YED is negative). [1m]
- This means that a decrease in income will generally lead to an increase in demand for inferior goods, like processed foods. [1m]

- (b) Using a diagram, explain the economic case for the imposition of a sugar tax to curb obesity. [4]

Market Failure due to Negative Externalities

1. Divergence (MEC associated with obesity e.g. burden on healthcare system)
2. Evidence from extract 4: “Burden of diabetes and heart disease”
3. Overproduction/overconsumption of unhealthy food and drinks (QsQf from the diagram)
4. Deadweight loss, as seen in shaded area from diagram
5. Diagram (answer must refer to the diagram)

Points 1 to 4 will gain a maximum of 3m and point 5 will be allocated 1m.

Market Failure due to Imperfect Information

1. Divergence (perceived MPC vs actual MPC associated with obesity)

- e.g. burden on healthcare)
2. Evidence from extract 4: “Burden of diabetes and heart disease”
 3. Overproduction/overconsumption of unhealthy food and drinks (QsQfperceived from the diagram)
 4. Deadweight loss, as seen in shaded area from diagram
 5. Diagram (answer must refer to the diagram)
- Points 1 to 4 will gain a maximum of 3m and point 5 will be allocated 1m.

(c) **Discuss if tax is the most appropriate policy to tackle the ills of obesity.** [8]

Question Analysis

Command	Discuss - to provide at least 2 different perspectives of the issue.
Content	Market Failure and Government Intervention - Policies to rectify negative externalities
Context	Obesity due to high sugar intake in various countries such as the UK
Approach	<p>Students need to discuss whether the sugar tax is the most appropriate policy to tackle the ills of obesity.</p> <p>TAS Structure</p> <ul style="list-style-type: none"> ▪ Thesis: Sugar tax is an appropriate policy to tackle the ills of obesity – explain how the sugar tax works and weigh the pros and cons. ▪ Anti-Thesis: There are other appropriate policies (regulation, ban, moral suasion...etc.) that can tackle the ills of obesity. <p>Synthesis: Weigh all 3 policies and come to a justified conclusion, with linkage back to the question.</p>

Essay Outline

Introduction	<ul style="list-style-type: none"> ▪ Define market failure ▪ Context of the essay – Sugar tax as a policy to tackle obesity in various countries e.g. UK ▪ Overview of the essay
Body	<p>Thesis</p> <ul style="list-style-type: none"> ▪ Tax and how it works in increasing the MPC (effective in solving negative externalities/imperfect information) ▪ Limitations of a tax <p>Anti-Thesis</p> <ul style="list-style-type: none"> ▪ Other policies (refer to extract 3 & 4) – Regulation (restrict the added sugar in food) and moral suasion (increase information)

	<ul style="list-style-type: none"> ▪ Limitations of each relevant policy
Conclusion	<p>Synthesis</p> <ul style="list-style-type: none"> ▪ Make and justify a stand – Tax can be or not be the most appropriate policy depending on the scenario – SR vs LR, different countries etc. ▪ A combination of policies works better – explain how the policies complement each other when used together.

Suggested Answer

In this question, from extract 3, we see that a country like UK wants to implement a sugar tax policy to tackle the ills of obesity as aforementioned in part (b), due to the presence of negative externalities which is a source of market failure. In this answer, I will discuss as to whether such a tax is the most appropriate policy in tackling the ills of obesity.

When the government implements a policy of sugar taxes to tackle the ills of obesity, the MPC increases to MPC^* , where $MPC^* = MPC + tax$ and the tax per unit = MEC at Q_s . This is shown in figure 1, where the MPC curve shifts to the left to MPC^* . The new equilibrium will then be at $MPC^* = MPB$, where Q_s , the socially optimal output level, is achieved, hence the overconsumption of food high in sugar is reduced, and deadweight loss is eliminated, thus tackling the ills of obesity. The policy of taxation is beneficial to the government as it will obtain greater government revenue where it can spend on improving infrastructure...etc. Taxes are also easy to implemented and still allow free market forces to operate – consumers who can afford to pay the taxes will still continue to consumer such processed food, whereas those who can no longer afford to pay the taxes to stop consuming the processed food. Unfortunately in reality, it is very hard for the government to identify the MEC at Q_s , hence under-taxation would still present the problem of overconsumption and deadweight loss will still exist. Over-taxation might lead to under-consumption and a whole new deadweight loss will be present. Moreover, such processed food with high sugar content might be very addictive and hence the demand for such foods will be relatively more price inelastic. Thus, a very large amount of taxes need to be implemented in order for the quantity demanded to drastically be reduced. As such, the policy of taxes might not be the most appropriate policy to tackle the ills of obesity.

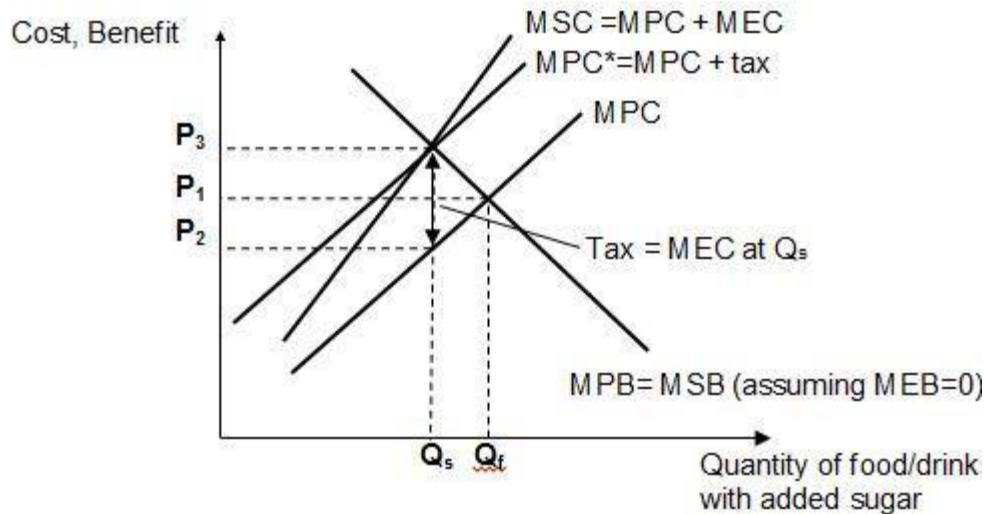


Figure 1: Tax on Sugar

An implementation of a regulation, such as limiting the availability of ultra-processed foods and sweetened soft drinks, would also be appropriate in tackling the ills of obesity. By reducing availability of unhealthy processed foods, this will help to reduce the overconsumption problem mentioned in part b, thus achieving Q_s , the social optimal output level and hence the deadweight loss will be eliminated. A regulation can be easy to implement, however such a regulation could be seen as a blunt tool, as compared to taxation or moral suasion, and the cost of monitoring and enforcing will be high. Such a regulation could also lead to people 'smuggling' into the country/creation of black markets to solve possible shortages.

Moral suasion could also be an appropriate policy to help tackle the ills of obesity. Educational campaigns will help to correct consumers' imperfect information with regards to the actual MPC of consuming processed foods with high sugar levels/educate them about the external costs, MEC. As such, through moral suasion, the negative externalities will be internalised, and Q_s the social optimal output level will be achieved with the elimination of the deadweight loss. In the long run, this policy is very appropriate as the people willingly reduce their consumption of such processed food, thus tackling the ills of obesity. On the other hand, such a policy will take a long time to come into effect, as compared to taxes or regulation, as it takes time to change people's perspectives and change their eating habits. Moreover, such a policy does not guarantee results as it depends on consumers' initiatives to change their dietary habits, rather than an enforcement of policy like taxation or regulation.

To conclude, a tax alone is definitely not the most appropriate policy to tackle the ills of obesity. For best and most appropriate results, it is recommended that the government implements the tax for short-run effectiveness due to the immediacy of the policy implementation. The government can then channel the tax revenue collected into educational campaigns to educate the society about the ills of obesity in hopes that the external costs will be internalised/the imperfect information will be corrected for long-run effectiveness. Should the PED of such foods be relatively price inelastic, regulations as mentioned in the seven-point plan,

such as limiting the availability of ultra-processed foods and sweetened soft drinks or reducing added sugars in food by 40% can also be implemented alongside the tax and moral suasion for guaranteed best results. This will then ensure that the ills of obesity will best be tackled most appropriately both in the short run and long run.

Marks Scheme

Level	Description	Marks
2	Provided a well-balanced 2-sided answer with sufficient elaboration and use of analytical framework, with evidence.	4—6
1	Only considered a one-sided effect of taxes OR A two-sided descriptive answer that merely listed and lacked economic analysis, with little or no use of evidence.	1—3
E	Overall stand on the issue with/without justifications based on economic analysis.	1—2

(d) **Discuss impacts of the ‘reform of the EU Common Agricultural Policy (CAP)’ on developing and developed countries. [8]**

Question Analysis

Command	Discuss – to provide at least 2 different perspectives of the issue.
Content	‘Impacts of... on developing and developed countries’ – something to do with interconnected nature of economy → quite open.
Context	‘Reform for EU CAP’ – EU cap is a quota imposed on domestic producers (Extract 5) and a ‘push for reform of EU CAP’ is the end of the quota. (Extract 5).
Approach	<p>Students need to discuss the impacts of the reform on CAP. Since context specifies developing and developed countries, you will need to discuss impacts on both developed (EU) and developing (ACP). And since the word discuss appears, the TAS will also need to be included.</p> <p>As it is a [8m] question and not a 15m essay, answer will need to show 3 points out of the following 4 to give you a TAS structure:</p> <ul style="list-style-type: none"> • Positive impact on LDC • Positive impact on DC • Negative impact on LDC • Negative impact on DC

Note that EU will represent the DC while ACP or any other reference to developing countries in extract will represent the LDC.

Some Possible Impacts

EU (DC)	ACP (LDC)
With the removal of EU CAP → increase in domestic production of	With the removal of EU CAP → less demand for land in

<p>sugar → increase in domestic supply of sugar → fall in price of sugar → increase in consumer surplus (+) → increase in quantity of sugar → increase sugar consumption → worsening obesity and market failure (-)</p> <p>With the removal of EU CAP → EU becomes a net exporter → increase in export earnings → increase in (X-M) → increase in AD → increase in GDP → increase in actual economic growth (+) → increase in employment (+) → improve in BOT/BOP (+) → increase in inflation (-)</p>	<p>developing countries → reduce land grabs → allowing small scale producers to survive (+) BUT can erode of livelihood as dependent on the sugar trade (-)</p> <p>With the removal of EU CAP → lose preferential access to EU → decrease in exports earnings → decrease in (X-M) → decrease in AD → decrease in GDP → decrease in actual economic growth (-) → decrease in employment (-) → worsen in BOT/BOP (-) → lower inflation (+)</p>
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Suggested Answer

Introduction

Currently, there is a quota on EU domestic sugar production. The shortfall in local demand is met by developing countries. A reform of the Common Agricultural Policy (CAP) will lead to an end of the quota. According to Extract 6, large sugar producers in EU are the most competitive producers. Thus, a reform of CAP is likely to lead to many changes in the world market for sugar. This essay serves to discuss the impacts of the reform on developing and developed countries.

Body

EU stands to gain from the reform of CAP. Because of the reforms, EU domestic sugar producers will now be able to increase production of sugar. As they are the most competitive sugar producers, they will likely move from being a net sugar importer to a net sugar exporter, as reported in Extract 5. As a result, this will increase their net exports, a component of aggregate demand (AD), and increase the AD as well. Through the multiplier process, the increase in net exports will lead to an increase in incomes, as seen in the graph below.

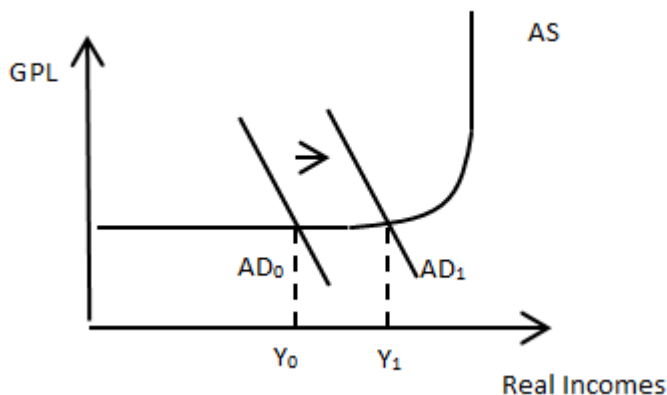


Figure 1

As a result, EU will see higher incomes due to the reform of CAP.

However, this might not be entirely good for EU. According to extract 6, EU sugar prices will fall and conform to the world prices. This will lead to increase consumption of sugar and sugar related foods. In UK for example, the consumption of sugar has risen and obesity and other sugar related issues have risen due to rising sugar consumption. Hence, a fall in sugar price will actually lead to a worsening of the market failure associated with the consumption of sugar. (for H2, I would probably add the market failure graph here).

For developing countries, this reform of the CAP might not be a bad thing. Although this will mean that it will lose export revenue and affect the livelihood of many people, there could be some positive outcomes. Because of the CAP, there has been an increase in large scale deals in developing countries. These deals often occur at the expense of smaller farms, as seen in extract 6. Large firms will end up exploiting the land, small producers and create problems for domestic producers. A reform of the CAP will see a fall in demand for sugar production in developing countries, leading to a fall in demand for land and less exploitation of workers and land in developing nations.

Conclusion

Overall, a reform in CAP will likely be positive for EU as a developed country with better sugar production, and while CAP can have positive effects on developing countries, it is likely that its overall effects on developing countries will be negative. However, the effects are only temporary. With the removal of protectionist measures, the market can then work to reallocate resources efficiently. In the long run, the developing countries could develop comparative advantage in sugar production as they continue to mechanise and develop. This might mean a reversal of the effects.

Marks Scheme for H2

Level	Description	Marks
3	<p>Well-developed answer that provides sufficient economic elaboration on the issue.</p> <p>Well-developed means 3 points out of the following 4:</p> <ul style="list-style-type: none"> • Positive impact on LDC • Positive impact on DC • Negative impact on LDC • Negative impact on DC <p>To achieve top marks, answers must also use an economic framework (DDSS, market failure or ADAS).</p>	7-8
2	<p>Some development of answer that deals with the different impacts on developed and developing countries, but limited in scope (such as only positive or negative).</p>	4-6

	Answer lacks economic framework.	
1	1 sided discussion, either in terms of analysing impacts on developed or developing countries ONLY.	1-3

Evaluation

Level	Description	Marks
1	Overall stand on the issue. For 2m, an economic justification is needed. Stands can include: magnitude of impact, outcomes of impacts, the reform's relative importance to each country etc.	1-2

Paper 1: CSQ 2 Answers

- (a) (i) **Using Table 2, compare the real GDP growth rates of India and China from 2013 to 2015.** [2]

Suggested Answer:

Real GDP growth rates of both India and China is positive [1] but India's real GDP growth rate is rising while China's real GDP growth rate is declining. [1]

- (ii) **Using Extract 8, account for India's growth rate.** [4]

Suggested Answer:

Observation: India's growth rate is rising and projected to rise further in the future.

Any 2 Reasons behind India's faster growth rate

- Lower commodity prices (evidence), (India may be importing more commodities), lower COP AS shifts right, higher GDP (knowledge)
- Lower interest rates (evidence); sparking faster AD growth, higher GDP (knowledge),
- Steady inflow of foreign investment (evidence); higher AD, higher GDP (knowledge)
- Prevent Rupee from rising (evidence) to maintain/increase export competitiveness, hence higher AD, higher GDP (knowledge)

2m for each point: knowledge & evidence needed for full credit.

- (b) **Using Tables 3 and 4, explain one possible reason for the change in the ranking of India.** [2]

Suggested Answer:

Observation: India's ranking rose from 5th position in table 2 to 4th position in table 3. [1]

OR India & Vietnam swapped places.

Reason: This may be due to lower cost of living in India. After accounting for PPP, Indian citizens would be able to enjoy a larger basket of goods and services. [1]

(c) **Explain why China should look into ‘boosting social safety nets’.** [4]

Suggested Answer:

- Consumers need to feel that they are taken care of by the state and be more inclined to spend rather than save.
- This will help to fuel consumption and drive economic growth as AD rises (knowledge) rather than have the economy be over-reliant on an ‘investment binge’ (evidence)
- Lower savings as opposed to high savings rate (evidence) is preferred as there will be lesser withdrawals from China’s circular flow of income.
- Given that MPS is part of the multiplier, if MPS becomes smaller, then the multiplier value can grow and any rises in AD will bring about a larger increase to China’s national income. (knowledge)

(d) **Discuss the impacts of China’s ‘growth-at-all-costs strategy’ on her economy.** [6]

Suggested Answer:

Thesis: Positive impacts of China’s ‘growth-at-all-costs strategy’ on the economy.

- Evidence: Table 2 on China’s growth rate. Knowledge: This strategy has been propelling China’s growth in national income well so far. (AD rising via export led growth), providing jobs for China’s population (reduction in unemployment)
- Evidence: It has put China on the world map for being it low cost, cheap labour advantages. Knowledge: China possessing CA in manufacturing, AS shifts right, falling prices
- Helps bolster Chinese firms to better compete with MNCs in their own domestic markets as well as international ones.

Anti-thesis: Negative impacts of China’s ‘growth-at-all-costs strategy’ on the economy.

- Evidence: Extract 8 “wrought damage on the environment”. Knowledge: higher growth will lead to market failure without government intervention as firms strive to up production increase profits without care for environment. Also lead to fall in non-material SOL and lower quality of life.
- Evidence: Growth was ‘propped by surge in investment in infrastructure and real estate that led to dangerous debt levels’. Knowledge: Such growth was overheating the economy and is fuelled by credit. This will lead to demand pull inflation.
- Evidence: Imbalance of economy fuelled more by investment. Knowledge: Not sustainable with ‘issues of wasteful spending and mountain of debt’. Growth was not channelled into proper areas (quality of growth/composition of GDP growth argument)

Level	Description	Marks
1	For identification and explanation of only positive or negative impacts on China’s economy. Did not bring in any macroeconomic objectives or standard of living.	1 – 3
2	For identification and explanation of both positive and negative impacts on China’s macroeconomic objectives. Reasoned stand as to the overall impact on China.	4 – 6

- (e) Explain Singapore's stance of maintaining a strong dollar to retain price stability. [4]

Suggested Answer:

- To correct imported inflation: a strong dollar helps to maintain the prices of imported goods and services and counter imported food inflation (evidence) which is helpful to Singapore, a resource poor country.
- To correct demand pull inflation: a strong dollar would raise the relative price of exports from Singapore, and lower the relative price of imports. This would result in a fall in net exports, leading to a fall in AD which can help to resolve demand pull inflation evident in the rise to MAS core inflation (evidence), in Singapore.
- To correct cost push inflation: a strong dollar helps to lower prices of imported inputs, lower costs of production and result in production of cheaper final goods and services in Singapore.

- (f) Assess the view that an 'almighty lift from non-electronic exports' is needed for Singapore's economy. [8]

Suggested Answer:

Current Challenges faced by Singapore:

Evidence: Extract 9: Slower than expected export demand hence export revenue expected to dip by 1.1%. (Knowledge) With export revenue falling, Singapore's economic growth is likely to slow or fall, AD falling.

Evidence: Extract 9: Economic restructuring and tighter foreign worker policies expected to drive up costs of production, AS may fall (knowledge).

Challenges: Sustained Economic Growth

Thesis: An almighty lift from non-electronic exports is needed for Singapore's economy.

- A rise in non-electronics exports will help fill the gap left by the fall in manufacturing exports, this will help to maintain AD and national income. (AD rising back to normal position)

Anti-thesis 1: An almighty lift from non-electronic exports is insufficient for Singapore's economy.

- However, evidence show that this area is also not performing well, 'pharmaceutical exports' have also been poor.
- Furthermore, the main issue is that export demand is not picking up as it should as recovery in US is 'less import intensive'.

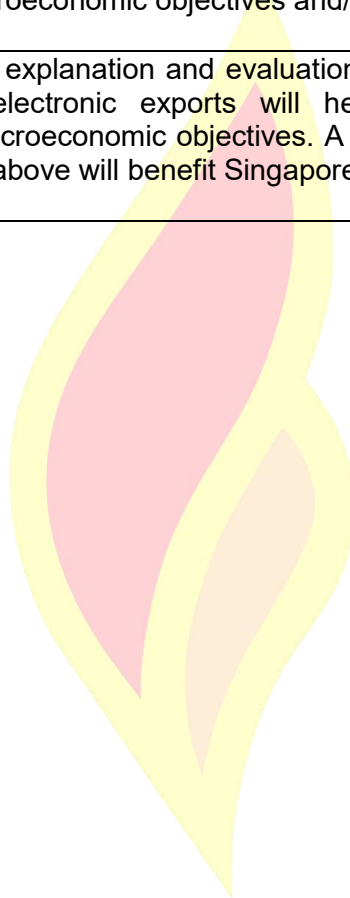
Anti-thesis 2: Other factors is needed for Singapore's economy

- Singapore management of her policies may be crucial in driving sustained economic growth, such as the stricter foreign worker policies. It can improve labour productivity in the long run but may lead to firms suffering losses in the short term. Hence government may need to offer subsidies to firms and retraining for the workers.

Synthesis: Arrive at a reasoned conclusion as to whether such a method will indeed benefit Singapore.

- An almighty lift in non-electronic exports may be needed to provide that push in AD for Singapore's economy but needs to be supported by sound government policies as well.

Level	Description	Marks
1	For superficially explaining how an almighty lift from non-electronic exports will help Singapore's economy without bringing in macroeconomic objectives and/or standard of living.	1 – 3
2	For a thorough explanation and evaluation of how an almighty lift from non-electronic exports will help the Singapore's achieve her macroeconomic objectives. A reasoned judgement of whether the above will benefit Singapore or not.	4 – 8



CJC

Paper 2: Essay 1

In 2013, Singapore's population grew by 1.6% to 5.4 million. The Downtown Line's first phase consisting of 6 MRT stations is set to complete in 2014, while the price of crude oil recorded a 50% fall.

Discuss the likely impacts these events have on various public transport markets in Singapore. [25]

Command: Discuss the likely impacts on different forms of public transport markets. The discussion revolves around the growth in population numbers, expansion of public transport infrastructure as well as a fall in price of crude oil.

Content: Demand and Supply, PED, XED, PES

Context: Various forms of public transportation in Singapore, such as MRT, public buses, taxi

How to attempt this question:

Firstly we need to establish:

1. How will the increase in population will affect the dd of various types of public transport
2. How the increase in MRT stations along downtown line affect the dd/ss of various types of public transport
3. How the fall in price of crude oil will affect the ss of various types of public transport
4. How will all 3 changes affect a public transport market individually as well as inter-related impact.
5. How the above 4 points affect the PRICE and QUANTITY of various forms of public transport.

Meaningful discussion of extent of change for price and quantity for various products require the use of the various elasticity concepts.

Quick Outline:

Introduction:

- Overview of essay – explaining scope of discussion for content (Dd , Ss ,PED ,PES XED) and context (MRT, Public Bus and/or Taxi)

MRT rides	Public Buses	Taxis
<ul style="list-style-type: none"> • ↑pop <u>size</u> → ↑DD • ↑MRT stations → change in <u>tastes & pref</u> → ↑DD • ↓oil prices → ↓<u>COP</u> → ↑SS <p>Simultaneous Changes in both DD & SS</p>	<ul style="list-style-type: none"> • ↑pop <u>size</u> → ↑DD • ↑MRT stations → <u>subst r'ship</u> w MRT → ↓DD (↑DD also accepted) • ↓oil prices → ↓<u>COP</u> → ↑SS <p>Simultaneous Changes in both DD & SS</p>	<ul style="list-style-type: none"> • ↑pop <u>size</u> → ↑DD • ↑MRT stations → <u>subst r'ship</u> w MRT → ↓DD (↑DD also accepted) • ↓oil prices → ↓<u>COP</u> → ↑SS <p>Simultaneous Changes in both DD & SS</p>
<p>Mini synthesis: ↑SS outweigh ↑DD</p>	<p>Mini synthesis: Overall, DD may still ↑ ↑SS outweigh ↑DD</p>	<p>Mini synthesis: Overall, DD may ↓, ↑SS outweigh ↓DD</p>

MRT rides	Public Buses	Taxis
<ul style="list-style-type: none"> Given a \uparrowSS, use PED to explain nature of good $PED < 1$ 	<ul style="list-style-type: none"> Given a \uparrowSS, use PED to explain nature of good $PED > 1$ 	<ul style="list-style-type: none"> Given a \uparrowSS, use PED to explain nature of good $PED > 1$
<ul style="list-style-type: none"> Given a \uparrowDD, use PES to explain nature of good $PES < 1$ 	<ul style="list-style-type: none"> Given a \uparrowDD, use PES to explain nature of good $PES < 1$ 	<ul style="list-style-type: none"> Given a \uparrowDD, use PES to explain nature of good $PES < 1$
<p>Overall Conclusion: Arrive at a reasoned conclusion on the most like impact for each market, focusing at the <u>P & Q in each market</u> Question <u>ceteris paribus assumption</u>. Use of <u>time & space</u> to evaluate</p>		

Marker's Comments

- Many candidates overly focused on simultaneous shifts, hence relegating to a low level 2 answer, and not in depth analysis for different markets with the support of elasticities concepts.
- Missing mini-syntheses (mini outcomes) for each market, hence scoring low for giving perspectives to the argument
- Weak overall conclusion, with most that do so focusing on summarising their points instead of evaluation or making a stand of definitive outcomes verses relative outcomes due to possible difference in interpretation of PED/PES/XED etc.
- Bare requirements require students to explain the impact of P & Q for each market explained, which most candidates have done well, but with the option of looking at TE/TR/CS/PS which are lacking in significant number of scripts.
- Poor structuring of answer leading to repetition/duplication of points and thus breath of essay is compromised. Some candidates are confused on some economic concepts (demand vs qty demanded) and without a clear structure, proved to be even more confusing for the marker.

Detailed Answer

Intro:

In economics, the market for a particular good can be analysed using the concept of demand & supply. A market is defined as a convenient arrangement whereby buyers and sellers can negotiate in order to exchange (buy and sell) goods, services, or factors of production at an agreed price.

Demand is defined as the amount of a good or service that consumers are both willing and able to buy at each possible price during a given period of time, ceteris paribus Supply is defined as the amount of a good or service that producers are both willing and able to sell at each possible price during a given period of time, ceteris paribus

The price elasticity of demand (PED) measures the degree of responsiveness of quantity demanded of a good to a change in its price, ceteris paribus.

The cross elasticity of demand (XED) measures the degree of responsiveness of demand of one good to a change in the price of another good, ceteris paribus.

The elasticity of supply (PES) measures the degree of responsiveness of quantity supplied of a commodity to a change in its price, ceteris paribus.

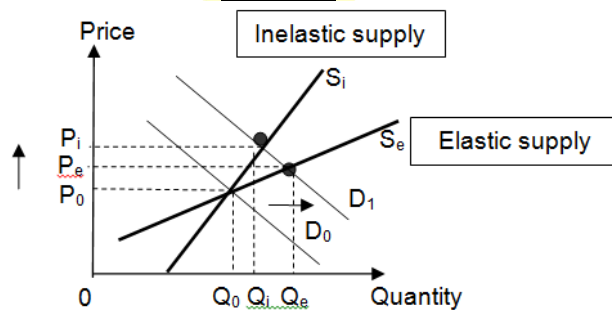
With an increase in population numbers, it will increase demand in normal goods and even more luxury good as oppose to a fall in demand for inferior products. The fall in price of crude oil will increase the supply of public transport as it will decrease the cost of production. Finally the increase in the number of MRT stations along the downtown line will have both demand and supply impacts of the various markets within the public transport sector. Thus, using the concept of demand, supply & elasticities this essay will determine how the price & quantity traded for various products (namely MRT, Buses and Taxi) will be affected.

Body:

Paragraph 1

The population growth in Singapore will increase the demand for all public transport markets (namely MRT, Buses and Taxi). This is due the change in size of population which is a non-price determinant of demand and will result in a rightward shift of the demand curve from D_0 to D_1 as seen in figure 1. The extent of change of the price and quantity will ultimately depend on the PES of the various market. The PES of Buses and Taxi will be more price elastic as compared to MRT due the cost of production where it is cheaper to run more services of Buses as opposed to Taxi but definitely cheaper to run than MRTs where it is not just the cost of running the trains but all the stations that has to be in operation.

Figure 1

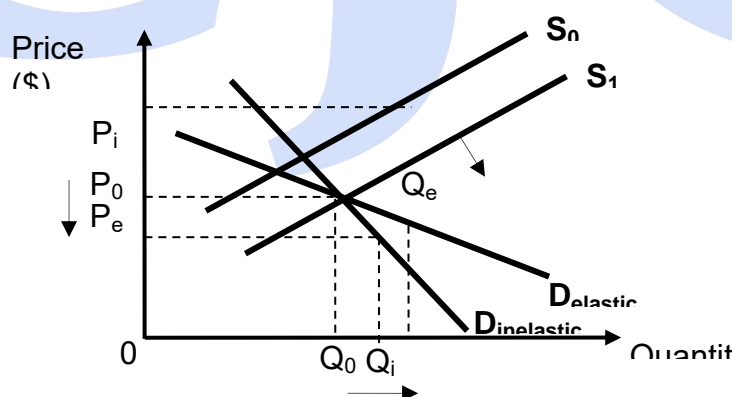


As seen in Figure 1, the Price of MRT will increase by more (P_0 to P_i) as compared to Buses and Taxis (P_0 to P_e), will the quantity will increase by less (Q_0 to Q_i) as compared to (Q_0 to Q_e).

Paragraph 2

The fall in price of crude oil in Singapore will increase the supply for all public transport markets (namely MRT, Buses and Taxi). This is due the change in cost of production which is a non-price determinant of supply and will result in a rightward shift of the supply curve from S_0 to S_1 as seen in figure 2. The extent of change of the price and quantity will ultimately depend on the PED of the various market. The PED of Taxi will be more price elastic as compared to MRT and Buses due the proportion of income spent on a ride, where it is definitely cheaper to ride on the MRT and/or Buses as compared to a trip on the Taxi.

Figure 2



As seen in Figure 2, the Price of MRT will fall by more (P_0 to P_i) as compared to Buses and Taxis (P_0 to P_e), will the quantity will increase by less (Q_0 to Q_i) as compared to (Q_0 to Q_e).

Paragraph 3

The completion of the 6 Downtown line stations in Singapore will increase the demand for MRT but may increase or decrease the demand for Buses and Taxis. This is due to the taste and preference of consumers towards the various mode of public transportation which is a non-price determinant of demand and will result in a shift of the demand curve. For the demand for MRT will definitely increase due to the added convenience and accessibility of the MRT system and thus more consumers are willing to ride the MRT thus will result in a rightward shift of the demand curve from D_0 to D_1 as seen in figure 1. As discussed in Paragraph 1, the PES of MRT is relatively inelastic due to the cost of production incurred in running the system, thus price will increase from P_0 to P_i and quantity will increase from Q_0 to Q_i .

For the bus market, it will on the XED of the buses and MRT prices. Buses can be deemed as complimentary goods as MRT stations will only bring riders to the general locations (town centres) and thus the need for Feeder buses to get to the ultimate destination. So if there was an increase/decrease in the Price of MRT, the demand for buses will decrease/increase respectively given that in this case they are close compliments the shifts in demand will be by a larger magnitude (As seen in Figure 4) . However, buses and MRT could be substitutes as well if they were to ply similar routes (this is highly unlikely as routes are regulated by the LTA and duplications will be kept to a minimal for the efficiency of the entire transportation network system) or for consumers whose route of travel can be serviced by both buses and MRT. So if there was an increase/decrease in the Price of MRT, the demand for buses will increase/decrease respectively given that in this case they are weak substitutes as MRT are likely to face traffic congestions and thus a faster ride to the destination, thus the shifts in demand will be by a smaller magnitude (As seen in Figure 3).

For the Taxi market, it will be deemed as a substitute and a weak substitute at that as the taxi is a premium mode of public transport bringing passengers from pick up location right to the destination. There is also the comfort where passengers need not squeeze with other commuters while travelling. Thus if there was an increase/decrease in the Price of MRT, the demand for Taxi will increase/decrease respectively but to a very minimal extent (As seen in Figure 3).

Figure 3

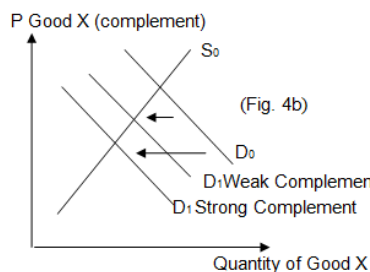
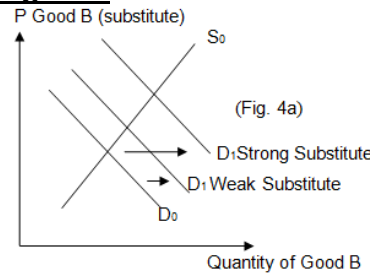


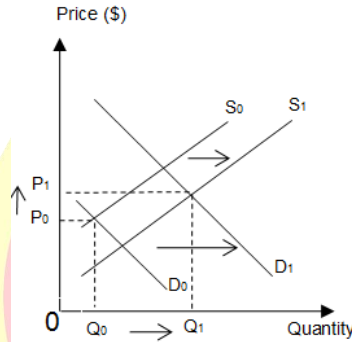
Figure 4

The final price changes will also have to take into account the PES of the respective mode of transport as a more price elastic supply will bring about a smaller variation in prices but a larger variation in quantity.

Paragraph 4

The final impact on the MRT market due the 3 different influences mentioned in the extract will be that of demand increasing more due to the increased accessibility of the entire transport network as well as population changes (assuming it is due to the influx of foreign workers whom will be using the public transport system to go about their daily lives) as compare to the increase in supply as MRT is run on electricity and the cost of crude oil decreasing will have an impact but albeit an indirect one. Thus the likely outcome can be seen in Figure 5, where price will ultimately increase from P_0 to P_1 and quantity increase from Q_0 to Q_1 .

Figure 5

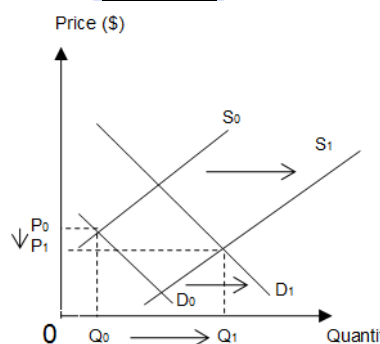


We can also conclude that within the market from MRT as seen in figure 5, the total expenditure by consumers as well as total revenue received by producers will increase. Both consumers and producers will also have a high amount of consumer surplus and producer surplus.

Paragraph 5

The final impact on the Bus market due the 3 different influences mentioned in the extract will be that of demand increasing less due to the population changes (assuming it is due to the influx of foreign workers whom will be using the public transport system to go about their daily lives) and due to demand for buses falling with the increase in MRT prices (buses and MRT as more likely to be complimentary goods) as compare to the increase in supply as Buses run on petroleum which is derived from crude oil thus it accounts for a large portion of the cost of production for bus companies. Thus the likely outcome can be seen in Figure 6, where price will ultimately fall from P_0 to P_1 and quantity increase from Q_0 to Q_1 .

Figure 6



We can also conclude that within the market from Buses as seen in figure 6, the total expenditure by consumers as well as total revenue received by producers will increase. Both consumers and producers will also have a high amount of consumer surplus and producer surplus.

Paragraph 6

The final impact on the Taxi market due the 3 different influences mentioned in the extract will be that of demand increasing less due to the population changes (assuming it is due to the influx of foreign workers whom will be using the cheaper modes public transport to go about their daily lives) and due to demand for taxi increasing with the increase in MRT prices (Taxi and MRT as more likely to be substitutes though minimally) as compare to the increase in supply as Taxi run on petroleum which is derived from crude oil thus it accounts for a large portion of the cost of

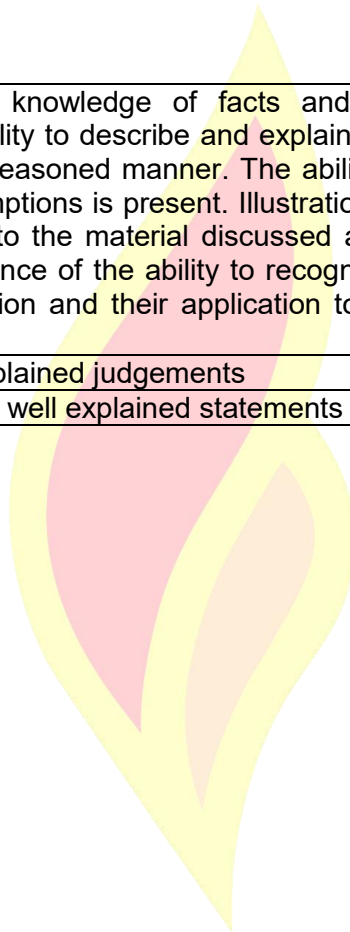
production for bus companies. Thus the likely outcome can be seen in Figure 6, where price will ultimately fall from P_0 to P_1 and quantity increase from Q_0 to Q_1 . We can also conclude that within the market from Buses as seen in figure 6, the total expenditure by consumers as well as total revenue received by producers will increase. Both consumers and producers will also have a high amount of consumer surplus and producer surplus.

Conclusion:

To conclude, the impact of the 3 situations stated would definitely lead to an increase in quantity generically. However it depends on the PED, PES and XED to determine the final increase in both price and quantity. This will further in turn affect the TR received by firms or TE spent by the commuters as well as influences on producer and consumer surpluses respectively. This is purely based on the Short Run analysis where consumers may not have sufficient information of the new route and timing of the impact of the 6 new MRT stations. In the long run, the impact on buses may vary when the MRT network's reliability and timing is taken into consideration by consumers. Taxi on its own should not be very different in the long run as those whom rely on Taxi as a mode of transport will not switch away from it to other forms of public transport and those who move away from MRT and buses to Taxi will be very minimal and only undertaken by those whom are in a rush or prefer some form of comfort/indulgence for the day.

Level 1	Low	The answer is mostly irrelevant and contains only a few valid points made incidentally in an irrelevant context.	1-5 marks
	High	The answer shows some knowledge e.g. understanding and explanation of the various causes of demand and supply, but does not indicate that the meaning of the question has been properly grasped. Basic errors of theory and/or and inadequate development of analysis may be evident. Answers that are not answered in context to Singapore and no use of examples of ANY form of public transport will fall into this category	6-9 marks *simultaneous change w/o mention DTL max 9m
Level 2	Low	The answer shows the ability to identify facts, some ability at graphs, fair ability to apply theory to the situations. E.g. Ability to explain various outcomes/shifts for various forms of public transport markets	10-11 marks *simultaneous change , 2 mkts and possible scenarios
	High	The answer has a more thorough relevance to the question but the theory is incompletely explained. Lack of use of elasticity concepts within the answer will fall into this category.	12-14 marks *as per L2L + compare between 2 markets
Level 3	Low	A good knowledge of facts and theory of the question, clear evidence of the ability to use facts and theory with accurate reference to the question that may have presented the candidate E.g. Students are able to explain in depth the various shifts in DD and SS as well as identification of use of elasticity concepts. Candidate are also able to comment on the size/magnitude/depth of impact on the various	15-17 marks *simultaneous change , 3 mkts and possible scenarios with comparison

		stakeholders	but may not have complete links in explanation
	High	A thorough knowledge of facts and theory with an excellent ability to describe and explain this in a precise, logical and reasoned manner. The ability to query some of the assumptions is present. Illustrations and examples appropriate to the material discussed are introduced as further evidence of the ability to recognise the principles of the question and their application to relevant current situations.	18-21 marks
Evaluation	E1	Mainly unexplained judgements	1-2 marks
	E2	Justified and well explained statements	3-4 marks



Paper 2: Essay 2

a) Explain the economic problem that all rational individual, firms and governments face. [8]

Part a

Command words:	'Explain' - Give clear reasons for an idea/circumstances, describing it in detail and using relevant economic facts.
Content:	'Economic problem ... ALL rational ... face' - , scarcity
Context:	'rational individuals, firms and governments' - no fixed context
Approach	Students need to explain clearly and fully the economic problem, scarcity, and its impacts.

Outline of essay:	
Introduction	Overview: the economic problem that all firms and government will have to solve scarcity. Essay serves to explain the problem fully.
Paragraph 1	Impacts of scarcity – Choice and opportunity cost
Paragraph 2	Explanation of opportunity cost arises → explanation of opportunity cost as the sacrifice rather than the cost
Paragraph 3	Using PPC to explain the situation
Conclusion	This is a problem that all rational individuals will need to solve. Most of the time, solved by market forces but there are times that it is solved by government intervention.

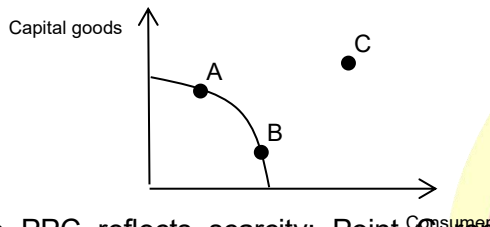
<p><u>Introduction:</u></p> <p>The economic problem faced by all rational individuals, firms and government is known as scarcity. Scarcity is the inherent problem faced by every individual. This essay serves to explain what scarcity is and the impacts of scarcity.</p>	
<p><u>Body: Paragraph 1</u></p> <p>Scarcity is a situation where unlimited wants cannot be met by limited resources. This is a case where every individual, firm and government wants more but is unable to get more due to constraints of resources. For an individual, he could be constrained by financial limits. For a firm, it could be constraint by the amount of profit it can make. For a government, the budget could be the constraint. Hence, they will need to make a choice in order to maximize outcomes. Choices need to be made as individuals, firms and governments are unable to have everything they desire. In the process of choice making, other options have to be surrendered, This sacrifice is known as opportunity cost, explained in the next paragraph.</p>	<p>P: to explain what scarcity is</p> <p>E: Explanation of idea and its impacts.</p> <p>E: In this question, I have left examples till later.</p> <p>L: Link to next paragraph</p>
<p><u>Body: Paragraph 2</u></p> <p>Opportunity cost is the next best alternative forgone when a choice is made. For example, in deciding between buying an iPhone and a Samsung Galaxy, the opportunity cost of buying the iPhone is the sacrifice of the Galaxy. The opportunity cost is the sacrifice one makes in order to make the decision.</p>	<p>P: to explain the idea of opportunity costs clearer.</p>

All these concepts can best be illustrated in the PPC below.

Body: Paragraph 3

The PPC reflects the total production possible by a country under the following assumptions.

1. All resources are dedicated to the production of these two goods
2. The quantity and quality of resources remains constant
3. There is no change in level of technology



The PPC reflects scarcity: Point C represents a level of output that is desired but unattainable. The country cannot consume beyond the PPC as the economy cannot produce that level of output. However, it is desirable to achieve that as it means more capital and consumer goods.

The PPC reflects choice: the country can be anywhere within or on the PPC, but it can be only on one point at one time. This reflects the problem of choice; it can have more consumer goods or more capital goods, but not more of both. So it could choose to be either point A or point B, but not both at the same time.

The PPC reflects opportunity cost: if the county is choosing between point A and B, and decides to go with A, this means the opportunity cost, the next best alternative forgone, is B. To get to point A, the country needed to sacrifice the alternative, which was point B.

Hence, PPC can be used to illustrate the idea of scarcity, choice and opportunity cost.

Conclusion:

The problem that all rational individual, firms and governments face is that of scarcity. This central problem of economics is the thesis of economics and countries do their best to manage it as best as possible.

P: using a graph, illustrate the key ideas associated with scarcity

Knowledge, Understanding, Application and Analysis

L3	Answer shows clear understanding of the question and reflected in the selection of relevant points. Answer explains clearly and correctly the economic problem fully, including impacts of choice and opportunity cost, with the use of good economic analysis. Answer uses examples to illustrate the ideas well.	6-8 Marks
L2	Answer shows some understanding of the question and reflected in the selection of few relevant points. Answer explains to some extent the economic problem with limited use of economic analysis. Answer uses examples to illustrate the ideas to a limited extent.	4-5 Marks
L1	Answer shows poor understanding of the question. Answer weakly explains the economic problem with no use of economic analysis. Answer lacks examples, or examples are merely stated.	1-3 Marks

b) The economic problem is best left to the free market to manage. However, governments are often seen to intervene in some markets with the use of taxes and moral suasion.

Discuss whether governments should intervene with the use of taxes and moral suasion in the free market. [15]

Part b

Command words:	<p>'Discuss' - Provide relevant arguments for and against an issue. Generally, the issues raised have some normative aspect, or have unspoken assumptions that can be challenged. Come to a judgment after reviewing the issues.</p> <p>'Discuss whether' – the TAS structure (yes/no) is set in qn. It limits the scope of discussion.</p>
Content:	<p>'governments... intervene' – government intervention (when? – market failure, macroeconomic problems)</p> <p>'Intervene in some markets' – more likely to be microeconomic (market failure)</p>
Context:	<p>Situation: Government intervenes in the market</p> <p>Who – not mentioned</p>
Approach	<p>Discussion revolves around:</p> <ul style="list-style-type: none"> • When the government ought to intervene in the market using taxes and moral suasion • When the government ought not to intervene in the market using taxes and moral suasion (government failure) <p>And one of the following:</p> <ul style="list-style-type: none"> • When the government ought not to intervene in the market using taxes and moral suasion (no market failure) <p>OR</p> <ul style="list-style-type: none"> • When the government ought to intervene in the market, but NOT using taxes and moral suasion (Using other polices which work better, OR in cases where public goods involved, use direct provision) <p>Stand</p> <p>Whether the government ought to intervene in the market using taxes and moral suasion. You need to decide.</p>

Outline of essay:	
Introduction	<p>Context: Link to part a as recognizing that the issue of scarcity needs to be managed at some level. Note that the market is normally the tool to be used to manage scarcity. Highlight that the government does from time to time intervene</p> <p>Overview: to provide a discussion into whether the government ought to intervene using taxes and moral suasion.</p>
Paragraph 1	<p>Explain when the government ought to intervene using taxes and moral suasion – Market failure (demerit good/ negative externalities)</p> <ul style="list-style-type: none"> • Explain why in this case the government needs to intervene • Explain how taxes and moral suasion will work. <p>Because the question is set with taxes and moral suasion, it is strongly recommended that you use demerit goods or goods with negative externality as the context. You cannot solve the market failure of public goods or factor immobility using a tax so those should not be used.</p>

Paragraph 2	Discussion about whether the government ought to intervene using taxes and moral suasion – benefits and costs of using taxes and moral suasion
Paragraph 3	When the government ought not to intervene using taxes and moral suasion – when there are other policies that work better better.
Conclusion	Conclude summarising the issues raised and make your own stand as to whether governments ought to intervene or otherwise.

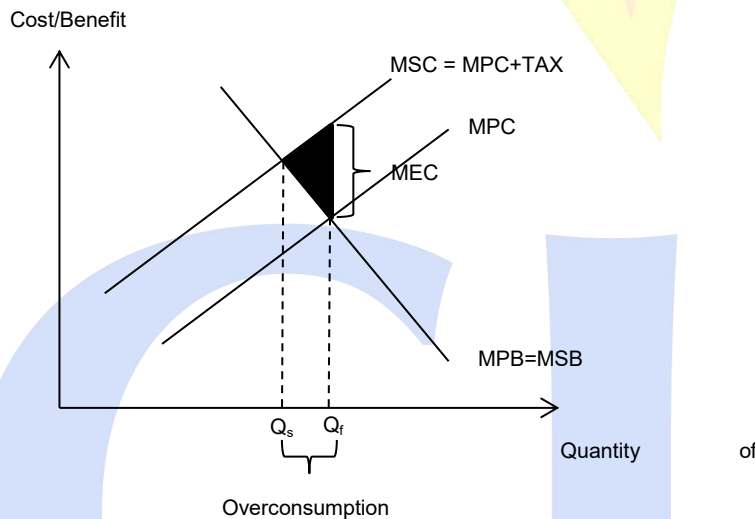
Introduction:

In part a, I explained the economic problem all rational individuals, firms and governments face. In light of the problem, most countries allow the market to manage the issue. However, governments will from time to time intervene in the market to ensure that the problem is best managed. This essay serves to discuss whether government should intervene in the market using taxes and moral suasion.

Body: Paragraph 1

Governments should intervene in the market using taxes and moral suasion. They do so when the market fails to allocate resources, such as in the case of demerit goods. Demerit goods are good where the government deems the good to be overconsumed. These are good that normally possess some negative externalities and some form of imperfect information. Cigarettes is an example of a demerit good.

The graph below shows the market for cigarettes and the impact of negative externalities



The free market market will only consider the private costs and benefits of smoking, and consume where $MPC = MSC$ at Q_f output. The private costs include the price of the cigarettes and the risk of cancer, while the private benefits of smoking include the comfort they get from smoking.

However, there is an external cost, shown by the divergence between the MPC and the MSC. This external cost, known as the externality, is an external cost borne by a third part for which no compensation is made. In the case of cigarettes, bystanders breathe in the second hand smoke which case them discomfort and the risk of cancer, and these costs are not compensated for.

P: Why government need to intervene – market failure

E: Explanation of market failure. Take note that you should use an example to anchor the explanation. It is also a good idea to use a market failure that can use taxes and moral suasion to solve so that you need not repeat this part.

Hence, the MSC is higher than MPC due to the MEC, and if smokers considered these costs, the consumption would be at Q_S , where $MSC=MSB$. There is an overconsumption of cigarettes by the free market, which leads to a deadweight loss as shown by the shaded triangle. This deadweight loss is because between the Q_s and Q_f output, the MSC exceeds the MSB and society suffers a loss.

Imperfect information will cause consumers to underestimate the cost of smoking. Some might not be aware of the true risk of smoking and believe that they will not get cancer no matter what. As such, they will smoke more than they should, leading to overconsumption of cigarettes.

A tax can help in solving the issue. A tax would internalize the externality by increasing the cost of production. The government can impose a tax equal to the MEC which will then shift the MPC upwards. This causes the market to take into account the external costs and reduce their consumption, achieving social optimal output. In Singapore, we impose a tax of about 70% of the selling price on every pack of cigarette. This will help the market internalize the cost of smoking.

Moral suasion can work to solve the market failure. By educating the public on the true dangers of smoking, they will recognize the true cost of smoking, increase their MPC and hence, reduce their own consumption to achieve the social optimal output. In Singapore, every box of cigarette must have a graphic picture detailing the true harm of smoking. This will make smokers realise every time they pick up the cigarette the harm they are causing themselves, thus potentially decreasing their consumption.

P: Taxes and moral suasion will work to solve the market failure

E: explain how they work. It is important to note why we need both; to explain why tax is necessary, you will need to first show what the problem is and then how tax solves it.

Body: Paragraph 2

Taxes have the advantage of collecting tax revenue for the government. This allows the government to devote the funds for other areas such as defense, or for healthcare in order to fix the harm caused by smoking.

The advantage of moral suasion is that once consumption patterns are set, consumers will continue to consume at social optimal output without need for government intervention. This means that moral suasion has a permanent effect on consumption levels, thus freeing up resources for the government to do other things.

However, taxes and moral suasion might not be the best solution. One of the problems of taxation is that the government will need to calculate the MEC accurately in order to implement the right tax level. If the government miscalculated the MEC, and imposed a tax that is too low, this will continue to be an over consumption as the new $MPC + Tax$ is still too low. As the social optimal output is not achieved, but government has intervene, there could be a belief that the market has achieved optimal output and left to operate on its own. This will mean that the deadweight loss will continue.

Moral suasion relies on influencing the individual's decision. In the context of smoking, this means to get smokers to recognize the true cost of smoking. However, as it is an addictive good, coupled with no incentive to change behaviors, moral suasion's impact on cigarette demand is indeterminate, and in the short run at least, unlikely to work.

Overall, while taxes and moral suasion has its merits and demerits, I feel that they are still necessary policies to be used in conjunction to solve the market failure. The government needs to be careful and continually tweak the tax level to ensure the right level of taxation is achieved.

Paragraph 3

However, the government should not intervene using taxes and moral suasion as there are other, better solutions that exist. One of the solutions recommended is regulation. Regulation can help ensure that the social optimal output is achieved. Singapore uses regulation effectively by targeting the MEC, reducing it as far as possible. One of the rules is the prohibition of smoking in all public areas, including void decks, covered walkways and pedestrian bridges. The purpose of the rule is to prevent second hand smokers from having to incur the externality. As a result, this will effectively reduce MEC, narrowing the divergence between MPC and MSC. The advantage of this policy is that the root of the problem, MEC, can be dealt with fairly easily in this context. It is easy to determine the external impact of second hand smoke and to deal with it.

One problem of regulation is the cost of monitoring. National Environment Agency is tasked to monitor and carry out checks to ensure people adhere to the rules. This might be costly and inefficient use of resources, as consumers need to be forced to behave in a certain manner.

Conclusion: Stand and justification

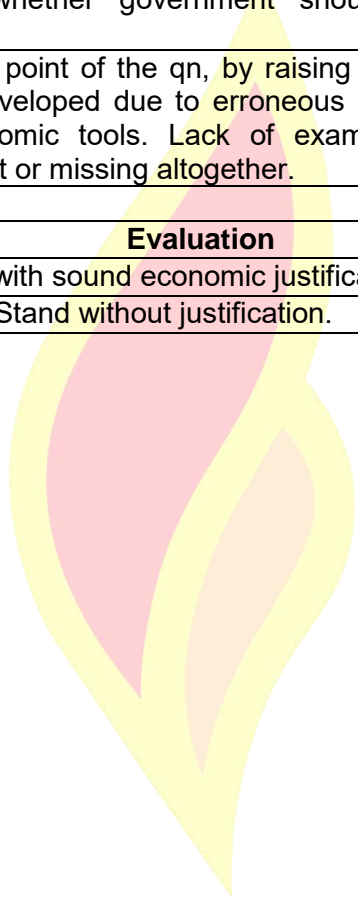
Due to scarce resources, society should strive to ensure that resources are allocated efficiently. In markets of demerit goods, Governments are able to intervene in the market using taxes and moral suasion in order to correct the market failure. Because the objective is to ensure social optimal output is achieved, governments should not just intervene using taxes and moral suasion. They can also consider alternatives such as regulation. By complementing the policies, the government has been able to achieve just that. Taxation force consumers to internalize the external cost while providing the incentive to reduce consumption immediately through higher prices. Revenues earned from taxation can go into funding moral suasion and regulation efforts. Moral suasion helps consumers understand the reason for the tax and makes acceptance of higher prices more palatable, as well as encourage consumers to reduce consumption voluntarily, such that the long term impact will be to achieve social optimal. And regulation can help by reducing the MEC, thus reducing the divergence. This will also help in case the government were to implement a tax that is too low, regulation can still help by reducing the shortfall, thus resulting in an optimal output.

Knowledge, Understanding, Application and Analysis

L3	Answers good understanding of the qn and provides a good discussion on the issues of resource allocation. Content is well developed through the good use of economic analysis of the issues, for example, reasons for market failure and government failure. Example use clearly illustrates the key points. Argument is well developed and coherent, covering whether governments should intervene or otherwise.	10 -13 Marks
L2	Answers shows some understanding of the qn and provides a fair discussion on the issues of resource allocation. Content is	7 - 9 Marks

	<p>somewhat developed through the use of economic analysis of the issues, but limited in breadth or depth. Example use illustrates the key points, but inconsistently so. Argument is present but lacking coherence as to whether government should intervene or otherwise.</p>	
L1	<p>Answers missed the point of the qn, by raising irrelevant points. Content is poorly developed due to erroneous understanding or failure to use economic tools. Lack of example use. Poorly constructed argument or missing altogether.</p>	<p>1 - 6 Marks</p>

Evaluation		
E2	Stand with sound economic justification	3-4
E1	Stand without justification.	1-2



CJC

Paper 2: Essay 3

- a) Explain the reasons for government intervention in the case of market dominance. [10]
 b) Discuss if barriers to entry is the only determinant of a firm's profitability. [15]

a) Explain the reasons for government intervention in the case of market dominance.[10]

Question Analysis:

Command	Explain – give clear reasons for an idea/circumstances, describing it in detail and using relevant economic facts.
Content	Firms and how they operate – why market dominance as a source of market failure and hence government intervention is necessary
Context	No specific context – use relevant context for relevant market structures
Approach	Students need to give reasons why market dominance is a source of market failure and hence government intervention is necessary

Outline of an Essay:

Introduction	Definition of market dominance and market failure. Overview and context of the essay
Body	<p><u>Paragraph 1:</u> Explain how market dominance lead to allocative inefficiency and hence market failure → requires government intervention.</p> <p><u>Paragraph 2:</u> Explain how market dominance lead to productive inefficiency and hence market failure → requires government intervention.</p> <p><u>Paragraph 3:</u> Explain how market dominance lead to X-inefficiency OR dynamic inefficiency and hence market failure → requires government intervention.</p>
Conclusion	Summary of the points mentioned above.

Suggested Answer:

Introduction

Market dominance occurs when a firm holds significant market power, which refers to the ability of a firm to set prices or quantity. Market failure occurs when the free market fails to allocate resources that would maximize society's welfare

As a dominant firm will be allocative inefficient, productive inefficient and most probably X-inefficient and dynamic inefficient, this will lead to market failure. Hence government intervention is required.

Body

Allocative efficiency is achieved when the level of output produced correspond to $P=MC$. This implies that the consumers valuation of consuming the good is equal to the cost of producing it. Market dominance leads to allocative inefficiency.

A market dominant firm has downward sloping AR & MR that has relatively price inelastic demand. A firm's profit maximizing equilibrium is at where $MC=MR$, with price P_M and quantity Q_M . The outcome is allocative inefficient as $P > MC$.

E.g. the massive fall in subscription fees and large surge in subscription to mobile services after the entry of M1, this implies that the SingTel was allocative inefficient as $P > MC$ when it was a monopoly. Hence there is a need for government intervention in the case of market dominance due to allocative inefficiency.

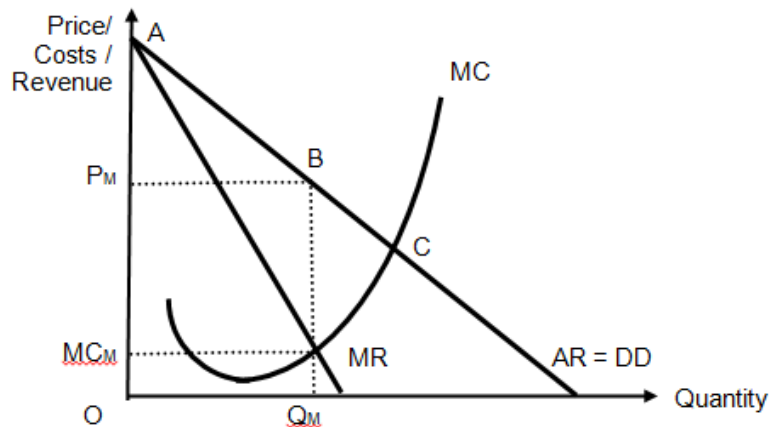


Figure 1: Allocative Efficiency

Productive efficiency from the firm's point of view is achieved when the firms produce along the LRAC, which is the minimum cost of producing that particular level of output. Productive efficiency from the society's point of view is achieved when the firms produce at the minimum LRAC, which all economies of scale has been exploited.

Market dominance leads to productive inefficiency. At Q_M , a market dominant firm will be producing along the LRAC at point A and hence is productive efficient from the firm's point of view. However, it is not producing at the lowest LRAC at point B and hence productive inefficiency from the society's point of view.

E.g. due to SingTel's dominant position before liberalisation, SingTel not operating at lowest LRAC, hence enables it to charge too high price and too low quantity. Hence there is a need for government intervention in the case of market dominance due to productive inefficiency.

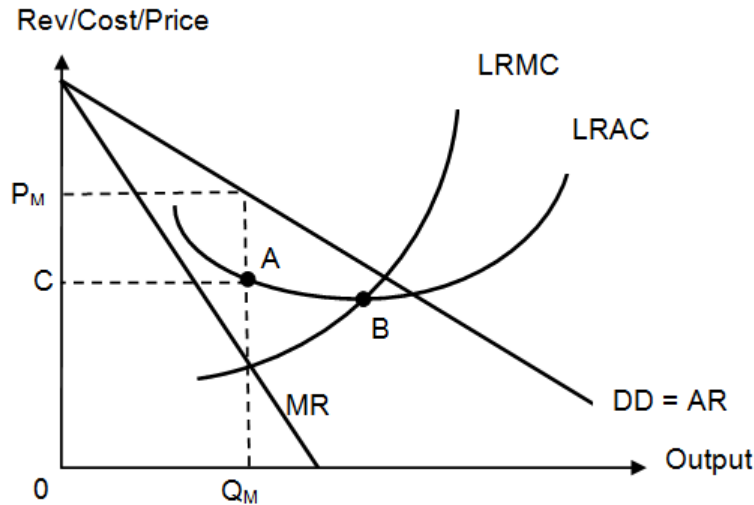


Figure: Productive Efficiency

Dynamic efficiency is achieved when firms engage in R&D on creating or making changes to a new product; or new production methods.

Market dominance tends to lead to dynamic inefficiency. A market dominant firm may become complacent and do not have the incentive to engage in R&D. Thus dynamic inefficiency occurs and there will be a lack of product variety and consumers choices and probably an increase in cost of production.

E.g. dynamic inefficiency - Microsoft monopolise computer operating system and office productivity software in the 1990s to mid-2000, many perceive the improvements in various versions to be marginal and unnecessary and arguably there was insufficient R&D.

X-Inefficiency occurs when a market dominant firm may become complacent and lacks the incentive to keep its costs to the lowest. Thus x-inefficiency occurs and the firm will be operating at an AC above the LRAC. Therefore, x-inefficiency can lead to productive inefficiency.

E.g. x-inefficiency - proposed opulent Apple headquarters coined by media as the 'spaceship'

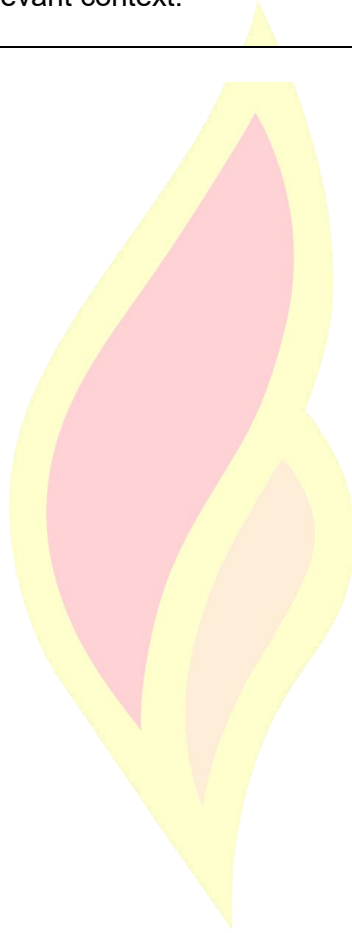
Conclusion

Market dominance leads to allocative, productive and probable dynamic and x-inefficiencies. As such government intervention is required.

Mark Scheme:

Knowledge, Understanding, Application and Analysis		
Level	Descriptors	Marks
L3	The answer shows excellent ability to explain the reasons government intervention in the case of market dominance. Explanations of reasons are accurate, logical and well-developed. The chosen context is of relevance to the question.	7 – 10
L2	The answer shows ability to explain the reasons government intervention in the case of market dominance. Explanations of reasons are accurate but underdeveloped. The chosen context is of relevance to the question.	5 – 6
L1	The answer contains only a few points lacking depth and detail in answering the question. There is no effort made to provide a context	1 – 4

	and gross conceptual errors are evident throughout the essay. The answer is mostly irrelevant and contains only a few valid points made incidentally in an irrelevant context.	
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cjc

b) Discuss if barriers to entry is the only determinant of a firm's profitability. [15]

Question Analysis:

Command	Discuss - to provide relevant arguments for and against an issue and arrive at a judgment after reviewing the issues. Generally, the issues raised have some normative aspect, or have unspoken assumptions that can be challenged.
Content	<ul style="list-style-type: none"> ▪ Characteristics of firms ▪ Behaviour of firms (profit maximisation → pricing and output decisions)
Context	No specific context – use relevant context for relevant market structures.
Approach	Students are required to provide arguments for and against the issue as to whether barriers to entry are the only determinant of a firm's profitability.

Examiners' Comments:

- Used the other 3 characteristics of the firms as other determinants of profitability – which is either a resultant of BTE or not a valid argument.
- A change in price will not necessarily lead to an increase in TR. Students need to use PED analysis to determine the change in TR. Student also did not link it to profits explicitly.
- Did not assume TC constant when explaining change in TR and hence change in profits.
- Most students illustrated the adjustment of SR supernormal profits to LR supernormal profits poorly.
- Students argued that many types BTE e.g. product differentiation and brand loyalty as an anti-thesis and hence render the argument one-sided.
- Only a handful of students had clear anti thesis argument.
- Some students illustrated kinked demand curve and explained price rigidity poorly.
- Some students illustrated explained price discrimination poorly.

Outline of an Essay:

Introduction	<p>Definition of BTE</p> <p>Overview and context of the essay</p>
Body	<p>Thesis</p> <p><u>Paragraph 1:</u> An analysis of how BTE affects price and output (TR) decisions and hence profitability.</p> <p>Low/no BTE → large number of small firms → low/no market power → price taker → makes supernormal profit in the SR → attracts new firms to enter the industry → increase in supply → decrease in price → decrease in AR = DD = MR → incumbent firms make normal profits in the LR.</p> <p><i>Note: vice versa argument for high BTE</i></p>

Paragraph 2: An analysis of how BTE affects TR and hence profitability.
Natural BTE - ownership or control over key inputs → high BTE → one large firm/small number of large firms → high market power → price setter → relative price inelastic demand → increase price → increase TR and hence increase profits e.g. De Beers in the fine diamond industry.

Artificial BTE – legal protection (patents, copyrights, licenses, franchises) and production differentiation and brand loyalty follow the same argument as above. *But note that high costs are also involved in the legal and R&D process.*

Paragraph 3: An analysis of how BTE affect TC and hence profitability.
Natural BTE – EOS + Large MES → high BTE → one large firm/small number of large firms → high market power → reap EOS → decrease in TC and hence increase in profits e.g. natural monopoly such at Singapore Powers.

Anti-Thesis

Paragraph 4: Explain why behaviour of competitors is a determinant of a firm's profitability.

Price Competition

Competitive oligopoly → interdependency of firms → price rigidity → firms are unable to set P & Q to profit maximise without depending the behaviour of competitors hence affect profits.

Monopolistic Competitive → independency of firms → firms are able to set P & Q to profit maximise without depending the behaviour of competitors hence affect profits.

Note: Other methods of price competition such as predatory pricing and price discrimination only occur in market structure with high BTE and hence are thesis arguments.

Non-price Competition

Advertising and product differentiation → more price inelastic demand → increase in P → increase in TR and hence profits.

Note: The non-price competition here must not involve high costs and becomes deterrence for new firms to enter the industry. Otherwise will be considered as thesis argument.

Paragraph 5: Explain why alternative objectives of firms e.g. revenue maximization is a determinant of a firm's profitability.
Alternative objectives of firms → revenue maximisation $MR = 0$ → affect P & Q decisions (TR) and hence profits.

	<p><u>Paragraph 6:</u> Explain why presence of potential contestable markets is a determinant of a firm's profitability. Contestable markets → potential of contestable markets → 0 entry and exit costs → firms with high market power may not charge at a P above MC → affect P & Q decisions (TR) and hence profits</p> <p><u>Paragraph 7:</u> Explain why government intervention e.g. price controls, nationalization is a determinant of a firm's profitability. Government intervention → government may influence the P &/or Q decisions of firms to ensure public interest. E.g. implement AC and MC pricing to ensure reasonable price are charged or ensure that the social optimal level of output is produced → affect P & Q decisions (TR) and hence profits</p>
Conclusion	Stand and justification

Suggested Answer:

Introduction

Barriers to entry (BTE) impede the entry and exit of new firms and can be natural or artificial. In this essay, an analysis of how a firm's profitability is determine by BTE and other factors.

Body

A firm's profitability depends on BTE. BTE determines the type of market structure a firm is in. The absence of BTE leads to Perfect Competition while high BTE leads to Monopoly. This will in turn affect the long run profits.

Firms in Perfect Competition profit maximises and produce Q_{PC} at market price P_{PC} . The firms will make supernormal profits and new firms attracted by it can enter the industry due to absence of BTE. This increases the industry supply curve and hence the market price will fall. Supply will continue to increase from S to S_1 , until $AR = AC$ i.e. where all the firms are making normal profits in the long run

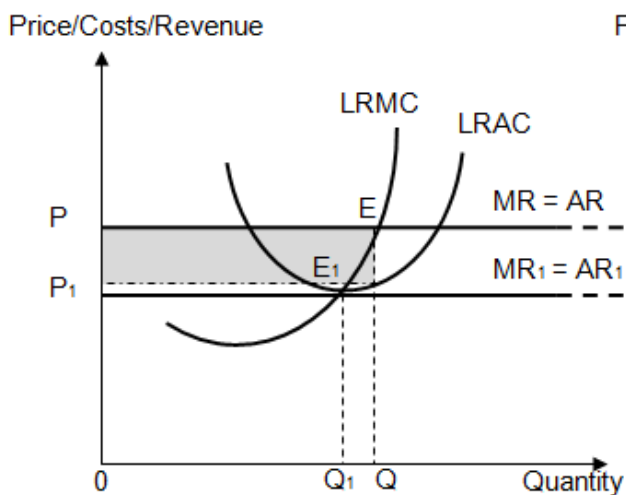


Figure 1: Perfectly Competitive Firm

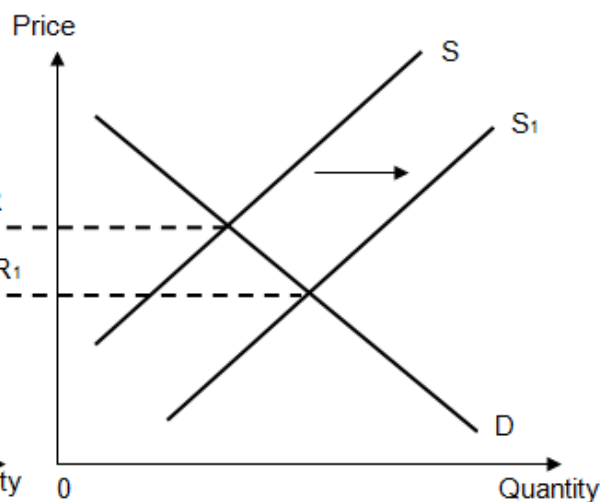


Figure 2: Perfectly Competitive Industry

However, the firm in Monopoly profit maximizes and produce at Q_M with price P_M . The firm will make supernormal profits and new firms attracted by it cannot enter the industry due to high BTE. Thus, the firm will make supernormal profits in the long run.

A firm's profitability depends on BTE. When a firm has ownership or control over key inputs, a natural BTE, there is high BTE resulting in one large firm or a small number of large firms. Thus, firms have high market power and a relatively price inelastic demand. Firms can then increase price to increase TR and hence increases profits e.g. DeBeers in the fine diamond industry.

A firm's profitability depends on BTE such as EOS and large MES in relation to market demand. In certain industries e.g. Singapore Power is a natural monopoly and hence its LRAC fall through the entire output. The MES is very large relative to market demand. It is thus more efficient for one firm to produce the good. This firm is able to reap EOS and this translates into a decrease in TC and hence increases profits.

Other factor such as alternative objectives is a determinant of a firm's profitability. Firms may choose to revenue maximisation at $MR = 0$. This will affect price and quantity (TR) and hence profits.

Another factor such as government intervention is a determinant of a firm's profitability. Government intervention is necessary when a firm has immense amount of market power and they may not work in the society's interest. This is especially true for natural monopoly producing essential goods such as water and electricity. Government can regulate a monopoly through implementation of MC or AC pricing leading to a fall in price and increase in output. The firm will incur a subnormal and normal profit respectively. Hence, government intervention affects profits negatively.

Conclusion

In conclusion, given that Profits = TR – TC, the condition of ceteris paribus simplifies the analysis. However, any BTE or non-BTE determinants affect both costs and revenue concurrently and hence the effects on profits have to depend on the relative magnitude of the changes in TR and TC. BTE is not the only determinant but as argued, it is probably one of the most important determinants of profitability.

Marks Scheme:

Knowledge, Understanding, Application and Analysis		
Level	Descriptors	Marks
L3	<p>Answer shows excellent knowledge of</p> <ul style="list-style-type: none"> ▪ how BTE determine price and output (TR) decisions of firms and hence profitability ▪ how BTE affect costs (TC) and hence profitability <p>Answers shows excellent knowledge</p> <ul style="list-style-type: none"> ▪ how behaviour (price and non-price) of competitors ▪ how firms with alternative objectives e.g. revenue maximisation ▪ how the presence of potential contestable markets ▪ how government intervention e.g. price controls and nationalisation <p>affects price and output decisions of firms and hence profitability.</p> <p>Excellent rigour of analysis throughout which includes well explained diagrams. There no major conceptual errors in explanation with</p>	9 –11

	explicit links to revenue and cost and hence profitability.	
L2	<p>Answer shows good knowledge of</p> <ul style="list-style-type: none"> ▪ how BTE determine price and output decisions of firms and hence profitability ▪ how BTE affect costs and hence profitability <p>Answers shows good knowledge</p> <ul style="list-style-type: none"> ▪ how behaviour (price and non-price) of competitors ▪ how firms with alternative objectives e.g. revenue maximisation ▪ how the presence of potential contestable markets ▪ how government intervention e.g. price controls and nationalisation <p>affects price and output decisions of firms and hence profitability.</p> <p>Good rigour of analysis which includes well explained diagrams. There are some conceptual errors in explanation and lacks explicit links to revenue and cost and hence profitability.</p>	6 – 8
L1	<p>Answer shows some knowledge of</p> <ul style="list-style-type: none"> ▪ how BTE determine price and output decisions of firms and hence profitability ▪ how BTE affect costs and hence profitability <p>Answers shows some knowledge of other determinants of price and output decisions of firms and hence profitability.</p> <p>Some rigour of analysis which may include diagrams. There are major conceptual errors in explanation with no links to revenue and cost and hence profitability.</p>	1 – 5

Evaluation		
E2	Justified evaluations/stand on how BTE is the only determinant of a firm's profitability.	3 – 4
E1	Unjustified evaluations/stand on how BTE is the only determinant of a firm's profitability.	1 – 2

Paper 2: Essay 4

Singapore's recorded a 6.3% annual growth in Gross Domestic Product (GDP) and enjoyed a current account surplus of \$51.4 billion in 2013, a massive 18.6 percent of gross domestic product.

Discuss the extent to which the above figures may be used as an indication of improving living standards in Singapore. (25)

Command	Provide alternative(s) to the stated issue. Places emphasis on more than just having a two sided discussion but also to show the limit to which an argument has validity and to come to a reasoned conclusion.
Content	Economic Indicators e.g. GDP, inflation, Current Account, GINI Coefficient. Measure of Standard of living- GDP, HDI, MEW.
Context	Singapore
Approach	We need to provide a 2-sided argument of the limit to which we can use GDP and current account figures to measure standard of living (material and non-material) and thus offer alternatives. It is crucial to consider these points in the context of Singapore.

Introduction:

Definition of SOL- Standard of living refers to the quality of life. It includes both material and non-material well-being. The material well-being refers to the quantity and quality of goods and services available, and the non-material well-being includes intangibles such as leisure time, lifestyle and the state of the environment.

Body:

Thesis: It is indicative and SOL has improved.

Define GDP- Gross Domestic Product (GDP) is the aggregate value of all final output produced by factors of production within the economic boundaries of a country over a given period of time, irrespective of who is earning the income.

GDP is a measure of economic growth or the increase in output. Since GDP has increased by 6.3%, this implies that aggregate demand (AD) must have increased resulting in a multiplied increase in national income via the multiplier effect. Thus, with an increase in national income, this means that materially, residents have a greater disposable income and thus higher purchasing power, hence they are able to enjoy a greater quantity of goods and services and hence higher material SOL.

Define Current account- The current account shows the flow of goods and services, plus incomes flowing into and out of the country, plus net transfer of money into and out of the country.

Components of Current account- Trade in Goods Account, Trade in Services Account, Net Income Flows, Net Current Transfers

Current account surplus-Assuming Ceteris paribus for Net income flows and Net Current Transfers, an improvement in current account balance by \$51.4 billion does imply that living standards have improved. This is because a large component of current account is the trade in goods and services component i.e. Balance of Trade. This is especially so for Singapore ('a massive 18.6% of GDP'), given our export-oriented nature. Thus, the trade surplus contributes to an increase in AD via increase in (X-M) and thus National income increases. This contributes to a higher material SOL as we are able to enjoy a greater amount of goods and services.

Anti-thesis:

It is not indicative of Material SOL:

GDP does not give us an indication of inflation levels

When accessing standard of living using national income figures, real GDP figures should always be used. This is because AD may be rising along the classical portion of the AS curve, such that inflation may result. Thus, if we are not careful and use nominal GDP figures, the figures would include both inflation and the actual quantity of goods and services consumed. Thus, in order to get a clearer idea of the actual quantity of goods and services consumed, we need to subtract the rate of inflation from the nominal GDP figures, in order to obtain real GDP figures.

GDP does not give an indication of per capita income

It is important to consider population figures when looking at standard of living. GDP figures alone will not be enough as the population numbers does affect GDP per capita, the amount of national income per person, i.e. the amount of goods and services each individual is able to enjoy.

Given Singapore's growing population in recent years due to our aim of a target population of 6.9million, it would not be enough to just look at GDP figures, but we need to look at the GDP per capita figures. This is because if GDP is increasing at a slower rate than rate of increase in population, the GDP per capita will actually be falling, and thus SOL per person will be falling.

Equity

In order to know whether material living standard has improved, we also need to not only know if GDP has increased, but also how it is distributed. If GDP increases benefit only a small minority of the population and most of the population does not benefit, then the economy's overall standard of living may not have increased even if national income increases.

Income equality has become a bigger issue in Singapore in recent years and the Gini coefficient for Singapore is rather high, sitting at 0.478.

Composition of GDP

Expenditure on Capital versus Consumption goods- If imports are primarily made up of capital goods, then this could translate into higher SOL only in the future, and not current SOL. Singapore also has a large expenditure for defence (about 3% of her GDP), however, although this contributes towards GDP, it does not contribute to an actual increase in SOL.

Nature of Current Account Surplus

A Current account surplus indicates that Singapore has more exports than imports. However, exports do not contribute to the living standards of Singaporeans as these are goods enjoyed by foreigners, and if import levels have decreased, this means that Singaporeans are enjoying fewer goods now.

There is also no indication of the current account figures of the previous year; hence although figures current show a surplus, it would be hard to say if current account figures have improved in comparison to before. Thus, we can't say that there has been increased contribution to AD, NY and thus material SOL.

It is not indicative of Non-Material SOL:

2 well –developed Non-material indicators

Leisure Time

Singaporeans are known to have one of the longest working hours in the world and a Global Gallup Survey has also polled that Singaporeans are one of the most unhappy people in the world. Thus, if increases in GDP are due to longer working hours and sacrifice of leisure time, then it would not be accurate to say that we have increasing SOL, just based on GDP and current account figures.

State of environment

If the increases in GDP result in environmental degradation through factory emissions from higher production, then, we also cannot say that we have an increasing SOL. Singapore also suffers from yearly haze conditions due to forest fires from Indonesia; this would also be something we need to take into account when measuring SOL.

Overall Stand and Evaluation

In summary, GDP and current account figures allow us to understand national income levels and hence do provide an indication towards material standard of living. However, we must take note that these must be tweaked for accuracy, i.e. we need to look at inflation, per capita, equity and composition figures. We must do this before we can be sure if Singapore has an improving material SOL.

In addition, material SOL figures alone is not enough; we also must take note of non-material SOL figures, thus, it is important to take note of figures that provide us an idea of items such as state of the environment and leisure time, e.g. Pollution Standards Index (PSI) figures, and no of working hours.

Thus, instead of relying on just GDP and current account figures, it may be wise to use a more composite index such as Human Development Index (HDI) which takes note of things such as life expectancy, education and per capita income indicators. This would provide us a better view of Singapore's SOL. Also, something we cannot ignore is income inequity which is a growing problem in Singapore, thus we must take note of GINI coefficient figures in order to accurately conclude about our SOL.

Levels	Description
L1 Knowledge/ Recognition {Description}	<u>1-5 marks</u> : Answer did not address question or address in an incidental manner. It may contain only a few valid points made incidentally in an irrelevant context. Numerous concept errors. No understanding of what is meant by standard of living. Argument is incoherent.
	<u>6-9 marks</u> : Answer is lacking in a core component- There is either no/little mention of Non-material SOL. OR No examples are being raised in the context of Singapore.
L2 Consolidate {Add some detail - Application without Analysis}	<u>10-11 marks</u> : The answer is a very general essay on standard of living, but it does not directly engage the question in terms of the 'extent' to which the above data can be used as an indication. The answer also poorly engages how GDP <u>and</u> Current Account may or may not be an indication of SOL. E.g. how GDP needs to be tweaked to take note of inflation.
	<u>12-14 marks</u> : Most parts of the essay directly addresses/engages the question. It directly addresses the word 'extent' to which the above data may be used as an indication. Either GDP <u>or</u> Current Account are poorly engaged in terms of how it may or may not be an indication of SOL. Generally speaking, there is also either a lack of depth or scope of points.
L3 Elaborate {Extend to include analysis} ▪ <u>Analyse</u> relevant theory to aid explanation ▪ <u>Apply</u>	<u>15-17 marks</u> : The answer is able to address the word 'extent' to which it may be used as an indication well. It is able to show how GDP and current account may or may not be an indication of SOL. Non-material SOL is also addressed. However, although the essay does try to link Singapore, it does not select points that are particularly important to standard of living in Singapore e.g. equity.
	<u>18-21 marks</u> : The answer addresses the question and its key words well. It does an excellent job of looking the extent to which GDP and SOL are indicative of SOL. Both material and non-material SOL are explained well. Points selected and elaboration of points also shows a good understanding of the

explanation in the context of the question	nuances when looking at standard of living in Singapore.
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Evaluation Marks		
E1	An overall stand and simple evaluation is provided e.g. briefly suggesting alternative sources of measurements of SOL. E.g. HDI and MEW.	1-2
E2	An overall stand is provided and an in-depth evaluation that shows consideration of overall issue in relation to Singapore is provided. E.g. Although GDP and CA are very important to our export-oriented economy; it is gradually becoming more important to consider equity and leisure time in our consideration of SOL as these are increasingly becoming contentious points in rapidly advancing Singapore.	3-4



Paper 2: Essay 5

Q5. In line with the Government's **restructuring efforts** to achieve **economic growth** driven by **sustained productivity improvements**, the Ministry of Manpower is taking steps to **raise the quality of our workforce** and **reduce reliance on foreign labour**.

Ministry of Manpower, March 2013

(a) Explain how raising the quality of our workforce and reducing reliance on foreign labour will bring about productivity improvements. [10]

(b) Discuss the view that the government should focus on supply side policies rather than demand management policies to achieve sustained economic growth. [15]

Part a

Command	Explain how: to elaborate in detail, the process involved or issue at hand with focus on the effects/outcomes
Content	Quality of workforce, reduce reliance on foreign labour and productivity improvements
Context	No particular context but from the preamble answer should be in the Singapore context
Approach	Students should be able to relate raising quality of workforce & reducing reliance of foreign labour to improvement in productivity of our workforce with use of AD/AS concepts and good examples in the Singapore context

Introduction

Productivity refers to output per unit of input. Singapore's approach towards improving productivity is to raise the quality of our workforce and moderate foreign employment. It is an approach to support Singapore's restructuring effort towards a high-value, productive economy so that Singapore can enjoy sustainable non-inflationary growth, low unemployment and favourable balance of payments. Singapore's labour market is currently near full employment and job creation remains healthy.

Body Paragraph 1

P: In a country such as Singapore which has no natural resources and therefore depends much on its people, raising the quality of her workforce helps to lower cost of production and improves productivity.

E: Labour training programmes will help train workers to work more efficiently, resulting in more output per unit of labour, effectively lowering the cost of production. As a result, the short run AS curve shifts to the right.

E: For example, workers' training and retraining programmes like SPUR, improvement in education system to ensure that relevant skills are taught in schools.

L: It is definitely very important for the Singapore government to improve our labour productivity as a small country with no natural resources, there is a need to rely on human labour so as to achieve our macro goals.

Paragraph 2

P: Raising the quality of our workforce will bring about productivity improvements via higher productive capacity.

E: With our increasingly well educated workforce and specialised training, productivity of our workforce has improved and this leads to increase in productive capacity since each worker can now contribute more output within the same work duration. The long run AS curve shifts to the right because greater output is achieved on a sustainable basis ceteris paribus. This thus promotes potential growth.

E: Knowledge-based industries such as aerospace engineering, biomedical engineering and digital media require specialised training. These industries are associated with higher productivity compared to other lower skilled industries.

L: Hence raising quality of our workforce is crucial to increase productivity for Singapore's long term growth and job creation.

Paragraph 3

P: Reducing reliance on foreign workers has forced Singapore firms to come up with measures to increase their productivity.

E: Singapore government had implemented moderation of foreign workers policy progressively during periods of slow growth to minimise the cost for firms. In addition, to help offset business cost and support reduction of foreign workers process, the Singapore government has put in place grants and subsidies to help firms embark on using innovation and technology in their production processes and improving training of workers. By reducing reliance on foreign workers, and allowing the firms to catch up in their adaptation of technology, this has given Singapore an opportunity to improve productivity of our workforce.

E: Examples of measures to reduce foreign workers include: increase in foreign worker levies, foreign worker quotas, Employment pass holders requiring minimum salaries to qualify

E: However, some debate that reducing foreign labour has not increased labour productivity thus far but instead reduce it in the short run due to the inefficiencies that result from a severe shortage of workers.

L: Reducing reliance on foreign labour may result in falling productivity in the short run but is still likely to improve productivity in the long run.

Paragraph 4 (optional)

P: Improvement in labour productivity will make Singapore more attractive to foreign investors.

E/E: With improvement in labour productivity, investors will be more willing to invest in our country with expectations of higher profitability. This is important to Singapore as we rely heavily on investment for growth. The increase in AD due to investment will lead to a much greater increase in national income through the multiplier effect, promoting actual growth in the economy. The inflow of FDI will also bring about further improvements in AS in the long run as there is more spending on capital goods. This further increases the productive capacity and promotes higher potential growth in the economy.

L: An improvement in labour productivity will result in increases in AD and AS thus helping the economy to achieve both actual and potential growth.

Conclusion:

The drive towards a high-value, productive economy supported by reduction of reliance on foreign workers and higher quality workforce should bring about long term benefits of sustainable non-inflationary growth and more job and favourable BOP in the long run.

Mark Scheme

L1	Weak understanding of the question. Several errors and inconsistencies in the explanation. A little or no reference to the Singapore economy. No usage of economic concepts (AD/AS). Answer lists and describes a few reasons why improving productivity is important to Singapore but no explanation on them.	1-4
L2	Ability to answer the question is seen. Some knowledge of how raising quality of workforce can improve our workforce productivity and thus enable us to achieve our macro goals. Explanation has some reference to AD/AS concepts. Very little reference made on reduction of reliance on foreign workers.	5-6
L3	Show good understanding of the question requirement, able to relate raising quality of workforce to improvement in productivity of our workforce and how improving labour productivity can increase both actual and potential growth. Use of AD/AS concepts and good use of examples in the Singapore context	7-10



(b) Discuss the view that the government should focus on supply side policies rather than demand management policies to achieve sustained economic growth. [15]

Question analysis

Command	Discuss 2 sided answer Demand side policies are effective however come with limitations. Supply side policies are effective however come with limitations.
Content	Macroeconomic Problems & Macroeconomic Policies Demand Side policies - Fiscal Policies & Monetary Policies Supply Side policies
Context	Singapore economy Singapore Government Policies
Approach	Explain how the various policies achieve actual and potential growth therefore help achieve sustained economic growth in an economy. Discuss the limitations of the policies in relation to effectiveness in achieving economic growth.

Introduction

Supply side policies seem to be more beneficial to small economies and demand side policies have many limitations. However, it would be inappropriate to say that demand-management policies are largely irrelevant because it is still useful to some extent especially in the short run. The Singapore government for example aims to achieve sustained non-inflationary economic growth using demand side policies and supply side policies. Due to the nature of the economy – small with limited resources, the government focus more on supply side rather than demand side policies. Demand side policies refer to policies that increase aggregate demand and supply side policies are policies to increase aggregate supply.

Thesis 1

P: Supply side policies increase a country’s ability to enjoy sustainable non-inflationary economic growth.

E: In a country like Singapore which is small and lacking in resources, it is easy for the country to achieve actual growth but with high inflation if her aggregate demand increases without increasing her aggregate supply. With supply side policies, the country can augment the size of her factors of production and increase their quality to increase the maximum amount of output. Supply side policies, allow a country to increase the quality of her products through R and D. It also increases the quality of her workforce which enable her to produce goods higher up in the value chain (e.g pharmaceutical products) or reduces the average cost of production. All these increase the country’s international competitiveness.

Greater productivity in the country also attracts FDI inflows leading to increase in AD and AS and thus actual and potential growth. Hence with the increase in aggregate supply a country can enjoy a rise in output in the long run with low inflation. (Draw AD/AS diagram to illustrate).

E: Examples of supply side policies in Singapore: The government has been actively encouraging re-training and upgrading of skills through subsidies and incentives. This is done with the aim to improve quality and productivity of labour which will promote employment without growing inflation. Examples of such policies are Skills Programme for Upgrading and Resilience (SPUR) and Continuing Education Training (CET) which subsidises skills upgrading. Through these policies, Singaporeans are able to be more competitive and better able to gain employment. These policies would help to shift the AS curve outwards leading to an increase in both potential and actual growth.

E: However, a supply side policy may have limited impact on the AS. This is because supply side policy takes time to take effect and thus increase in AS cannot be seen in the short run. Workers may be reluctant to go for training and employers may also be reluctant to let employees off for training. Financing government expenditure may have an offsetting effect on AS. Government expenditure to achieve sustained growth will put a strain on the government’s budget. In the future, tax may be increased to support the supply side policies and this may have disincentive effect on

work and investment and may result in a fall in AS. Also supply side policies may be inappropriate especially in the short run when the problems arise from demand deficiency.

L: Link back to question: Nevertheless, to achieve sustained economic growth in the long run, Supply side policies are still the most important.

Anti-Thesis 1

P: Expansionary fiscal policy which allows increases in government expenditure and decrease in taxation may also need to be used to achieve actual growth.

E: By increasing G, the government injects into the economy and by decreasing taxes, households and companies are able to increase consumption and investment. The injections into the economy work through the multiplier effect and consequently national income increases resulting in actual growth.

E: In the case of Singapore, the government would often increase government expenditure by accelerating infrastructural projects such as the building of train lines and schools.

E: Fiscal policy may not have a significant impact on a country's economic growth. Fiscal policy would be effective in a large economy with a big domestic sector and large multiplier like the USA and China. However in a small economy like Singapore it is not effective in increasing AD as it gives little boost to the NY due to a small injection multiplier and a small domestic relative to the external demand. Most of public spending is often aimed at the supply side measures to increase the country's productive capacity or to redistribute income to allow the poor to cope better with the global economic downturn. Furthermore, government spending may result in a crowding out effect. As the government borrows from banks to increase spending in the country, banks will increase interest rate leading to lower levels of investment. This would not be as effective in increasing AD as the free market is known to be better at decision making and allocation of resources than the government. Also the use of fiscal policy may result in increasing demand pull inflation.

L: This increase in AD would lead to an increase in the general price level if the economy reaches full employment. Supply side policy used in tandem with fiscal policy may still be more effective to bring about sustained growth.

Anti-Thesis 2

P: In countries which are unable to manipulate interest rates due to the open economy trilemma, exchange rate policy can be employed.

E: In a small open economy like Singapore, employing traditional monetary policy may be impractical as with the free movement of capital the Triffin dilemma occurs and monetary policies may be given up for exchange rate policy which can be used to promote economic growth. In times of recession when income and employment falls AD will also fall. Depreciation is therefore used to increase AD. Depreciation can be used to increase exports and decrease imports in a country like Singapore. With depreciation, exports will seem more competitive as it is cheaper, while imports will seem more expensive due to the weaker currency. Assuming Marshall Lerner condition holds, this will lead to increase in (X-M), increase in AD and therefore increase in national income leading to actual economic growth.

E: These may also drive up cost push inflation which is extremely undesirable given Singapore's import-reliant export industry as this would filter through to higher export prices and thus has drawbacks on (X-M) and thus AD and economic growth. In addition, focusing on stimulating Singapore export using exchange rate policy cannot reduce the vulnerability faced from income change of the world economies. When major economies like America and Europe are in recessions, Singapore's export will also fall reducing her AD and national income. An expansionary monetary policy centred on exchange rate of reducing in price of Singapore's export can reduce some fall in export fully reverse the fall in Singapore's economic growth.

These may also drive up cost push inflation which is extremely undesirable given Singapore's import-reliant export industry as this would filter through to higher export prices and thus has drawbacks on (X-M) and thus AD and economic growth. In addition, focusing on stimulating Singapore export using exchange rate policy cannot reduce the vulnerability faced from income change of the world economies. When major economies like America and Europe are in recessions, Singapore's export will also fall reducing her AD and national income. An expansionary

monetary policy centred on exchange rate of reducing in price of Singapore's export can reduce some fall in export fully reverse the fall in Singapore's economic growth. Also in the short run the BOT may worsen and economic growth may fall due to the J curve effect. At the same time for depreciation to be effective the Marshal-Lerner condition must hold.

L: Thus focusing on providing goods that are income-inelastic through supply side policy might be more apt.

Synthesis:

In conclusion, supply side policies have more to offer, given the many limitations of demand management policies. However, they would be inappropriate especially in the short run when problems arise due to demand deficiency. Though fiscal and monetary policies would not have that significant impact in small economies with its large dependence on exports, it is still important because they work quickly and their effects are seen more rapidly as compared to supply side policies. Thus it is inappropriate to say that governments should focus more on supply side policies rather than demand management policies because demand management policies are still useful to some extent especially in the short run. In Singapore, due to the nature of the economy being small and open, she has a small multiplier and faced increased vulnerability from changes in external sector. By diverting her resources to increase aggregate supply through supply side policies allow her to augment her increase in productivity and productive capacity as well as enjoy sustainable non-inflation growth in the long run.

Mark Scheme

L1	Answer that shows some superficial knowledge of the economic policies adopted by a government to achieve economic growth. Little or no evaluation of the policies. Conceptual error/s evident.	1-5
L2	Some explanation and evaluation in terms of effectiveness of at least 2 policies with the use of AD/AS framework. Evaluation may not be consistent for all policies discussed. Diagram may not be clearly explained Some examples of policies adopted by government to achieve sustained economic growth – addressing both actual and potential growth.	6-8
L3	Detailed explanation of at least 3 policies and their evaluation in terms of their effectiveness. Reference to AD/AS framework clearly made and explained. Examples adopted by a government to achieve actual and potential economic growth and thus sustained economic growth. A considered introduction or conclusion is also observed.	9-11
E1	1m – Any evaluation within the essay / any conclusion; no judgment 2m – Any conclusion; weak judgment	1-2
E2	A reasoned judgment on whether supply side policy is more effective than demand side policies in achieving sustained economic growth. 3m – Clear stand on the above issue with a weak judgment 4m – Clear stand on the above issue with judgment that is well elaborated	3-4

Paper 2: Essay 6

Discuss the view that protectionism brings harm to the free market economy. [25]

Question Interpretation

Command word	Discuss – give different perspectives Give overall evaluation - stand and justify
Content/Concepts	Free market economy – exchange of goods & services with no government intervention Benefits and costs of free trade Protectionism – definition, arguments for and against protectionism Macro aims, micro aims, SOL
Context	Give own examples of products / industries / countries (developed & developing countries)
Approach	<p><u>Thesis</u>: Explain why protectionism brings harm to the free market economy</p> <ul style="list-style-type: none"> - What is protectionism and why it hinders the gains from trade. (Use Principle of Comparative Advantage or World Tariff diagram) - Arguments against protectionism <p><u>Anti-thesis</u>: Explain why protectionism does not bring harm to the free market economy</p> <ul style="list-style-type: none"> - Arguments to justify protectionism - Protectionism negates the costs of free trade <p>Discuss the effects on the economy, linking to the macro and micro aims and SOL. Give examples. Make a stand and justify</p>

Essay Outline

Introduction

- Define free trade, protectionism
- Set context: Explain that free market economy means removal of barriers to promote free trade. Free trade helps to achieve the macro and micro aims of the government and improve SOL whereas protectionism is a barrier to free trade and hinders the achievement of these aims.

Body

Thesis: Protectionism brings harm to the free market economy

T1: Explain what is protectionism and why it hinders the gains from trade

Protectionism goes against principle of comparative advantage and limits trade possibilities:

- Explain that countries are not able to fully exploit principle of comparative advantage in allowing for specialization and trade to take place.
 - o Lower world output and lower consumption possibilities
- Higher prices and lower overall economic welfare due to import tariffs
 - o Explain how consumers have to pay higher price and lower quantity from import tariff. Illustrate with world tariff diagram.
 - o Explain overall loss in economic welfare due to domestic over-production and domestic under-consumption.
- Other effects such as lower export earnings, lower quality, lower rate of technological advancement

T2: Explain arguments against protectionism

- Complacency
- Retaliation
- Beggar-thy-neighbour effect

Anti-thesis: Protectionism does not bring harm to the free market economy

AT1: Explain arguments for protectionism

- Protect domestic workers from falling wages and unemployment
- Protect sunset industries
- Protect infant industries
- Protect foreign control of domestic industries through dumping

AT2: Explain that protectionism negates the costs of free trade

Explain the costs of free trade that protectionism can help to reduce:

- Immobility of resources and structural unemployment
- Increased vulnerability to external shocks and economic stability
- Free trade may not benefit all countries equally

Conclusion (Overall Evaluation to make a stand & justify)

- Consider time period. Protectionism is justified in the short run and give reasons. But in the long run, protectionism is harmful to the free market economy as it breeds inefficiency in the economy and slows down economic growth.

Detailed Answer

Introduction

A free market economy refers to the removal of barriers to promote free trade which is the exchange of goods and services across international borders. Protectionism refers to the partial or complete protection of domestic industries from foreign competition in domestic markets. Countries use various methods to restrict trade such as tariffs, quotas, embargoes, export subsidies. Free trade will generally enable countries to develop and grow, allowing them to be more globally competitive to achieve the macro and micro aims of the government as well as to attain higher standards of living whereas protectionism is a barrier to free trade and hinders the achievement of these aims. However free trade can also have detrimental effects, and hence countries may engage in protectionism to protect their own industries.

Thesis: Protectionism brings harm to the free market economy

T1: Explain what is protectionism and why it hinders the gains from trade

Protectionism brings harm to the free market economy as it **hinders the gains from free trade**. With protectionism, countries are not able to fully exploit the **principle of comparative advantage** in allowing for specialization and trade to take place. Hence countries are **not able to enjoy higher world output and higher consumption possibilities**. Developing countries such as India will benefit from the lower prices due to the specialisation of goods all around the world. According to the Principle of Comparative Advantage (CA), mutually beneficial trade occurs when a country exports a good it has CA in and imports the good that it does not have CA in. With greater abundance of cheaper labour in India, India has a lower opportunity cost in producing labour intensive goods. Hence specialisation and production of labour intensive goods will allow India to benefit as other countries such as US specialise and produce high-skilled capital intensive goods. This will result in higher world output of both goods produced by India and US. However, protectionism does not allow the countries to enjoy this benefit as it hinders trade and countries will not specialise according to the principle of CA, hence resulting in **lower world output**.

With trade barriers and limited quantity available to import and consume, countries will suffer from **lower consumption possibilities**. Countries would allocate their scarce resources to produce goods

that they do not have a CA in, thus limiting the benefits of specialisation and trade. Hence a country which used to consume outside its production possibility curve would not be able to enjoy the same level of consumption possibilities. Hence lower world output and lower consumption possibilities ensue due to protectionism. In the long run, there is less efficient utilisation of resources and lower standard of living.

Due to import tariffs, consumers have to pay **higher prices** and suffer from lower quantity available. This is shown in Figure 1 below.

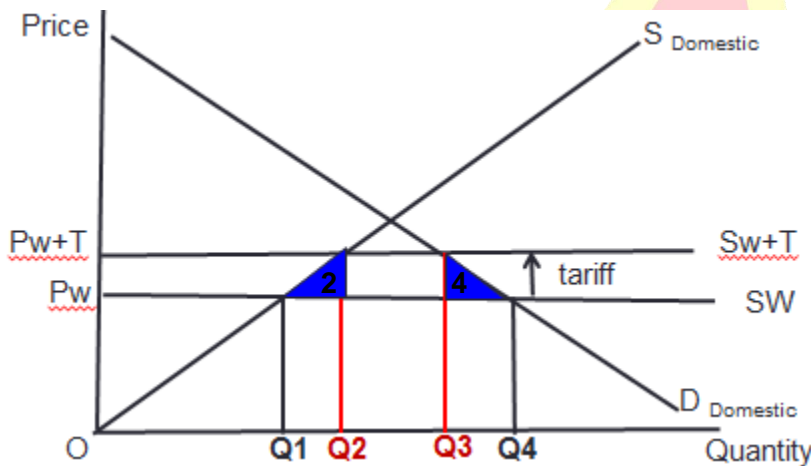


Figure 1: World Tariff Diagram

Figure 1 shows that after the imposition of the tariff, the market price rises by the full amount of the tariff from P_w to $P_w + T$ and there is a fall in consumer surplus. In addition, consumption falls from OQ_4 to OQ_3 . There is an overall loss in economic welfare shown by the shaded area in Figure 1 due to domestic over-production (area 2) and domestic under-consumption (area 4). Area 2 measures the additional opportunity cost incurred due to the increase in domestic production. Since the domestic producers are relatively more inefficient than the foreign producers, it will be cheaper to purchase from abroad than to produce domestically. Area 4 measures the surplus that is lost by consumers due to fall in overall consumption by Q_3Q_4 amount.

Protectionism also brings harm to the free economy as countries will suffer from a **fall in economies of scale (EOS)**, translating to **higher costs of production** for producers, and hence **higher prices** of goods. With protectionism, there is limited trade amongst countries. Thus firms are unable to expand to other countries which would mean that these firms end up producing less goods and services. This means they are unable to reap substantial EOS, which are benefits of trade enjoyed by firms when they increase their production levels as they expand their market reach and produce for the local and foreign markets. As a result, firms are unable to enjoy the lower production costs and their profits would be much lower than if the industry was not protected. Hence firms may pass on the higher costs in the form of higher prices to consumers.

Anti-thesis: Protectionism does not bring harm to the free market economy

AT1: Explain arguments for protectionism

However, protectionism does not always bring harm to the free market economy. It can be justified if it helps to protect its sunset industries, infant industries or to protect foreign control of domestic industries through dumping.

A country may engage in protectionism to protect its declining (sunset) industries. The industry could have lost its comparative advantage because of changes in the relative costs of production across countries. One such example is the US tyre industry where the US government has imposed import tariffs on tyre from China to protect the declining US tyre industry. As US faces

intense competition from China's tyre industry, there is a danger that the US tyre firms may be forced to shut down very quickly resulting in sudden and massive structural unemployment. As the factors of production are not perfectly mobile, workers need time to learn new skills to move into new industries. Hence protectionism would allow the industry to decline gradually and to give the workers sufficient time to be retrained to move to other industries as well as for the machines to be used for a longer period of their life span to prevent wastage of resources.

However, protectionism in this case cannot be sustained for an indefinite period of time as it goes against the principle of comparative advantage. If the industry has indeed lost its CA, it is more efficient if resources are transferred to other industries with CA. Furthermore, once protectionism is put in place, it is very hard to remove it as workers within the industry may be resistant to the change. Thus, this causes resources to be effectively locked in inefficient industries and depriving other industries such as sunrise industries of valuable economic resources.

Thesis: Protectionism brings harm to the free market economy

T2: Explain arguments against protectionism

Protectionism may bring harm to the free market economy as it results in complacency. Protectionism significantly reduces competition from foreign firms. This means that domestic firms are the main producers in the market and are sheltered from foreign competition by the government. Hence they may get complacent and not feel the need to engage in research and development to reduce costs and to improve the quality of their products. This means that firms may no longer produce at the minimum average cost as they lack the incentive to be productive efficient. This results in productive inefficiency from society's point of view as goods are not produced at the lowest possible average cost and the rate of technological advancement will also be slower. For example, before protectionism was implemented, US tyre firms compete with foreign firms in the market for tyre and will try to lower their costs to sell them at a cheaper price or differentiate their tyre to make its demand more price inelastic. As the US government imposed tariffs on imports of tyre from China, the US firms are sheltered from their major competitor and may not see the need to be productive efficient. As such, the price of US tyre is higher than it should be and this reduces the consumer surplus of US tyre consumers. Hence this brings harm to the free market economy.

Anti-thesis: Protectionism does not bring harm to the free market economy

AT2: Explain that protectionism negates the costs of free trade

However, free trade also has its problems and limitations, and protectionism can negate or reduce the costs of free trade. Free trade brings about problems of immobility of resources and structural unemployment, increased vulnerability to external shocks and economic instability, and free trade may not benefit all countries equally.

Over-reliance on trade with other countries increases the vulnerability of the economy to external shocks and may cause economic instability. If a country is dependent on its exports to boost its economic growth, it faces instability in its national income and employment if there are any fluctuations in export demand or changes in trade cycles of the importing countries. For example, if there is a recession in other countries such as the 2008/9 global recession, countries that are dependent on external demand will suffer. The fall in the demand for its exports will lead to a fall in the national income and hence an adverse effect on the economic growth of the country.

Conclusion / Overall Evaluation

Protectionism is justified in the short run during recession or to help infant industries to develop and to improve their competitiveness before they are ready to face foreign competition. Protectionism may also be used in the short run to maintain employment of workers in the key industries despite loss of CA. This is to give workers some time to move into other industries during the transition period. In the long run, protectionism is harmful to the free market economy as it breeds inefficiency in the economy and slows down economic growth. Other measures such as supply-side policies must be undertaken to develop possible areas of growth for the country that will help her to achieve sustained economic growth in the future.

Mark Scheme

Levels	Description
<p>L1 Knowledge/ Recognition {Description}</p>	<p><u>1-5 marks</u> : Answer did not address question or address in an incidental manner – failing to explain protectionism and free trade.</p> <p>Very poor content development of protectionism and free trade, such that the answer is mostly irrelevant and contains only a few valid points made incidentally in an irrelevant context. Argument is incoherent.</p>
	<p><u>6-9 marks</u> : Points merely state or describe, with little/weak explanations, or with basic conceptual errors, of: - arguments to support protectionism, - arguments against protectionism</p> <p>Inadequate content development of analysis present. No/little examples raised in context of industries or economies. Argument is incoherent.</p>
<p>L2 Consolidate {Add some detail – Application without Analysis}</p>	<p><u>10-11 marks</u> : Some parts of the essay address the question (protectionism, free trade and 2-sided discussion), shows economic analysis, but with gaps and no clear links to micro/macro aims/SOL. Content points are underdeveloped. Argument may not be fully coherent.</p> <p>Examples raised in context of industries or economies, though not thoroughly.</p>
	<p><u>12-14 marks</u> : Most parts of the essay directly addresses/engages the question (protectionism, free trade and 2-sided discussion), good economic analysis, with some links to micro/macro aims and SOL but not consistently throughout answer. Content points are more thoroughly developed. Argument is fairly coherent.</p> <p>Examples raised in context of industries and economies, though not consistently well elaborated.</p>
<p>L3 Elaborate {Extend to include analysis} ▪ <u>Analyse</u></p>	<p><u>15-17 marks</u> : Clearly answers the question, addressing why protectionism is harmful or justified for the economy, well elaborated economic analysis, links to micro and macro aims and SOL but not consistently made throughout answer. Content points are well and thoroughly developed. Arguments are fluent and coherent.</p>

<p>relevant theory to aid explanation</p>	<p>Answer shows a good knowledge of the effects of protectionism and free trade in various contexts. Coherent essay with many contextual explanations though this may not be consistently applied throughout the essay.</p>
<p>▪ <u>Apply</u> explanation in the context of the question</p>	<p><u>18-21 marks</u> : Clearly answers the question, addressing why protectionism is harmful or justified for the economy, with various perspectives and well elaborated economic analysis, and clear links to micro and macro aims and SOL consistently made throughout answer. Content points are well and thoroughly developed. Arguments are fluent and coherent.</p> <p>Examples raised in context of industries and economies, and consistently well elaborated.</p> <p>Well-argued essay with clear evidence of ability to form reasoned judgment in each scenario and well explained links to micro and macro aims and SOL, as well as overall in the conclusion of the essay.</p>

Evaluation Marks		
E1	Mainly unexplained judgement of when protectionism is good or harmful to the economy with no clear/justified conclusion to support stand.	1-2
E2	Well-reasoned/explained judgment of when protectionism is good or harmful to the economy with strong justification	3-4



Name:		Index Number:		Class:	
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DUNMAN HIGH SCHOOL
Preliminary Examination
Year 6

Economics

8819/1

(Higher 1)

25 September 2015

Section A Case Study

3 hours

Section B Essay

Additional Materials: Writing Papers

PLEASE READ THE FOLLOWING INSTRUCTIONS FIRST

Write your name and class on all the work you hand in.

Write in dark blue or black pen on both sides of the paper.

You may use a soft pencil for any diagrams, graphs or rough working.

Do not use staples, paper clips, highlighters, glue or correction fluid.

Please start on a fresh sheet of paper for a new question.

Section A

Answer **all** questions.

Section B

Answer **one** question.

At the end of the examination, fasten your work securely into three separate bundles, one for each question.

The number of marks is given in brackets [] at the end of each question or part question. Circle the question number you have attempted.

Section A		Section B	
Q1	Q2	Q3	Q4

This document consists of **8** printed pages including this cover page.

[Turn over

Section AAnswer **all** questions in this section**Question 1****Issues in the Clothing Industry****Table 1: Cotton in selected economies (million bales)**

	Production		Consumption	
	2013/14	2014/15	2013/14	2014/15
China	32.8	30.0	34.5	35.2
India	31.0	30.5	23.4	24.1
Pakistan	9.5	10.2	10.4	10.5
United States	12.9	16.1	3.5	3.6
World total	120.1	119.2	109.1	111.1

*Source: United States Department of Agriculture***Extract 1: Clothing to dye for: the textile sector must confront water risks**

Dye houses in India and China are notorious for dumping untreated wastewater into local streams and rivers. Why are the world's largest apparel companies not doing more to mitigate the effects of this timeless, yet toxic, dyeing process?

The answer in part lies in Tirupur, India. Local dye houses have long dumped wastewater into the local river, rendering groundwater undrinkable and local farmland ruined. Despite tougher regulations, a watchful local press, and the closure of companies in non-compliance, water pollution has festered. The city's 350,000 residents, not multinational textile companies, pay the price.

The global demand for cheap clothing will push dye houses to simply react to local regulations by moving operations to another city. Moral outrage will not convince many leading clothing manufacturers to change their ways; as long as companies do not pay a price for the land and water their suppliers poison, watch for the excessive use and abuse of water to dye clothing to continue.

Source: Guardian Professional, 12 August 2013

Extract 2: British Consumers spending less on food and more on clothes

British consumers have cut back on the amount of food they buy, but are purchasing more clothes in the wake of the recession. For most Britons their wardrobe is more important than their stomachs.

Business consultant Neil Saunders said: "In our experience clothing volumes are a bit depressed. But one thing we do know is people are trading up to better clothes, buying statement pieces. Though shoppers are very savvy when it comes to cutting back at the supermarket, many enjoy clothes shopping and see it as a bit of a treat."

Source: Telegraph, 21 Feb 2012

Extract 3: Protectionism in the U.S. Textile Industry

Textile and apparel protectionism has been a continuous feature of U.S. trade policy. High tariffs, "voluntary" export restraints, and import quotas have defined U.S. policy.

Although people speak of the "textile and apparel industry," as if it were one and the same, they are distinct industries. Textile production is capital-intensive, sophisticated in its applications, and concentrated in rich locales (e.g., U.S., Canada, EU, Hong Kong, Korea, Taiwan), with a few exceptions (e.g., China, India, Turkey, Pakistan). Textiles (yarns and fabrics) are the central inputs for apparel production, which is labour-intensive, involves, primarily, the cutting and sewing of fabric, and is dispersed in developing countries across the globe.

Many apparel manufacturers in the U.S. have already shifted production operations to Mexico, the Caribbean, and Central America. Without U.S. apparel production, then, one would think eliminating tariffs on imports would be unobjectionable, delivering real benefits to all who wear clothes. Instead, the United States still maintains tariffs on clothing that amount to 10 times the average U.S. tariff. Why the high duties in the absence of meaningful U.S. apparel production? Because the U.S. textile industry insists on preserving those tariffs as leverage to compel foreign apparel producers to purchase their inputs. Foreign apparel producers that use U.S. textiles are given duty-free access into U.S.

U.S. textiles are already more expensive than China's, India's and Korea's textiles that Vietnamese apparel producers might otherwise purchase. Conditioning duty-free access on the use of U.S. textiles would essentially eliminate the competition, enabling U.S. textile exporters to raise prices further. It would also limit the apparel offerings of Vietnamese producers, who – in the absence of alternative suppliers – would have less leverage to demand and expect the types and colours of fabrics, according to their production schedules, that best fit the design of the final product. Or, alternatively, the Vietnamese could just forego the duty-free access, purchase textile inputs from China, and pay the higher duty.

Rather than compete on quality and price with the world's few textile producers for the business of the world's multitude of apparel producers, the U.S. textile industry has convinced the U.S. government to do its bidding. The public shouldn't believe for a

moment the fallacies about this industry struggling to survive. Apparel producers account for only 16 percent of the textile industry's revenues, the bulk of which come from producers of home furnishings, carpeting, conveyer belts, tyres, medical devices, and aerospace parts. Even if the industry lost some apparel producers as customers on account of real competition, it has plenty of other revenue sources to cultivate. Meanwhile, single working mothers raising children might be able to stretch their budgets further on account of lower-priced clothing.

Source: Forbes, July 2013

Questions

- (a) Referring to Table 1,
- (i) explain how the world price of cotton is likely to change over the period. [1]
 - (ii) identify the country that has had the greatest impact on world prices. Justify your answer. [3]
- (b) (i) Referring to Extract 1, explain how the existence of negative externalities can lead to market failure. [4]
- (ii) As a consultant economist, what options would you present to the Indian government in response to the negative externalities associated with textile production, and what would you recommend? Justify your answer. [8]
- (c) Referring to Extract 2 and using the concept of opportunity cost, explain one effect of the recession on UK consumers. [2]
- (d) Extract 2 mentioned that 'clothing volumes are a bit depressed' but spending on clothing have risen. Comment on what this might imply for the price elasticity of demand for clothing in UK. [4]
- (e) Do you think U.S. governments should continue to protect its textile industry as described in Extract 3? [8]

[Total: 30]

Question 2

Economic Growth and Challenges

Extract 4: Singapore is counting on ASEAN for growth

Singapore is counting on Southeast Asia's economic boom to lure foreign investment as the island's clampdown on foreign labour raises wage costs. The region, known as the Association of Southeast Asian Nations (ASEAN), is forecast to grow 5.2 percent this year and 5.6 percent in 2014.

Singapore became Southeast Asia's only advanced economy by moving up the technology ladder, turning a trading port into the region's biggest banking centre and a manufacturer of electronics, petrochemicals and pharmaceuticals. As its bigger, less-developed neighbours lure companies with faster growth rates, larger populations and cheaper workers, the island is forced to find new ways to position itself to stay competitive. Singapore cannot afford to attract the same kind of land and labour-intensive industries as in the past but as a services hub, it still has many advantages.

Asia which had seven of the top 10 exporters of textiles and clothing and office and telecommunications equipment in 2011 - shipped \$5.98 trillion of goods that year, an 18 percent increase from the year before, according to the World Trade Organisation (WTO). Of that, Southeast Asia sent out \$1.24 trillion of products, compared with \$432 billion in 2000 and \$72 billion in 1980, data from the WTO show.

Source: Bloomberg, September 16, 2013

Table 2: Selected ASEAN key economic indicators

Indicators	2010	2011	2012	2013 ^{P/}
GDP per capita at current prices (US\$)	3,139	3,587	3,761	3,832
International merchandise trade (US\$ million)	2,009,116	2,388,444	2,476,427	2,511,517
Export (US\$ million)	1,051,614	1,242,199	1,254,581	1,271,128
Import (US\$ million)	957,502	1,146,245	1,221,847	1,240,388
Foreign direct investments inflow (US\$ million)	100,360	97,538	114,284	122,377

Table 3: Intra-ASEAN trade, 2014^{P/}

Country	Intra-ASEAN exports		Intra-ASEAN imports	
	Value (US\$ mil)	Share to total exports (%)	Value (US\$ mil)	Share to total imports (%)
Cambodia	2037.9	19.1	5577.6	29.4
Indonesia	39822.1	22.6	50903.1	28.6
Lao	1451.3	55.0	2045.0	74.4
Malaysia	65297.0	27.9	53779.1	25.7
Singapore	127739.2	31.2	75457.2	20.6
Vietnam	18260.5	12.3	22537.1	15.5
ASEAN	329700.4	25.5	278617.6	22.5

p/ preliminary

Source: ASEAN Website, <http://www.asean.org/>

Extract 5: Asia's challenges

Asia's rapid growth in recent decades has lifted hundreds of millions out of extreme poverty, but the region remains home to two-thirds of the world's poor, with more than 800 million Asians still living on less than \$1.25 a day and 1.7 billion surviving on less than \$2 a day. Poverty reduction remains a daunting task.

The gap between Asia's rich and poor has widened alarmingly in the past two decades. The Gini coefficient, a measure of inequality, has increased in much of the region: taking developing Asia¹ as a single unit, the Gini coefficient has increased from 39 to 46. Three groups, in particular, have benefitted most - the owners of capital, those living in cities and near coasts and the better educated graduates. Inequality of opportunity is prevalent and is a crucial factor in widening income inequality. 1.7 billion people (45 percent of the population) continue to lack access to sanitation and 680 million are still without access to electricity.

Asia has enjoyed a remarkable period of growth and poverty reduction, but the new realities of technological progress, more globally integrated markets, and greater market orientation are magnifying inequalities in physical and human capital. Asian policymakers must redouble their efforts to bring opportunities in employment, education, health and other key social services to all – thereby making growth more inclusive.

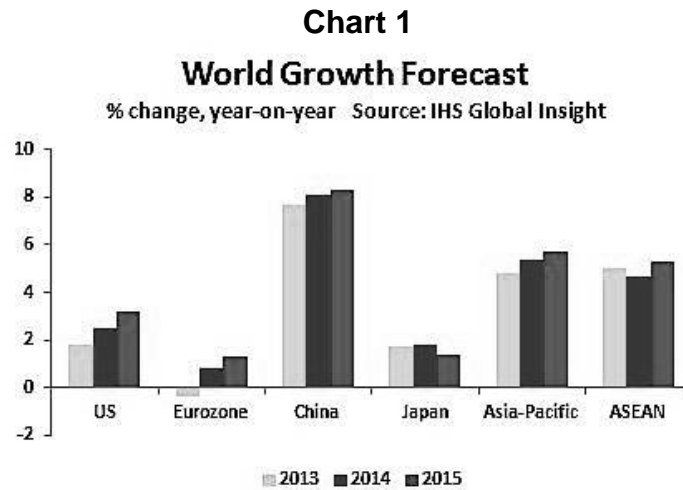
Source: OECD Forum 2013, OECD Website

Extract 6: Global recovery should carry ASEAN through economic headwinds

One of the key risks to the ASEAN outlook for 2015 is the impact of Federal Reserve tapering of its quantitative easing programme and eventual policy-driven interest rate rises in 2015 as US recovery continues. This could pose risks of further depreciation of ASEAN currencies versus the USD.

Notwithstanding this, Southeast Asia remains one of the most rapidly growing regions of the global economy. Key megatrends supporting future ASEAN growth include the rapidly growing numbers of middle income households, strong growth in intra-Asian trade and manufacturing supply chains with Northeast Asia as well as a massive expansion in infrastructure spending and urban development across ASEAN over the next two decades. These megatrends will support rising valuations for ASEAN equity and property markets over the medium to long-term, due to rising household incomes, rapid urbanisation, and strong corporate earnings growth.

¹ Developing Asia includes countries such as Afghanistan, Bangladesh, Bhutan, Brunei Darussalam, Cambodia, China, Fiji, India, Indonesia, Kiribati, Laos, Malaysia, Maldives, Myanmar, Nepal, Pakistan, Papua New Guinea, Philippines, Samoa, Sri Lanka, Thailand, Timor Leste (East Timor), Tonga, Vanuatu and Vietnam. It excludes the Middle East (Iran, Turkey and the Arab countries) and the Advanced Economies in Asia, which are classified as Japan, Singapore, Hong Kong, South Korea and Taiwan.



Many ASEAN countries will also remain attractive destinations for foreign mergers and acquisitions inflows, due to their fast-growing domestic consumer markets and their competitiveness as low cost manufacturing hubs. This has already been reflected in surging Japanese mergers and acquisitions inflows to ASEAN over the last three years, with Chinese mergers and acquisitions flows also expected to grow strongly as rapidly rising wages in coastal China make many ASEAN countries more competitive locations for low cost manufacturing.

Source: www.forbes.com, Jan 19, 2014

Questions

- (a) (i) Explain what is meant by ‘GDP per capita at current prices (US\$)’. [2]
- (ii) Explain whether the data in Table 2 is sufficient to provide evidence of a real economic growth in ASEAN in 2012. [4]
- (iii) Discuss whether the economic growth in ASEAN will necessarily bring about improvement in standard of living of its people. [8]
- (b) (i) With reference to Table 3, which member will gain most from intra-ASEAN trade? Explain your answer. [2]
- (ii) With reference to Extract 4, explain the basis for the pattern of trade between Singapore and the other ASEAN members. [3]
- (c) (i) With reference to Extract 6, explain how ‘the policy-driven interest rate rises in 2015 could pose risks of further depreciation of ASEAN currencies versus the USD’. [3]
- (ii) Discuss the extent that ASEAN’s economic outlook is determined by external factors. [8]

[Total: 30]

Section B

Answer **one** question from this section

3. Crude oil prices have increased sharply due to booming Asian economies, increasing difficulties in extraction, and lack of viable alternative fuels, causing rising inflation in oil-importing countries.
- a) Explain why there is a sharp increase in crude oil prices. [10]
- b) Discuss the policy options an oil-importing country can adopt in view of the rising inflation. [15]
4. Malaysia and Singapore have been each other's main trading partners for many years. Recently, the Malaysian ringgit has slumped to a new historic low against the Singapore dollar.
- a) Explain why exchange rates rather than interest rates are the preferred choice as the instrument of monetary policy in Singapore. [10]
- b) Discuss the likely effects of a depreciation of the Malaysian ringgit on the Singapore economy. [15]

Suggested Answer

Case Study Q1

Referring to Table 1,

ai) explain how the world price of cotton is likely to change over the period. [1]

Answer: World production of cotton exceeds world consumption. The surplus thus led to a decrease in the world price of cotton.

a ii) identify the country that has had the greatest impact on world prices. Justify your answer. [3]

Answer: China has the greatest impact on world prices. China is the largest producer & consumer of cotton. When its production fell the most, it would have caused world supply of cotton to be significantly lowered. In addition to that, consumption of cotton in China also increased the most. Hence it impacted the world price the most.

bi) Referring to Extract 1, explain how the existence of a negative externalities can lead to market failure. [4]

Answer:

- The production of textile creates water pollution that generates negative externalities which are third party effects arising from production and consumption of goods and services for which no appropriate compensation is paid. [1m]
- When left to market forces, an overproduction and overconsumption of textiles [1m] will occur where “dye houses were dumping untreated waste water into the local river, rendering groundwater undrinkable and local farmland ruined” which cause their residents to incur these external costs. (Application from case) [1m]
- As a result deadweight loss occurs causing a loss of welfare. [1m]

[Note: Diagram may be used to help your explanation]

bii) As a consultant economist, what options would you present to the Indian government in response to the negative externalities associated with textile production, and what would you recommend? Justify your answer. [8]

Answer:

Policy 1 (market based solutions): may consider using a tax so that firms internalise the negative externalities; revenue can be used for environmental clean-up; however, government may not have sufficient information on amount to tax or promote innovation in firms through a subsidy so that they create more environmentally friendly production methods, reducing negative externalities; however, it is a strain on government budget.

Policy 2 (command and control solutions): impose regulations to limit the level of pollution emitted by each firm; prevent firms from uprooting to move operations to avoid regulations in their respective countries; however, requires strong monitoring ability.

Policy 3 (public education, campaigns): to educate firms and consumers on the environmental damage, encourage consumers to support firms that use

environmentally friendly production methods; however, requires time to change mindsets.

Possible evaluation/conclusion to consider:

Recommend a combination of methods – impose tax/ subsidies/ regulations to achieve immediate results, education as a long-term, sustainable solution. The method in which the government should intervene in this market depends on

- o The ability of firms to create solutions through innovation
- o The amount of information / resources available to the government
- o Various local governments should consider working together (eg, to prevent firms from uprooting to move operations to avoid regulations in their respective countries).

Mark Scheme:

- L1 (1 - 2 m) – stating policies without economic reasoning
- L2 (3 – 4 m) – explain policies with economic reasoning but explanation may be vague or not balanced
- L3 (5 – 6 m) – analyse policies with good economic reasoning and a balanced approach
- E1(1-2m) – Make a sound judgement based on economic reasoning

(c) Referring to Extract 2 and using the concept of opportunity cost, explain one effect of the recession on UK consumers. [2]

Recession → declining household income, falling purchasing power → force households to choose how they would spend their income → if they decide to spend on clothes, the opportunity cost would be to cut back on their spending on food (next best alternative forgone).

(d) Extract 2 mentioned that ‘clothing volumes are a bit depressed’ but spending on clothing have risen. Comment on what this might imply for the price elasticity of demand for clothing in UK. [4]

- Assuming that clothing volumes are depressed due to increase in prices, demand for clothing is price inelastic (i.e $PED < 1$). Rise in price leads to a less than proportionate fall in quantity demanded. Increase in total spending due to increase in price will be more than fall in total spending due fall in clothing volumes -> net increase in spending.
- However, ceteris paribus assumption may not hold in reality, where PED may be > 1 . There could be other factors (eg. Those in Extract 3) → increase in spending as people are trading up to better clothes, buying statement pieces. Many enjoy clothes shopping and see it as a bit of a treat."

e) Do you think U.S. governments should continue to protect its textile industry as described in Extract 3? [8]

Thesis: Government should continue protectionist measures

- Reduce loss of firms' sales revenue, protect jobs → boost economic growth, reduce structural unemployment (AD-AS framework)
- Reduce loss of government revenue - improve government budget balance, use revenue/ buy time for shift into other industries with potential comparative advantage.

Anti-thesis: Government should not continue protectionist measures

- Inefficiency of the U.S. textile exporters: protectionist measures eliminate competition and raise price further → loss of export competitiveness → Vietnamese forgo the duty free access and purchase from China instead; hurt consumers in terms of reduction in choices and variety and higher prices.
- Apparel producers account for only 16 percent of the textile industry's revenues → wastage of resources → incurred high opportunity cost → could have focus on other areas for revenue

Overall:

- While it may be useful for US government to protect its textile industry, this should only be a short-term measure to retain jobs and improve government budget position, not continued for extended period of time due to high opportunity costs.
- Need to work closely with industry to move up value chain or totally outsource to low-cost competitors, focusing on developing other industries and upskilling workers for growth.

Mark Scheme

- L1 (1 - 2 m) – statements without economic reasoning.
- L2 (3 – 4 m) – Explanation with economic reasoning but vague or not balanced.
- L3 (5 – 6 m) – Discuss pros and cons of protecting US textile industry with good economic reasoning, sufficient scope and a balanced approach.
- E1(1 - 2m) – Make a sound judgement based on economic reasoning

Suggested Answer

Case Study Q2

ai.	Explain what is meant by 'GDP per capita at current prices (US\$)'	[2]																														
<p>Assessment Objective: Definition / Knowledge</p> <p>GDP per capita at current US\$</p> <ul style="list-style-type: none"> • GDP means Gross domestic product which is the sum of the value of all final goods and services produced in the country during the year. • GDP per capita is gross domestic product divided by the population size. • Data are in current U.S. dollars and has not been adjusted for inflation <p>Mark Scheme</p> <ul style="list-style-type: none"> • Need to explain all three concepts of 'Gross Domestic Product', 'Per Capita' and 'Current Prices' to get 2 marks'.] 																																
aii.	Explain whether the data in Table 3 is sufficient to provide evidence of a real economic growth in ASEAN from 2011 to 2012.	[4]																														
<p>Assessment Objective: Data Interpretation</p> <p>Table 3: Selected ASEAN Key Economic Indicators</p> <table border="1"> <thead> <tr> <th>Indicators</th> <th>2010</th> <th>2011</th> <th>2012</th> <th>2013^{pr}</th> </tr> </thead> <tbody> <tr> <td>GDP per capita at current prices (US\$)</td> <td>3,139</td> <td>3,587</td> <td>3,761</td> <td>3,832</td> </tr> <tr> <td>International merchandise trade (US\$ million)</td> <td>2,009,116</td> <td>2,388,444</td> <td>2,476,427</td> <td>2,511,517</td> </tr> <tr> <td>Export (US\$ million)</td> <td>1,051,614</td> <td>1,242,199</td> <td>1,254,581</td> <td>1,271,128</td> </tr> <tr> <td>Import (US\$ million)</td> <td>957,502</td> <td>1,146,245</td> <td>1,221,847</td> <td>1,240,388</td> </tr> <tr> <td>Foreign direct investments inflow (US\$ million)</td> <td>100,360</td> <td>97,538</td> <td>114,284</td> <td>122,377</td> </tr> </tbody> </table> <p>Thesis: To explain how table 3 provide evidence of a real economic growth in ASEAN from 2011-12</p> <p>Antithesis: To explain how Table 3 is lacking in evidence of a real economic growth in ASEAN from 2011-12</p> <ul style="list-style-type: none"> • Table 3 shows that FDI (in US\$) has increased from 2011 and 2012 and BOT (in US\$) continued to be surplus in 2012, both contributing to nominal economic growth (at current prices). However it is uncertain if real economic growth has increased since the inflation rate is not given. • Table 3 also shows that GDP per capita at current price (US\$) has increased from 2011 to 2012. However both the population size and the inflation rate are not given. Hence it is not certain whether real GDP has increased. • Although the population size should only increase marginally within a year, the inflation rate may nevertheless be higher than the nominal economic growth rate. Hence the data in Table 3 is insufficient to conclude that there is real economic growth in ASEAN from 2011 – 2012. 			Indicators	2010	2011	2012	2013 ^{pr}	GDP per capita at current prices (US\$)	3,139	3,587	3,761	3,832	International merchandise trade (US\$ million)	2,009,116	2,388,444	2,476,427	2,511,517	Export (US\$ million)	1,051,614	1,242,199	1,254,581	1,271,128	Import (US\$ million)	957,502	1,146,245	1,221,847	1,240,388	Foreign direct investments inflow (US\$ million)	100,360	97,538	114,284	122,377
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	<p>Mark Scheme</p> <ul style="list-style-type: none"> • Capped at 2 marks if response only focused on GDP figures, ignoring data on FDI and BOT • Capped at 2 marks if response is imbalanced and only focused on thesis or anti-thesis 	
a iii	Discuss whether the economic growth in ASEAN will necessarily bring about improvement in standard of living of its people.	[8]
	<p>Extract 6: Asia's Challenges</p> <p>Asia's rapid growth in recent decades has lifted hundreds of millions out of extreme poverty, but the region remains home to two-thirds of the world's poor, with more than 800 million Asians still living on less than \$1.25 a day and 1.7 billion surviving on less than \$2 a day. Poverty reduction remains a daunting task.</p> <p>The gap between Asia's rich and poor has widened alarmingly in the past two decades. The Gini coefficient, a measure of inequality, has increased in much of the region: taking developing Asia² as a single unit, the Gini coefficient has increased from 39 to 46. Three groups, in particular, have benefited most - the owners of capital, those living in cities and near coasts and the better educated graduates. Inequality of opportunity is prevalent and is a crucial factor in widening income inequality. 1.7 billion people (45% of the population) continue to lack access to sanitation and 680 million are still without access to electricity.</p> <p>Asia has enjoyed a remarkable period of growth and poverty reduction, but the new realities of technological progress, more globally integrated markets, and greater market orientation are magnifying inequalities in physical and human capital. Asian policymakers must redouble their efforts to bring opportunities in employment, education, health and other key social services to all—thereby making growth more inclusive.</p> <p>Thesis: Economic growth will increase the material standard of living of an average resident in ASEAN.</p> <ul style="list-style-type: none"> • Economic growth -> increase in real GDP • Standard of living can be categorised as material and non-material. Improvement in SOL -> improvement in both material and non-material SOL. • Note that GDP per capita is a more accurate indicator of SOL. Since Table 3 shows that GDP per capita for ASEAN has increased, the average SOL should increase. • Indeed, from Extract 6, it was stated that 'Asia's rapid growth in recent decades has lifted hundreds of millions out of extreme poverty'. Based on AD/AS analysis, increase in NY -> increase in purchasing power -> increase in material standard of living <p>Anti-thesis 1: Economic growth may not lead to increase in material standard of living all the residents in ASEAN.</p> <ul style="list-style-type: none"> • Economic growth may not be inclusive since there is greater income inequality. • It was stated in extract 6 that there were unequal opportunities - the owners of capital, those living in cities and near coasts and the better educated graduates benefit the most and 'the region remains home to two-thirds of the world's poor, with more than 800 million Asians still living on less than \$1.25 a day and 1.7 billion surviving 	

² Developing Asia includes countries such as Afghanistan, Bangladesh, Bhutan, Brunei Darussalam, Cambodia, China, Fiji, India, Indonesia, Kiribati, Laos, Malaysia, Maldives, Myanmar, Nepal, Pakistan, Papua New Guinea, Philippines, Samoa, Sri Lanka, Thailand, Timor Leste (East Timor), Tonga, Vanuatu and Vietnam. It excludes the Middle East (Iran, Turkey and the Arab countries) and the Advanced Economies in Asia, which are classified as Japan, Singapore, Hong Kong, South Korea and Taiwan.

	<p>on less than \$2 a day.'</p> <ul style="list-style-type: none"> • Gini Coefficient, a measure of income inequality has also increased • If the NY of the uneducated workers living in rural areas did not increase -> their material standard of living of may not have improved. <p>Anti-thesis 2: The non-material standard of living of the uneducated workers living in rural areas may not have improved as well.</p> <ul style="list-style-type: none"> • Quoting Extract 3 - 1.7 billion people (45% of the population) continue to lack access to sanitation and 680 million are still without access to electricity. <p>Judgement:</p> <ul style="list-style-type: none"> • Income inequality is a relative concept. Income inequality will increase as long as the increase in income benefits the higher income more. Standard of living is absolute concept. As long as real increase in NY -> increase in purchasing power -> increase in material SOL, despite the increase in income inequality. Increase in non-material SOL can be increase through govt intervention. • Extract 6 seems to suggest an increase in Asian policymakers efforts to bring opportunities in employment, education, health and other key social services to all. If the policies implemented are effective, both the material and non-material aspect of SOL in ASEAN will certainly improve overtime. <p><u>Mark Scheme</u></p> <ul style="list-style-type: none"> • L1 (1 - 2 m) – statements without economic reasoning. Did not focus on reducing income inequality. • L2 (3 – 4 m) – with economic reasoning but explanation on impact of economic on SOL may be vague or not balanced, focusing either on material or non-material aspect, or on positive and negative impact. • L3 (5 – 6 m) – with good economic reasoning, sufficient scope and a balanced approach. Focus on both the material and non-material aspect, and on positive and negative impact. • E1(1 - 2m) – Make a sound judgement based on economic reasoning 	
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bi.	With reference to Table 2, which member will gain most from Intra-ASEAN trade? Explain your answer.	[2]																																																																
<p style="text-align: center;">Table 2: Intra- ASEAN trade, 2014^{p/}</p> <table border="1"> <thead> <tr> <th rowspan="2">Country</th> <th colspan="2">Intra-ASEAN exports</th> <th colspan="2">Intra-ASEAN imports</th> </tr> <tr> <th>Value (US\$ mil)</th> <th>Share to total exports (%)</th> <th>Value (US\$ mil)</th> <th>Share to total imports (%)</th> </tr> </thead> <tbody> <tr> <td>Brunei</td> <td>2093.0</td> <td>19.8</td> <td>1767.6</td> <td>49.1</td> </tr> <tr> <td>Cambodia</td> <td>2037.9</td> <td>19.1</td> <td>5577.6</td> <td>29.4</td> </tr> <tr> <td>Indonesia</td> <td>39822.1</td> <td>22.6</td> <td>50903.1</td> <td>28.6</td> </tr> <tr> <td>Lao</td> <td>1451.3</td> <td>55.0</td> <td>2045.0</td> <td>74.4</td> </tr> <tr> <td>Malaysia</td> <td>65297.0</td> <td>27.9</td> <td>53779.1</td> <td>25.7</td> </tr> <tr> <td>Myanmar</td> <td>4362.3</td> <td>39.5</td> <td>7092.6</td> <td>43.7</td> </tr> <tr> <td>Philippines</td> <td>9211.2</td> <td>14.9</td> <td>16158.8</td> <td>23.8</td> </tr> <tr> <td>Singapore</td> <td>127739.2</td> <td>31.2</td> <td>75457.2</td> <td>20.6</td> </tr> <tr> <td>Thailand</td> <td>59425.8</td> <td>26.1</td> <td>43299.5</td> <td>19.0</td> </tr> <tr> <td>Vietnam</td> <td>18260.5</td> <td>12.3</td> <td>22537.1</td> <td>15.5</td> </tr> <tr> <td>ASEAN</td> <td>329700.4</td> <td>25.5</td> <td>278617.6</td> <td>22.5</td> </tr> </tbody> </table> <p>p/ preliminary Source: ASEAN Website, http://www.asean.org/</p> <p>Lao [1m] Because intra-ASEAN exports and imports form the greatest % share of its total exports and imports. From table 2, 55% of its export revenue is gained from ASEAN and 76% of its import expenditure is paid to ASEAN. Given that it's most dependent on ASEAN for both imports and exports, it has gained most from intra-ASEAN trade. [1 m]</p>			Country	Intra-ASEAN exports		Intra-ASEAN imports		Value (US\$ mil)	Share to total exports (%)	Value (US\$ mil)	Share to total imports (%)	Brunei	2093.0	19.8	1767.6	49.1	Cambodia	2037.9	19.1	5577.6	29.4	Indonesia	39822.1	22.6	50903.1	28.6	Lao	1451.3	55.0	2045.0	74.4	Malaysia	65297.0	27.9	53779.1	25.7	Myanmar	4362.3	39.5	7092.6	43.7	Philippines	9211.2	14.9	16158.8	23.8	Singapore	127739.2	31.2	75457.2	20.6	Thailand	59425.8	26.1	43299.5	19.0	Vietnam	18260.5	12.3	22537.1	15.5	ASEAN	329700.4	25.5	278617.6	22.5
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bii.	With reference to Extract 5, explain the basis for the pattern of trade between Singapore and the other ASEAN members.	[3]																																																																
<p>Extract 5 Singapore became Southeast Asia's only advanced economy by moving up the technology ladder, turning a trading port into the region's biggest banking centre and a manufacturer of electronics, petrochemicals and pharmaceuticals. As its bigger, less-developed neighbours lure companies with faster growth rates, larger populations and cheaper workers, the island is forced to find new ways to position itself to stay competitive. Singapore cannot afford to attract the same kind of land and labour-intensive industries as in the past but as a services hub, it still has many advantages.</p> <p>Asia which had seven of the top 10 exporters of textiles and clothing and office and telecommunications equipment in 2011 -- shipped \$5.98 trillion of goods that year, an 18 percent increase from the year before, according to the World Trade Organization. Of that, Southeast Asia sent out \$1.24 trillion of products, compared with \$432 billion in 2000 and \$72 billion in 1980, data from the WTO show.</p> <p>The pattern of trade between Singapore and the other ASEAN countries can be explained using the theory of CA which is based on the fact that different countries have different factor endowments.</p> <ul style="list-style-type: none"> • Singapore is the only advanced economy in SEA with developed technology and economic infrastructure but faces scarcity in land and labour while SEA's technology and service sectors are not yet developed but has a large population size. <p>Differences in factor endowment lead to differences in relative prices of factors between countries and these differences in turn affect relative prices of goods and services.</p> <ul style="list-style-type: none"> • Prices of capital equipment and technology will hence be cheaper in Singapore relative to SEA while prices of labour will be cheaper in SEA relative to Singapore. <p>Each therefore specialises in producing goods that require the factors for which they have abundant supply and can hence likely to be able to produce at lower opportunity cost while trading to obtain goods and services that they do not produce or produce at higher opportunity cost.</p> <ul style="list-style-type: none"> • Hence Singapore specialises and exports services and high valued 																																																																		

	<p>goods, becoming the region's biggest banking centre and manufacturer of electronics, petrochemicals and pharmaceuticals.</p> <ul style="list-style-type: none"> SEA on the other hand specialises and exports labour-intensive goods. In fact, Asia exports seven of the top 10 exporters of textiles and clothing and office and telecommunications equipment in 2011. <p><u>Mark Scheme</u></p> <ul style="list-style-type: none"> Max 2 m if the answer is generic and not applied to given context based on Extract 5. For 3 m, candidate needs to explain how differences in factor endowment between Singapore and SEA -> differences on opportunity costs of producing the same good -> basis for specialisation and hence trade. 	
ci.	With reference to Extract 4, explain how 'the policy-driven interest rate rises in 2015 could pose risks of further depreciation of ASEAN currencies versus the USD'.	[3]
	<ul style="list-style-type: none"> Increase in US interest rate, ceteris paribus-> increase in rate of return of investing in US financial assets relative to other economies' assets, including ASEAN. Assuming that investors aim to max their net return from investment (profits), we will see a rise in DD for US assets and a fall in DD for ASEAN assets (1m for impact if increase in US i/r on US and ASEAN assets) Fall in DD for ASEAN assets <ul style="list-style-type: none"> → fall in DD for ASEAN currencies as less hot money flows into ASEAN → a rise in SS of ASEAN currencies as more hot money flows out of ASEAN. (1m to explain impact on DD and SS of ASEAN currencies) Assuming that the exchange rates in ASEAN are determined by market forces of DD and SS, rise in SS and fall in DD -> excess SS of currencies at the current rate -> depreciation of ASEAN currencies (1 m for exchange rate adjustment) 	
cii.	Discuss the extent that ASEAN's economic outlook is determined by external factors.	[8]
	<p>Thesis</p> <p>From Extract 7, 'One of the key risks to the ASEAN outlook for 2015 is the impact of Federal Reserve tapering of its quantitative-easing program and eventual policy-driven interest rate rises in 2015 as US recovery continues. This could pose risks of further depreciation of ASEAN currencies versus the USD.'</p> <p>External factor – ASEAN's economic outlook depends on US MP. If US r/i increases -> net capital outflow from ASEAN -> depreciation of ASEAN currencies -> fall in confidence -> fall in I and C -> fall in AD and slower increase in AS -> fall in actual and potential EG. How important US r/i is as a factor, is dependent on how dependent ASEAN is on US for FDI. Note that ASEAN is dependent on external trade too [See Table 3]. Depreciation of ASEAN currencies could improve its C/A. Hence be it</p>	

external trade or FDI or hot money flows, ASEAN's economic outlook is dependent on external factors

From Extract 7, Many ASEAN countries will also remain attractive destinations for foreign mergers and acquisitions inflows, due to their fast-growing domestic consumer markets and their competitiveness as low cost manufacturing hubs. This has already been reflected in surging Japanese mergers and acquisitions inflows to ASEAN over the last three years, with Chinese mergers and acquisitions flows also expected to grow strongly as rapidly rising wages in coastal China make many ASEAN countries more competitive locations for low cost manufacturing.

External factor – Economic outlook depends particularly on FDI from China and Japan into ASEAN to tap on its available resources. Chart 1 shows high potential growth of China. Hence reinforcing that external economic conditions are indeed very important in determining ASEAN economic outlook.

Anti-thesis

From Extract 7, it was also stated that Southeast Asia remains one of the most rapidly growing regions of the global economy and the rapidly growing numbers of middle income households -> increase in purchasing power -> **increase in Cd**; strong growth in intra-Asian trade and manufacturing supply chains -> **increase in I and X -> AD**; expansion in infrastructure spending and urban development across ASEAN -> **Increase in AS**. These megatrends will support rising valuations for ASEAN equity and property markets over the medium to long-term -> Increase in wealth in ASEAN -> increase in Cd.

Internal factor – Rapid economic growth in ASEAN for the past decade -> increase in HHY + Profits -> increase in Cd + I -> -> ASEAN's economic outlook is dependent on internal factors. How important increase in wealth is dependent on domestic consumption and investment as a % of AD. Extract 6 stated that 'two-thirds of the world's poor, with more than 800 million Asians still living on less than \$1.25 a day and 1.7 billion surviving on less than \$2 a day. Poverty reduction remains a daunting task'. Given the low per capita GDP (table 3) and the high % of export outside ASEAN, internal factors are relatively less important]

Judgement on the extent that ASEAN's economic outlook is dependent on external factors:

Given its low GDP per capita and high income disparity ASEAN is still in its infant stage of development, it is still very much dependent on the developed economies for external trade and foreign direct investors. Hence currently its economic outlook still hinges on external factors although the level of dependence may fall overtime.

Approach

- Explain what it meant by 'economic outlook'
- Explain how the external factors determine ASEAN's economic outlook
- Explain the internal factors determines ASEAN's economic outlook as well
- Make a judgement on the extent that external factors determines ASEAN's economic outlook based on a set of criterial (characteristics of ASEAN, prevailing external economic environment etc)

Mark Scheme:

- L1 (1 - 2 m) – statements with economic reasoning
- L2 (3 – 4 m) – with economic reasoning but explanation may be

	<p>vague or not balanced, focusing either on internal or external factors only</p> <ul style="list-style-type: none">• L3 (5 – 6 m) – with good economic reasoning and a balanced approach, discussing the importance of external factors and yet highlighting the relevance of internal factors• E1(1-2m) – Make a sound judgement based on economic reasoning	
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Suggested Answer

Essay Q3

Crude oil prices have increased sharply due to booming Asian economies, increasing difficulties in extraction, and lack of viable alternative fuels, causing rising inflation in oil-importing countries.

- a) Explain why there is a sharp increase in crude oil prices. [10]
- b) Discuss the policy options an oil-importing country can adopt in view of the rising inflation. [15]

Suggested Outline

- a) Explain why there is a sharp increase in crude oil prices. [10]

'Crude oil prices have increased sharply due to booming Asian economies, increasing difficulties in extraction, and lack of viable alternative fuels'

Booming Asian economies

- In booming Asian economies, Asians' income will rise. Their ability to buy goods increases and they will increase their demand for most goods, assuming these goods are normal goods where demand rises as people's income rise.
- Increase in the derived demand for crude oil as an essential factor input in production of many goods (eg, operate machinery, transport). Rightward shift of market demand curve for crude oil - increase in quantity demanded at every price level, ceteris paribus.

Lack of viable alternative fuels

- Price inelastic demand for crude oil due to a lack of viable alternative fuels. There are no close substitutes for crude oil. Consumers of crude oil (eg, producers of goods) cannot readily switch to other products that satisfy the same need (eg, operate machinery, transport). When the price of crude oil increases, consumers of crude oil are less likely to switch away to alternative fuels, especially in the short run, resulting in a less than proportionate fall in quantity demanded for crude oil, ceteris paribus.

Increasing difficulties in extraction

- Fall in supply of crude oil due to increasing difficulties in extraction. The cost of production for additional units of crude oil will rise, i.e., marginal cost of production rises (eg, more expensive machinery required for extraction of crude oil). The increase in input prices reduces the profitability of crude oil extraction firms, causing them to reduce production. Holding the price of crude oil unchanged, quantity supplied falls, shifting the supply curve to the left, ceteris paribus.
- Price inelastic supply for crude oil, since crude oil extraction firms are less able to respond to price increase by increasing quantity supplied quickly, especially in the short run, due to as increasing difficulties in extraction, ceteris paribus. They will be hampered in expanding their production with the existing extraction equipment/technology available to them.

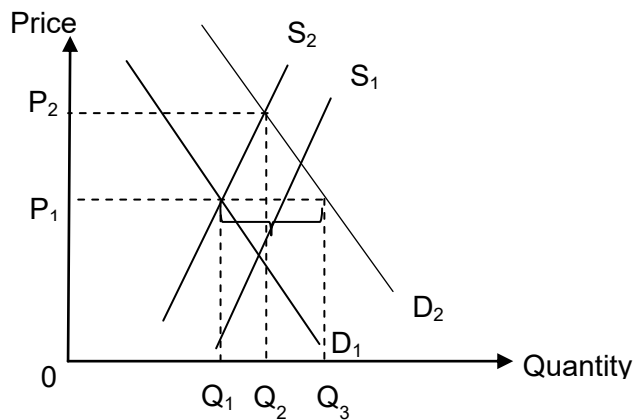


Fig 1: Market for crude oil

Combined effect

- Figure 1 shows the simultaneous shifts of the demand and supply curves (D_1 to D_2 and S_1 to S_2), creating a shortage of Q_1Q_3 at the initial price of P_1 . Consumers with higher purchasing power are more able and willing and pay a higher price to obtain crude oil. Extraction firms will then respond to such a signal sent by consumers and adjust the quantity of crude oil supplied upwards. This process will continue until the price eventually reaches P_2 . At this price, quantity demanded is equal to quantity supplied. Together with price inelastic demand and supply, a sharp rise in crude oil prices is observed.

Level	Descriptors
L3 [7 – 10]	Well-reasoned explanation. Analysis includes simultaneous shift of demand and supply curves, with application of elasticity concepts, linking to sharp increase in crude oil prices.
L2 [5 – 6]	Incomplete analysis. Underdeveloped explanation of simultaneous shift of demand and supply curves, limited or no application of elasticity concepts.
L1 [1 – 4]	Smattering of points. Unable to explain effects of events in preamble on sharp increase in crude oil prices. Single shifts of demand and supply curves, without combined effect.

b) Discuss the policy options an oil-importing country can adopt in view of the rising inflation. [15]

- **Rising inflation** – rising increase in the general level of prices in an economy that is sustained over a period of time.
- **Oil-importing countries**
 - United States is one of the largest importing countries. In recent years, it has increased its production of shale gas as an own alternative to crude oil.
 - Singapore lacks natural resources and is a major importer of crude oil, not only for domestic use, but more for refinement and re-exporting.
- Oil-importing countries face **cost-push inflation** caused by continuous rises in unit costs of production due to increase in crude oil prices as an essential import (upward shifts in AS). When firms experience an increase in unit cost of production independent of AD factors, the same output will be supplied by firms only at higher prices. Firms respond to the higher unit cost by partly decreasing output and partly increasing price of final goods and services to protect their profit levels. This adjustment will lead to fall in real national income and higher GPL. As firms cut back production, demand for factors of production also fall. Ceteris paribus, unemployment increase.
- Countries which depend heavily on oil imports will face **imported inflation**, especially if they **lack productivity growth** to offset the increase in crude oil prices. An increase in the price of oil will cause oil-importing countries to experience higher unit cost of production for most goods and services. This is because oil is an essential factor of production in many production processes, used either directly or indirectly.
- Macroeconomic effects:
 - Internal: LR economic growth & future SOL
 - Uncertainty in expected rate of return on investment, increased risk, erosion of business confidence → reduce investment → fall in AD and national income, rise in unemployment
 - Discourages savings as households' ability to purchase goods and services erode over time → reducing funds available for firms to borrow for investment
 - External: Increase in relative inflation undermines economic competitiveness → worsening of BOP position and ER depreciation
 - Worsen current account – less price competitive exports if a country's inflation rises relative to other countries (especially trading partners). The price of exports will be higher relative to its trading partners' goods and services. This increase in price of exports will lead to a more than proportionate fall in quantity demanded of exports if $PED_{\text{exports}} > 1$, leading to a fall in export revenue. The prices of imports will fall relative to the prices of domestically produced goods which were subjected to rising inflation. Demand for imports will increase as domestic consumers substitute imports for domestically produced goods. Import expenditure will increase. The greater the cross elasticity of demand between domestically produced goods and imports, the larger will be the increase in import expenditure.

- Worsen capital account – lower foreign direct investment due to rapidly increases in unit cost of production → net fall in long-term capital inflow. Capital flight → people anticipate a fall in exchange rates and prefer to put their money in countries where the monetary situation is more stable → fall in short-term capital inflow.
- Exchange rate depreciation – Fall in demand for and increase in supply of local currency. Governments may draw down on foreign reserves to support exchange rate

Policy options

- **Exchange rate policy** useful for country highly reliant on imported crude oil (eg, Singapore) to combat cost-push inflation – appreciation of domestic currency will lower price of imports in domestic currency terms, ceteris paribus, helping to offset the increase in price of imported crude oil. Unit cost of production falls when imported inputs are used in production, raising export competitiveness (downward shift of AS), raises consumer and investor confidence.
- Possible tradeoff in other macroeconomic goals, eg, erodes export competitiveness which in turn has a contractionary effect on the AD and will cause a worsening of the current account balance. However, the tradeoff is less serious for countries that are reliant on imports – revaluation brings down unit cost of production, allowing firms to reduce the prices of goods and services, especially if the countries' exports have high import content, this helps to partially offset the initial loss of competitiveness.
- For countries without BOP surpluses that create a natural tendency for the exchange rate to appreciate, the central bank would find it necessary to use reserves to buy up its currency in the foreign exchange market to keep the official exchange rate above its market exchange rate. However, reserves are finite and, in the absence of any capital controls, it would not be possible for the central bank to support an over-valued currency indefinitely.
- For a country enjoying BOP surpluses, the excess demand for the country's currency in the foreign exchange market puts an upward pressure on its exchange rate. In this case the central bank does not have to do anything to bring about the appreciation.

Demand management policies generally not effective to combat rising inflation, not directed at rising costs. Detrimental for countries dependent on domestic C & I for growth.

- Contractionary fiscal policy – government reduces G and increases T to reduce AD
- Contractionary monetary policy – central bank increase i/r to reduce AD (conventional), targeting C & I
- **Supply-side policies**, particularly cost-cutting measures or measures to raise productivity, are useful to combat cost-push inflation by holding down unit cost of production down even as factor prices increase.
- These policies aim to enhance long-run growth potential by increasing factor quantity and/or quality. However, they involve large amounts of government expenditure, something which not all countries can afford. For many countries, such spending may have to be financed by borrowing from internal and external sources.

- Higher spending on training and innovation does not necessarily translate into better outcomes. The effectiveness of training depends very much on workers' attitude and aptitude towards training. Similarly, achieving breakthrough in research is also uncertain.
- For such spending to generate the expected productivity growth usually involve long gestation period. Supply-side policies are therefore not intended to be short-run policies.
 - *Retraining and Skills Upgrading*: As part of the Continuing Education and Training (CET) Masterplan, the Government has been expanding the annual training capacity and enhancing funding support for training. The two National CET Campuses are expected to provide about a combined total of 150,000 training places annually.
 - *Research and Development*: As part of its research, innovation and enterprise (RIE) 2015 plan, the Singapore Government will invest S\$16.1 billion over 2011-2015 to further boost RIE. Included amongst the various approaches taken by RIE2015 are (1) focus on talent attraction and development, positioning Singapore as a choice location for researchers and (2) greater funding support to multidisciplinary, breakthrough science. Under the Productivity and Innovation Credit (PIC) scheme, firms enjoy significant tax deductions or payouts for their investments in research & development, innovation, automation and training.
 - Incomes policy could be implemented by the government where wages increases are curtailed. This could be in the form of a wage freeze wage reduction. In Singapore, the National Wages Council (NWC) issues wage guidelines.
 - Development in new technologies / Source for alternatives – use more advanced technology so that production is more efficient (i.e. uses less crude oil for same amount of output)

Not ideal to implement price ceiling to prevent raising unit cost of production in the economy. An effective price ceiling must be set below the market equilibrium price of the factor of production. Does not raise productivity, strain on government resources to hold down prices.

Overall

- In view of the rising inflation, an oil-importing country should consider adopting supply-side policies to raise productivity and exchange rate policies to curb imported inflation, over demand-management policies.
- Policy choice depends on whether the oil-importing country prioritises curbing of cost-push inflation, which is often accompanied by falling real national income and increasing unemployment. Severity depends on how long the inflation rate remains high. If rising inflation rate does not persist, then it would not be a huge concern to the government, especially considering that policies implemented take time to work.

Level	Descriptors
L3 [9 – 11]	<ul style="list-style-type: none"> • For an excellent and comprehensive balanced analysis of three policy options available to oil-importing countries in view of rising inflation. Includes real-world exemplifications to ensure a contextualised discussion. • Excellent use of AD/AS framework in the analysis
L2 [6 – 8]	<ul style="list-style-type: none"> • For an accurate but under-developed discussion, or an imbalanced analysis of policy options available to oil-importing countries in view of rising inflation (eg, thesis only). • Lack of real-world exemplifications to ensure a contextualised discussion. • Some use of AD / AS framework
L1 [1 – 5]	<ul style="list-style-type: none"> • Answers are mostly irrelevant, or largely descriptive and weak in economic analysis. • Inadequate development of economic analysis • An answer with very limited ideas relevant to the given context, or containing some conceptual errors.
Evaluation	
E2 [3 – 4]	Able to make sound judgement (eg, rank) on policy options available to oil importing countries in view of rising inflation, highlighting necessary conditions, stating implicit assumptions and contextualised.
E1 [1 – 2]	Attempt to make judgement with weak justification.

Suggested Answer

Essay Q4

Malaysia and Singapore have been each other's main trading partners for many years. Recently, the Malaysian ringgit has slumped to a new historic low against the Singapore dollar.

- a) Explain why exchange rates rather than interest rates are the preferred choice as the instrument of monetary policy in Singapore. [10]
- b) Discuss the likely effects of a depreciation of the Malaysian ringgit on the Singapore economy. [15]

Suggested Answer for part (a)

Define monetary policy

- A deliberate attempt by the government to regulate the economy by controlling money supply or the interest rates, thereby influencing aggregate demand and thus stabilizing the level of output or income, prices, and employment at the full employment level.

Reasons for Monetary Authority of Singapore's (MAS) choice

1. The use of the exchange rate policy has certain benefits that help Singapore to cater to our unique characteristics of being small and openness to trade, capital movement and foreign direct investments.
2. Singapore has no capital control and is unable to set our interest rate to deviate too far away from world interest rates since any attempt to change interest rate will be negated by hot money inflows or outflows due to Singapore's position as an international financial centre. This can result in an inflow of ST capital that would negate any increase in interest rates and push interest rates down. Hence, interest rates would not be a useful instrument for its monetary policy in Singapore due to its openness to capital flows.

Singapore focuses on the Exchange Rate Policy because of its unique economic characteristics of being small and open as well as our position as an international financial centre

Explain how Exchange Rate Policy works in Singapore

- Monetary policy in Singapore has been centred on the exchange rate. MAS chooses to anchor their monetary policy to the exchange rate, by managing it more flexibly against a basket of currencies of our major trading partners. MAS operates a managed float regime for the Singapore dollar with the trade-weighted exchange rate allowed to fluctuate within a policy band.
- Changes in the exchange rate aim to change the price of exports and imports to influence external demand to achieve the macroeconomic objectives.

Explain how exchange rate can benefit Singapore

- Our small size and the lack of natural resources, such as crude oil, iron and steel, means that Singapore have to import even the most basic of our daily requirements and at the same time export to pay these requirements. This has resulted in a very open trade policy, with very few import restrictions. Both imports and exports amount to over 150% of Singapore's GDP over the years.
- Changes in the exchange rate to offset the changes in foreign price levels would thus have a significant effect on **imported inflation**. This means that by appreciating her exchange rate, Singapore is able to keep the price of her imports low so that she can reduce her rate of inflation due to high price of imports, lowering cost of production. By keeping the prices of these imported raw materials low, this will **lower cost push inflation** in Singapore.
- Being small also implies that she has a small domestic market and hence has to rely heavily on foreign market to export her goods. Hence, the value of her exports makes up over 150% of her GDP, indicating her high degree of openness to foreign trade. Her manufacturing exports have very high import content and thus by appreciating the exchange rate of the Singapore dollar, this will help to keep the cost of producing these manufacturing exports low and thus **maintaining her export competitiveness**, by keeping price increases in Singapore goods less than those of competitors to achieve a healthy current account balance and positive actual economic growth.

Interest rate would not be a useful instrument for its monetary policy in Singapore due to its openness to capital flows.**Explain how Monetary Policy centred on interest rate works**

- On the other hand, changes in interest rates aim to change domestic demand of consumption and investment expenditure to achieve the macroeconomic aim.
- A rise in interest rate will **increase the cost of borrowing** so as to reduce the profitability of investment, thus lowering the level of investment. At the same time, households will increase their savings and cut back on their consumption on credit. Hence, as the level of aggregate demand falls due to a fall in consumption and investment demand, general price level falls leading to a fall in demand-pull inflation.

Explain how interest rate is not useful for Singapore

- Singapore's role as an international financial centre which adopts a **free banking policy**. With the large presence of foreign banks and foreign direct investments, MAS **cannot effectively change the money supply** because if MAS were to raise the amount of cash reserves that banks have to keep aside so that they have less reserves to lend, foreign banks can resort to external funds.
- As a small and open financial hub, she needs to follow the international trends in the interest rate to avoid large capital flows. Too great a variation would cause instability of the exchange rate due to large capital flows. Thus, Singapore is a price taker in terms of interest rate. The market is determined by the three local banks according to market forces.
- Likewise, Singapore's interest rates are largely **determined by foreign interest rates** and market expectations of movements in the Singapore dollar. Thus, any attempt by MAS to raise or lower the domestic interest rate over a long period of time would be thwarted by a shift of **funds into or out** of Singapore. Interest rates influences domestic demand which makes up a smaller percentage of GDP than

external demand. Thus, change in interest rates has a smaller impact on the GDP than exchange rate which influences external demand. Therefore, Singapore, which is dependent more on external demand for growth choose to focus on exchange rate instead of interest rates.

- Managing the exchange rate is thus the most effective way of maintaining price stability in a small, open economy like Singapore. It is relatively controllable by the MAS and bears a stable and predictable relationship with the objective of monetary policy which is price stability.

Marking Scheme for part (a)

Level (Marks)	Knowledge, Application, Understanding and Analysis
L3 (7-10)	<ul style="list-style-type: none"> • Developed explanation of the two reasons why MAS's monetary policy is centred on the exchange rate rather than interest rates, with good application to the Singapore context
L2 (5-6)	<ul style="list-style-type: none"> • Undeveloped explanation of two reasons why MAS's monetary policy is centred on the exchange rate rather than interest rates, with some application to the Singapore context <p>OR</p> <ul style="list-style-type: none"> • Developed explanation of one reason why MAS's monetary policy is centred on the exchange rate rather than interest rates, with some application to the Singapore context. • 'Undeveloped' – Elaboration is superficial and descriptive, without good examples in the Singapore's context to substantiate.
L1 (1-4)	<ul style="list-style-type: none"> • Weak analysis on how exchange rate is a tool for Singapore's monetary policy

Suggested Answer for part (b)

Currency depreciation is the loss of value of a country's currency with respect to one or more foreign currencies. The depreciation of the country's currency would mean a decrease in value of that country's currency.

The stance taken by Malaysia to depreciate the currency would impact Singapore economy as it brings about both positive and negative impacts on Singapore and her ability to achieve sustained economic growth.

Depreciation of ringgit would affect Singapore economy:

Thesis: Negative Impact of depreciation on ringgit on Singapore economy

- The depreciation taken by Malaysia would increase the value of the SGD relative to the value of ringgit.
- The move would impact the price competitiveness of Singapore's exports, as Singapore's exports would be more expensive in ringgit and imports into Singapore cheaper in terms of domestic currency. Assuming Marshall-Lerner condition ($PED_x + PED_m > 1$), this would cause a fall in the net export revenue of

Singapore. Assuming ceteris paribus, this would cause a fall in the net exports of Singapore and also a fall in AD which would lead to a fall in national income by the multiplier effect. The fall in real GDP would cause negative actual growth for Singapore.

Anti-Thesis: Positive Impact of depreciation on Singapore economy

- As mentioned earlier, the depreciation undertaken by Malaysia would make the price of imports cheaper in terms of SGD. This would have a positive impact on Singapore's ability to achieve sustained economic growth as the cheaper imports in terms of SGD would represent a lower cost of production for goods which utilizes imported inputs for production.
- This would mean that SRAS would increase. The increase in SRAS would bring about an increase in real national income- positive actual growth
- If the fall in general price level and positive actual growth increase investor confidence resulting in inflow of foreign direct investments, this would result in an increase in AD and an increase in productive capacity that would increase LRAS, resulting in sustained economic growth.

Conclusion & Evaluation

1. Depreciation of ringgit may adversely affect Singapore economy to a limited extent

- **Existing Policies which mitigate the effects of depreciation of ringgit**
Given the depreciation of currencies of ringgit, Singapore could have used alternative policies on top of Exchange Rate policy.

Fiscal policy

Fiscal policy in Singapore is directed mainly at promoting long term economic growth by investing in infrastructure, education, research and development.

The Singapore government adopts the following principle in promoting economic growth:

1. To provide a stable and conducive business environment in order to attract foreign direct investment into the country. At the same time, the stability and the business-friendly economic climate can be an inducement for local investments too.
 2. Changes in policies pertaining to tax and government expenditure must be justified on microeconomic grounds such as equity and a focus on supply-side issues.
- The government can increase its expenditure of public projects such as building new expressways. An alternate approach would be to stimulate consumption and investment by reducing taxes. Reduction in income tax would stimulate consumer spending through an increase in personal disposable income and higher purchasing power, whereas reductions in indirect taxation would enable a given disposable income to buy more goods and services, hence increasing consumption. Cuts in corporate tax will increase after-tax profits and thus encourage private investment.
 - When the government increases spending or reduces taxes, it results in an increase in AD represented by a rightward shift of the AD curve. Through the multiplier process, national income will increase through the multiplier effect.

- Given the fall in net exports, (X-M), the increase in consumption, investment and government spending brought about by the expansionary fiscal policy may help to reverse the fall in AD.
- The increase in AD and production will allow actual economic growth to take place and ease the recession. It will also reduce cyclical unemployment, moving the economy its full employment level.

Supply-Side Policy

Short-run

Singapore Government introduced short run supply side policies to help firms cope with costs of production. These initiatives would help reduce cost of production, increasing SRAS, resulting in positive actual growth for Singapore.

Examples: Jobs credit scheme/ Property tax rebates

Long run

Provide higher course fee support for companies and individuals and absentee payrolls for companies that send their workers for training so as to help Singaporeans to upgrade their skills so that they can stay employed or seek re-employment.

Training grants were also provided for general education and skills for workers to acquire post-graduate diploma and even university degrees so as to have a stronger impact on re-employment and retaining productive workers in the labour market.

Example: Skills Programme for Upgrading and Resilience (SPUR), CET (Continuing Education and Training), PIC (Productivity and Innovation Credits)

Training schemes should be put in place to not only retrain the already structurally unemployed but also those who may be unemployed in future as the Singapore economy is rapidly transforming itself into a **knowledge-based economy**.

At the same time, the productive capacity of the economy can be increased by the **increase in LRAS via the increase in quantity of resources**, the improvement in the quality of resources or the advancement of technology.

Supply side policies would shift the LRAS rightwards from LRAS1 to LRAS. This will reduce the GPL from OP1 to OP2, as well as raise the level of real output from Y1 to Y2, increasing potential growth and reducing inflation at the same time. **Cyclical unemployment and inflation will also be reduced when production is increased.**

2. Time frame of depreciation

The impact of the depreciation would depend on the time frame of the depreciation. If the depreciation stance was a temporary measure undertaken by Malaysia to improve their export competitiveness in order to improve their BOP position, the impact would be for the short-run. Moreover, as the Marshall-Lerner condition does not hold in the short run, a short run depreciation of their currency by other countries may in fact benefit Singapore's net exports. However, if it was a long-term measure, then MAS would have

to consider taking actions as it would have impacts on Singapore's export competitiveness

Marking Scheme for part (b)

Level (Marks)	Knowledge, Application, Understanding and Analysis
L3 (9-11)	Detailed analysis of how the depreciation of ringgit would affect Singapore economy (2 sided: positive & negative impact). Answer should include real life examples from the Singapore context .
L2 (6-8)	Undeveloped explanation of how the depreciation of ringgit would affect Singapore economy (Undeveloped 2 sided or developed 1 sided analysis). Answer may have little (or no) real life examples from the Singapore context .
L1 (1-5)	For an answer that shows some superficial knowledge of how the depreciation of ringgit would affect Singapore economy. Conceptual error/s evident.
Allow up to 4 marks for evaluation	
E2 (3-4)	For a judgment based on economic analysis / adequately substantiated
E1 (1-2)	For an unexplained judgment, or one that is not supported by economic analysis.

Name:		Index Number:		Class:	
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DUNMAN HIGH SCHOOL
Preliminary Examination
Year 6

ECONOMICS

9732/1

(Higher 2)

25 September 2015

Paper 1

2 hours 15 minutes

Additional Materials:
Writing Papers

READ THESE INSTRUCTIONS FIRST

Answer **all** questions.

Write your name and class on all pieces of work handed in.

Write in dark blue or black pen on both sides of the paper.

You may use a soft pencil for any diagrams, graphs or rough working.

Do not use staples, paper clips, highlighters, glue or correction fluid.

The number of marks is given in brackets [] at the end of each question or part question.

At the end of the examination, fasten all your work securely into **two** separate bundles (one for Question 1 and one for Question 2).

This document consists of **7** printed pages including this cover page.

[Turn over

Answer **all** questions.

Question 1

The US Pharmaceutical Industry

Table 1: Healthcare and overall inflation rate in the US

Year	2012	2013	2014
Healthcare Inflation (%)	3.5	3.3	2.1
Overall Inflation (%)	1.7	1.5	0.8

Source: www.ycharts.com, and www.usinflationcalculator.com

Extract 1: How does growth in healthcare costs affect the US consumers?

When the price of a gallon of gas or a pound of hamburger rises, consumers can anticipate how the increase will affect what they have left to spend on other goods. It is far less obvious to consumers how increases in healthcare costs hit their pockets due to the uncertainties of healthcare needs.

In 2011 when US healthcare costs increased by 3.5 percent, US healthcare expenditure per capita increased by 3.1 percent. According to the November 2013 issue of the Journal of the American Medical Association, the primary reason for the rise in healthcare costs in 2011 accounting for 91 percent, was an increase in the price of drugs, medical devices, and hospital care. In 2013, when US healthcare costs increased by 3.3 percent; US healthcare expenditure per capita increased by 3.4 percent. Back in 2009, even when the US economy plunged into recession and millions lost their jobs, healthcare costs grew by 4 percent and healthcare expenditure per capita grew by 2.9 percent. Although these numbers are striking, they may not be easily translated into figures that are meaningful to individual Americans.

Sources: *Various*

Table 2: Top five US pharmaceutical companies: share of pharmaceutical industry

Share of pharmaceutical industry (by value of US sales)	2012 (%)
Novartis	20.0
Merck	19.8
Pfizer	18.2
AstraZeneca	17.3
Teva	16.3

Source: www.statista.com, 26 May 2014

Extract 2: Pricing strategies of US pharmaceutical companies

Once drugs reach the mass market, they are often relatively inexpensive to produce. Therefore, selling these drugs at lower prices outside the US can still be good for business. However, these drugs could find their way back to the US market and undercut the higher price set initially. Pharmaceutical companies try to prevent this by selling drugs at a lower price in developing countries, while promoting regulations barring re-importation of these drugs.

A recent trend observed is that prices paid for a drug vary depending on how well it works for some set of patients. Expensive cancer drugs may help with a variety of different cancers but often work better for one in particular. For instance, *Tarceva*, a cancer drug extends survival of lung cancer patients by months while survival of pancreatic cancer patients is only by weeks.

Sources: Forbes, 12 December 2013 & LDI, University of Pennsylvania, 11 June 2015

Extract 3: Hot drugs show sharp price hikes

On May 30 last year, the price for a bottle of *Lantus* diabetes medication went up by 16.1 percent. On the next day, *Lantus*'s direct competitor, *Levemir*, also registered a price increase of 16.1 percent. The pattern repeated itself six months later when *Lantus* was marked up 11.9 percent, and *Levemir*, matched again exactly.

Contrary to the consumer's ideal in which rivals cut prices to grab market share, competitors in branded pharmaceuticals often drive each other's prices higher. Prescription spending rose 13 percent last year to \$374 billion, according to IMS Health Holdings Inc.

The price of *Lantus* is set independently, according to a company statement. Experts pointed that if firms make independent price decisions not due to collusion, it could have been a business decision to follow price increments of their competitors. It was also noted that greater demand for diabetes medication is helping to drive price increases.

Source: Bloomberg, 6 May 2015

Extract 4: Pharmaceutical industry gets high on fat profits

Pharmaceutical companies have developed the majority of medicines known to humankind, but they have profited handsomely from doing so, and not always by legitimate means.

Pharmaceutical companies justify the high prices they charge by arguing that their research and development (R&D) costs are huge even though their marginal cost of manufacturing is just a tiny fraction of the price charged. On average, only three in 10 drugs launched are profitable. Many more do not even make it to market. Pharmaceutical companies however, spend far more on marketing drugs - in some cases twice as much - than on developing them.

The industry also argues that the wider value of the drug needs to be considered. Drugs do save money for consumers over the longer term. Take hepatitis C, a virus that kills people and used to require a liver transplant; with a 12-week course of a drug, 90 percent of people are cured, will never need surgery or looking after, and can continue to support their families. Even then, critics argue that just because you can charge a high price for something does not necessarily mean you should, especially when it comes to health.

Big pharmaceutical companies also say they only have a limited time in which to make profits. Patents are generally awarded for 20 years, but 10 to 12 of those are typically spent developing the drug at a high cost. This leaves eight to 10 years to make money before the formula can be taken up by generic drug companies, which sell the medicines for a fraction of the price. Once this happens, sales fall by more than 90 percent.

This is why pharmaceutical companies go to extraordinary lengths to extend their patents. New formulations and combining two existing drugs to give a wider use are some legal ways to eke out patents. Until recently, paying bribes to doctors to prescribe their drugs was commonplace, although this is now illegal in many places. Rules on gifts, educational grants and sponsoring lectures are less clear cut. A recent study found that doctors in the US receiving payments from pharmaceutical companies were twice as likely to prescribe their drugs. This may change when new rules force doctors to disclose all gifts and payments received.

Pharmaceutical companies have also been accused of colluding with chemists to overcharge for their medicines and of publishing trial data that highlight the positive at the expense of the negative. They have also been found guilty of mis-branding and wrongly promoting various drugs, and have been fined billions as a result. The rewards are so great, it would seem, that pharmaceutical companies have continually been prepared to push the boundaries of legality.

No wonder, then, that the World Health Organisation (WHO) has talked of the "inherent conflict" between the legitimate business goals of the drug companies and the medical and social needs of the wider public.

Source: BBC News, 6 November 2014

Questions

- a) (i) Compare US healthcare inflation rate with the US overall inflation rate between 2012 and 2014. [2]
- (ii) Using the concept of opportunity cost, explain the effect of an increase in healthcare costs on the US consumers. [2]
- (iii) Explain possible reasons for the relationship between healthcare costs and healthcare expenditure per capita in Extract 1. [4]
- b) (i) Explain the type of market structure operating in the US pharmaceutical industry. [4]
- (ii) Discuss the extent to which the various pricing strategies adopted by the pharmaceutical companies could help them increase their profits. [8]
- c) Discuss the case for government intervention in the pharmaceutical industry. [10]

[Total: 30]

Question 2

Economic Growth and Challenges

Extract 5: Singapore is counting on ASEAN for growth

Singapore is counting on Southeast Asia's economic boom to lure foreign investment as the island's clampdown on foreign labour raises wage costs. The region, known as the Association of Southeast Asian Nations (ASEAN), is forecast to grow 5.2 percent this year and 5.6 percent in 2014.

Singapore became Southeast Asia's only advanced economy by moving up the technology ladder, turning a trading port into the region's biggest banking centre and a manufacturer of electronics, petrochemicals and pharmaceuticals. As its bigger, less-developed neighbours lure companies with faster growth rates, larger populations and cheaper workers, the island is forced to find new ways to position itself to stay competitive. Singapore cannot afford to attract the same kind of land and labour-intensive industries as in the past but as a services hub, it still has many advantages.

Asia which had seven of the top 10 exporters of textiles and clothing and office and telecommunications equipment in 2011 - shipped \$5.98 trillion of goods that year, an 18 percent increase from the year before, according to the World Trade Organisation (WTO). Of that, Southeast Asia sent out \$1.24 trillion of products, compared with \$432 billion in 2000 and \$72 billion in 1980, data from the WTO show.

Source: Bloomberg, 16 September 2013

Table 3: Selected ASEAN key economic indicators

Indicators	2010	2011	2012	2013 ^{p/}
GDP per capita at current prices (US\$)	3,139	3,587	3,761	3,832
International merchandise trade (US\$ million)	2,009,116	2,388,444	2,476,427	2,511,517
Export (US\$ million)	1,051,614	1,242,199	1,254,581	1,271,128
Import (US\$ million)	957,502	1,146,245	1,221,847	1,240,388
Foreign direct investments inflow (US\$ million)	100,360	97,538	114,284	122,377

Table 4: Intra-ASEAN trade, 2014^{p/}

Country (Selected)	Intra-ASEAN exports		Intra-ASEAN imports	
	Value (US\$ mil)	Share to total exports (%)	Value (US\$ mil)	Share to total imports (%)
Cambodia	2037.9	19.1	5577.6	29.4
Indonesia	39822.1	22.6	50903.1	28.6
Lao	1451.3	55.0	2045.0	74.4
Malaysia	65297.0	27.9	53779.1	25.7
Singapore	127739.2	31.2	75457.2	20.6
Vietnam	18260.5	12.3	22537.1	15.5
ASEAN	329700.4	25.5	278617.6	22.5

p/ preliminary

Source: ASEAN Website, <http://www.asean.org/>

Extract 6: Asia's challenges

Asia's rapid growth in recent decades has lifted hundreds of millions out of extreme poverty, but the region remains home to two-thirds of the world's poor, with more than 800 million Asians still living on less than \$1.25 a day and 1.7 billion surviving on less than \$2 a day. Poverty reduction remains a daunting task.

The gap between Asia's rich and poor has widened alarmingly in the past two decades. The Gini coefficient, a measure of inequality, has increased in much of the region: taking developing Asia¹ as a single unit, the Gini coefficient has increased from 39 to 46. Three groups, in particular, have benefitted most - the owners of capital, those living in cities and near coasts and the better educated graduates. Inequality of opportunity is prevalent and is a crucial factor in widening income inequality. 1.7 billion people (45 percent of the population) continue to lack access to sanitation and 680 million are still without access to electricity.

Reducing inequality and making growth more inclusive in Asia, therefore, requires the following mutually re-enforcing policy actions. First, fiscal policy must play an important role. Spending on social sectors – health and education – should be increased. Second, the gap between rural and urban areas and across provinces must be bridged. Regions lagging behind need more and better infrastructure. Third, productive jobs are a must for inclusive growth. This requires eliminating distortions that favour capital over labour and setting up public employment schemes to address pockets of unemployment and underemployment.

Asia has enjoyed a remarkable period of growth and poverty reduction, but the new realities of technological progress, more globally integrated markets, and greater market orientation are magnifying inequalities in physical and human capital. Asian policymakers must redouble their efforts to bring opportunities in employment, education, health and other key social services to all – thereby making growth more inclusive.

Source: OECD Forum 2013, OECD Website

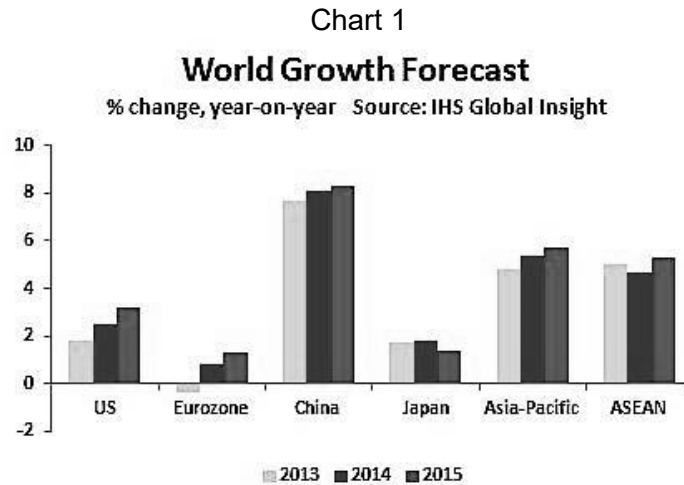
Extract 7: Global recovery should carry ASEAN through economic headwinds

One of the key risks to the ASEAN outlook for 2015 is the impact of Federal Reserve tapering of its quantitative easing programme and eventual policy-driven interest rate rises in 2015 as US recovery continues. This could pose risks of further depreciation of ASEAN currencies versus the USD.

Notwithstanding this, Southeast Asia remains one of the most rapidly growing regions of the global economy. Key megatrends supporting future ASEAN growth include the rapidly growing numbers of middle income households, strong growth in intra-Asian trade and manufacturing supply chains with Northeast Asia as well as a massive expansion in infrastructure spending and urban development across ASEAN over the next two decades. These megatrends will support rising valuations for ASEAN equity and property

¹ Developing Asia includes countries such as Afghanistan, Bangladesh, Bhutan, Brunei Darussalam, Cambodia, China, Fiji, India, Indonesia, Kiribati, Laos, Malaysia, Maldives, Myanmar, Nepal, Pakistan, Papua New Guinea, Philippines, Samoa, Sri Lanka, Thailand, Timor Leste (East Timor), Tonga, Vanuatu and Vietnam. It excludes the Middle East (Iran, Turkey and the Arab countries) and the Advanced Economies in Asia, which are classified as Japan, Singapore, Hong Kong, South Korea and Taiwan.

markets over the medium to long-term, due to rising household incomes, rapid urbanisation, and strong corporate earnings growth.



Many ASEAN countries will also remain attractive destinations for foreign mergers and acquisitions inflows, due to their fast-growing domestic consumer markets and their competitiveness as low cost manufacturing hubs. This has already been reflected in surging Japanese mergers and acquisitions inflows to ASEAN over the last three years, with Chinese mergers and acquisitions flows also expected to grow strongly as rapidly rising wages in coastal China make many ASEAN countries more competitive locations for low cost manufacturing.

Source: www.forbes.com, 19 January 2014

Questions

- a) (i) Explain what is meant by ‘GDP per capita at current prices (US\$)’. [2]
- (ii) Explain whether the data in Table 3 is sufficient to provide evidence of a real economic growth in ASEAN in 2012. [3]
- b) (i) Comment on whether there is a trade-off between economic growth and income inequality. [4]
- (ii) Discuss the policy actions proposed to reduce income inequality for a more inclusive growth in Asia. [8]
- c) (i) Explain the basis for the pattern of trade between Singapore and other ASEAN members. [3]
- (ii) Assess the relative importance of internal and external factors in determining ASEAN’s economic outlook. [10]

[Total: 30]

Suggested Answers:

Question 1

The US Pharmaceutical Industry

- a) (i) Compare US healthcare inflation rate with the US overall inflation rate between 2012 and 2014. [2]

The US healthcare inflation rate was consistently higher than US overall inflation rate between 2012 and 2014. [1m]

Both US healthcare and overall inflation rates were falling between 2012 and 2014. [1m]

- (ii) Using the concept of opportunity cost, explain the effect of an increase in healthcare costs on the US consumers. [2]

Define opportunity cost: the next alternative forgone when an economic decision has been made.

The increase in healthcare costs will mean that US consumers have to spend more of their income on the same quantity of healthcare. Assuming their budget/income unchanged, US consumers will have less to spend on other goods and services. This will cause them to incur opportunity costs in terms of other goods and services forgone.

- (iii) Explain possible reasons for the relationship between healthcare costs and healthcare expenditure per capita in Extract 1. [4]

Two well explained reasons [2m each]

In 2011 when US healthcare costs increased by 3.5 percent, US healthcare expenditure per capita increased by 3.1 percent. According to the November 2013 issue of the Journal of the American Medical Association, the primary reason for the rise in healthcare costs in 2011 accounting for 91 percent, was an increase in the price of drugs, medical devices, and hospital care. In 2013, when US healthcare costs increased by 3.3 percent; US healthcare expenditure per capita increased by 3.4 percent.

This meant that an increase in healthcare cost would lead to increase in expenditure, implying that the demand for healthcare is price inelastic. The increase in price would have led to a less than proportionate decrease in quantity demanded, since healthcare is a necessity for those who require it, there will be an increase in expenditure as the increase in expenditure from paying a higher price outweighs the decrease in expenditure from consuming less units. [2m]

Back in 2009, even when the US economy plunged into recession and millions lost their jobs, healthcare costs grew by 4 percent and healthcare expenditure per capita grew by 2.9 percent. Although these numbers are striking, they may not be easily translated into figures that are meaningful to individual Americans.

There could have been an increase in demand for healthcare, leading to an increase in the price and quantity of healthcare in the healthcare market, causing an increase in expenditure. It seemed that even when there was a recession, the healthcare expenditure continued to increase. This can be deduced as increase in demand. [2m]

- b) (i) Explain the type of market structure operating in the US pharmaceutical industry. [4]

The US pharmaceutical industry is an oligopolistic market. [1m]

Table 2: Market share of 5 largest companies in the industry combined to be 91.6%. [1m]

Pharmaceutical companies justify the high prices they charge by arguing that their research and development (R&D) costs are huge even though their marginal cost of manufacturing is just a tiny fraction of the price charged. On average, only three in 10 drugs launched are profitable.

The US pharmaceutical companies incur large start-up costs due to the significant amount to be spent on research and development (R&D). The spending can only be recovered if the firm sells a large quantity and earns a large amount of revenue. In addition, pharmaceutical companies may own patents that allow them to enjoy monopoly status and keep out other companies from producing similar drugs. This helps to maintain high and price inelastic demand for their products and allow them to earn high profits (supernormal profit), which is typical of oligopolies. [2m]

- (ii) Discuss the extent to which the various pricing strategies adopted by the pharmaceutical companies could help them increase their profits. [8]

Thesis: Various pricing policies help pharmaceutical companies increase their profits

T1: Third degree price discrimination – US market vs. developing countries market

Relate to the 3 conditions of price discrimination:

- (i) Price setting ability (This is made possible by patents that prevent other companies from manufacturing a drug with similar properties. This reduces the availability of substitutes and thus the company has price setting ability of the drugs.)
- (ii) Able to segment the market into smaller submarkets and keep them separate (This is possible as there is a geographical factor that separates the two groups of consumers. People in need of medical care may be too weak to travel and cannot wait for a better time to consume the drugs, thus they are not likely to be able to purchase the same drug from a country that sells at a lower price; extract also mentioned that the pharmaceutical companies try to prevent re-importation.)
- (iii) Each submarket has different PED (This is possible since US is the relatively advanced nation; US consumers typically have higher purchasing power and thus exhibit higher willingness and ability to pay → the PED is lower and demand larger. Consumers in the developing nations have on average lower income; the same drug takes up a larger proportion of their income, thus the PED is more elastic and the ability to pay is lower.)

Show on diagram the result of higher revenue with the same cost of production.

T2: Price discrimination; same drug, same cost but different effectiveness to the user → considered a different product (MB to consumer is different; thus AR and MR will differ) → different price is due to different MC=MR level (show on diagram)

Expensive cancer drugs may help with a variety of different cancers but often work better for one in particular. For instance, Tarceva, a cancer drug extends survival of lung cancer

patients by months while survival of pancreatic cancer patients is only by weeks.

Antithesis: Various pricing policies do not help pharmaceutical companies increase their profits

AT1: Success depends on the ability to prevent seepage between the submarkets, which could be a problem. The companies may experience difficulties preventing re-importation as there will be black markets and outlaws who are willing to smuggle the drugs into US. This will compromise the efforts of the companies as the demand in US market will fall as they switch over to genuine but smuggled drugs from the black market.

The revenue pharmaceutical companies can make from the US market will be reduced. In contrast the revenue made in developing companies will increase. There will be arbitration of prices between the submarkets, eroding the additional profits arising from price discrimination.

AT2: Does not follow kinked demand curve model where companies do not raise price when their competitor increases price

On May 30 last year, the price for a bottle of Lantus diabetes medication went up by 16.1 percent. On the next day, Lantus's direct competitor, Levemir, also registered a price increase of 16.1 percent. The pattern repeated itself six months later when Lantus was marked up 11.9 percent, and Levemir, matched again exactly.

Contrary to the consumer's ideal in which rivals cut prices to grab market share, competitors in branded pharmaceuticals often drive each other's prices higher.

When a competitor increases price, the typical oligopoly will not follow the price increment so that it can capture the market share when consumers switch over from purchasing competitor's goods to its good. However, this is not observed in the case between Lantus and Levemir.

Evaluation:

There are many deterrents present to prevent seepage. Pharmaceutical companies can work closely with authorities to snub out the smuggling activities and thus retain the profits made from price discrimination. Consumers may be wary of the black market drugs as there may be some drugs that are fake and do not possess the supposed medicinal properties. The willingness to switch to black market drugs may be low in US and thus the arbitration of prices will not happen.

The price of Lantus is set independently, according to a company statement. Experts pointed that if firms make independent price decisions not due to collusion, it could have been a business decision to follow price increments of their competitors. It was also noted that greater demand for diabetes medication is helping to drive price increases.

It seemed that there could be other factors contributing to the decision for Levemir to raise prices. The increase in prices for drugs could have been due to increase in demand that allows the entire market to adjust price upwards. This is aligned with profit maximising objective where MR increases, thus $MC=MR$ occurs at a higher price and output. In this case, the increase in price is justified and it did help the pharmaceutical companies raise profit.

L3	Balanced argument on various pricing strategies and ability to apply the possibility of price rigidity that was perceived to exist in the pharmaceutical industry	5-6m
----	---	------

	Clear understanding of price discrimination Good use of diagram(s) and few/little conceptual errors Good reference to extract material	
L2	Underdeveloped answer on the pricing strategies of pharmaceutical companies; lack of economic rigour, lack of diagram(s), some conceptual errors, poor application of extract information One-sided answer that shows the either the strategies that raise profits or why they do not	3-4m
L1	Smatter of points that use little case material to explain pricing strategies of pharmaceutical companies	1-2m
E	Judgment on whether pharmaceutical firms adopt appropriate pricing strategies to raise profits	1-2m

c) Discuss the case for government intervention in the pharmaceutical industry. [10]

Introduction:

Government intervention exists to achieve microeconomic or macroeconomic goals. In this case, focus is on microeconomic goals → economic efficiency and dynamic efficiency. Because of the nature of the good, equity is also taken into consideration.

Thesis: There is a need for government intervention

T1: Presence of positive externalities in consumption

Consumers of drugs take into account of marginal private benefit in consumption of drugs but they do not take into account the marginal external benefit arising from them being healthy and productive to the workforce and economy at large.

Take hepatitis C, a virus that kills people and used to require a liver transplant; with a 12-week course of a drug, 90 percent of people are cured, will never need surgery or looking after, and can continue to support their families.

There will be under-consumption and a resultant deadweight loss in the absence of government intervention.
(Draw CBA to illustrate.)

T2: Presence of imperfect information

Consumers are often over-charged or even misled into consuming wrong drugs or over-priced drugs because they lack perfect information in making informed decisions. In this case, the demand may be higher than what it should have been, and this will also cause a deadweight loss from over-consumption.

A recent study found that doctors in the US receiving payments from pharmaceutical companies were twice as likely to prescribe their drugs.
Pharmaceutical companies have also been accused of colluding with chemists to overcharge for their medicines and of publishing trial data that highlight the positive at the expense of the negative. They have also been found guilty of mis-branding and wrongly promoting various drugs, and have been fined billions as a result.

(Draw DD/SS or CBA to illustrate.)

T3: Presence of imperfect competition

Pharmaceutical companies are oligopolistic firms that set $P > MC$. This

inevitably creates a deadweight loss due to under-production. (Draw cost-revenue diagram to illustrate.)

Pharmaceutical companies justify the high prices they charge by arguing that their research and development (R&D) costs are huge even though their marginal cost of manufacturing is just a tiny fraction of the price charged.

T4: Equity concerns

It is fair that everyone has access to medical drugs that will help prolong life and reduce pain/discomfort. The access to drugs should not be based on purchasing power as it is preposterous to assume that a poorer person deserves more pain and lower life expectancy. This is an argument related to healthcare being a merit good.

Even then, critics argue that just because you can charge a high price for something does not necessarily mean you should, especially when it comes to health.

Antithesis: There is no need for government intervention

AT1: There are multiple market failure sources that make intervention difficult as government may not have perfect information. It is possible that the good intentions of government may lead to government failure.

Illustrate with example where a government can potentially over-subsidise cost of drugs in view of the presence of positive externality and lead to a larger deadweight loss from over-consumption.

AT2: Governments from developing nations may not want to interfere as the presence of third degree price discrimination allows drugs to be sold in their countries. Without price discrimination, the single price of drugs that apply across countries will be too high, and even fewer people in the developing countries will have access to these drugs. The cross-subsidisation allows drugs to be supplied to countries with lower income per capita.

AT3: The presence of large profits is required for future R&D and to allow dynamic efficiency.

On average, only three in 10 drugs launched are profitable. Many more do not even make it to market.

Patents are generally awarded for 20 years, but 10 to 12 of those are typically spent developing the drug at a high cost. This leaves eight to 10 years to make money before the formula can be taken up by generic drug companies, which sell the medicines for a fraction of the price. Once this happens, sales fall by more than 90 percent.

Intervention that prevents pharmaceutical companies from making large profits will limit their ability to engage in R&D activities to further develop drugs. This will impair dynamic efficiency that is highly valued in this industry and for the greater good of people and society.

Evaluation:

Reasoned judgment on whether:

- (i) need for intervention
- (ii) type of intervention
- (iii) area/aspect of intervention (prioritisation)
- (iv) length of intervention
- (v) ability of government to intervene.

L3	Balanced argument: At least two well explained sources of market failure and two well explained reasons for government not needing to intervene in the industry Good use of diagram(s) and few/little conceptual errors Good reference to extract material	6-8m
L2	Underdeveloped answer on the different types of market failures; lack of economic rigour, lack of diagram(s), some conceptual errors, poor application of extract information One-sided answer that shows the sources of market failure or a direct reasoning on why government should not intervene in the industry	4-5m
L1	Smatter of points that use little case material to explain market failure or rationale for government intervention	1-3m
E	Judgment on whether government should intervene in the pharmaceutical industry	1-2m

[Total: 30]

Suggested Answer Outline / Mark Scheme

Questions

ai Explain what is meant by ‘GDP per capita at current prices (US\$)’ [2]

GDP per capita at current US\$

- GDP means Gross domestic product which is the sum of the value of all final goods and services produced in the country during the year.
- GDP per capita is gross domestic product divided by the population size.
- Data are in current U.S. dollars and has not been adjusted for inflation

Mark Scheme

- Need to explain all three concepts of ‘Gross Domestic Product’, ‘Per Capita’ and ‘Current Prices’ to get 2 marks’.]

a ii Explain whether the data in Table 3 is sufficient to provide evidence of a real economic growth in ASEAN from 2011 to 2012. [3]

Table 3: Selected ASEAN Key Economic Indicators

Indicators	2010	2011	2012
GDP per capita at current prices (US\$)	3,139	3,587	3,7
International merchandise trade (US\$ million)	2,009,116	2,388,444	2,476,4
Export (US\$ million)	1,051,614	1,242,199	1,254,5
Import (US\$ million)	957,502	1,146,245	1,221,8
Foreign direct investments inflow (US\$ million)	100,360	97,538	114,2

Thesis: To explain how table 3 provide evidence of a real economic growth in ASEAN from 2011-12

Antithesis: To explain how Table 3 is lacking in evidence of a real economic growth in ASEAN from 2011-12

- Table 3 shows that FDI (in US\$) has increased from 2011 and 2012 and BOT (in US\$) continued to be surplus in 2012, both contributing to **nominal economic growth (at current prices)**. However it is uncertain if real economic growth has increased since the inflation rate is not given.
- Table 3 also shows that GDP per capita at current price (US\$) has increased from 2011 to 2012. However both the population size and the inflation rate are not given. Hence it is not certain whether real GDP has increased.
- Although the population size should only increase marginally within a year, the inflation rate may nevertheless be higher than the nominal economic growth rate. Hence the data in Table 3 is insufficient to conclude that there is real economic growth in ASEAN from 2011 – 2012.

Mark Scheme

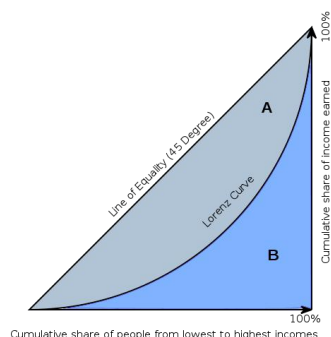
- Capped at 2 marks if response only focused on GDP figures, ignoring data on FDI and BOT
- Capped at 2 marks if response is imbalanced and only focused on thesis or anti-thesis

bi Comment on whether there is a trade-off between economic growth and income inequality. [4]

Analyse issues in given context

- Economic growth – increase in real GDP
- Income inequality - The unequal distribution of household or individual income across the various participants in an economy. Income inequality is often presented as the percentage of income to a percentage of population and measured using the Gini coefficient = Area A/Area (A+B); As Gini Coefficient increases, income inequality increases. (See fig below)

Note:



Trade-off between economic growth and income inequality means that economic growth is at the expense of income inequality, i.e, income gap widens with economic growth

Thesis: Yes - Evidence from Extract 6 showed that there was 'Asia's rapid growth in recent decades' and that 'the gap between Asia's rich and poor has widened alarmingly in the past two decades' and Gini Coefficient has increased from 39 to 46 showing income inequality has increased.

Economic reasoning - Economic growth in ASEAN was driven by technological progress, more globally integrated markets, and greater market orientation -> provided more opportunities for the owners of capital (entrepreneurs) **rather than owners of labour (workers)**, those living in cities and near coasts **rather than rural areas** and the better educated graduates **rather than the non-graduates**.

- More globally integrated markets -> Increase in demand for export > increase in derived demand for workers near coasts -> higher wages for coastal workers
- Greater market orientation -> higher demand for goods and services -> higher profits for firms
- Higher technological progress -> higher tech production -> higher derived demand for skilled / educated workforce -> higher wages for skilled / educated workers

They will hence gain more of the increase in income (in the form of profits and wages) from economic growth than the uneducated labour living at the rural areas -> greater income inequality

Anti-thesis: The uneducated labour living at the rural areas also saw increase in their income levels with economic growth. It was stated in Extract 6 that 'Asia's rapid growth in recent decades has lifted hundreds of millions out of extreme poverty'.

Judgment: Income levels generally increase with economic growth. However, given that the uneducated labour living at the rural areas experience lower increment of income due to sources of economic growth, they have lesser opportunities compared to the entrepreneurs and better educated graduates, there is a trade-off between economic growth and income inequality.

Mark Scheme

- Explain the meaning of a 'trade-off' between economic growth and income inequality [1m]
- Thesis - Explain the economic reasoning for the trade-off [1m]
- Antithesis – Explain possible reasoning why there is no trade off [1m]
- Judgement – [1m]

- bii Discuss the policy actions proposed to reduce income inequality for a more inclusive growth in Asia. [8]

From Extract 6: Reducing inequality and making growth more inclusive in Asia, therefore, requires the following mutually-re-enforcing policy actions.

- First, fiscal policy must play an important role. Spending on social sectors—health and education—should be increased.
- Second, the gap between rural and urban areas and across provinces must be bridged. Regions lagging behind need more and better infrastructure.
- Third, productive jobs are a must for inclusive growth. This requires eliminating distortions that favour capital over labour and setting up public employment schemes to address pockets of unemployment and underemployment.

Approach

- Explain how two of the above proposed policy options work to reduce income inequality for a more inclusive growth in Asia
- Discuss the pros and cons of each option
- Make a judgment on the option(s) to adopt using the FRESH criteria

Mark Scheme

- L1 (1 - 2 m) – statements with economic reasoning. Did not focus on reducing income inequality.
- L2 (3 – 4 m) – with economic reasoning but explanation of policies to reduce income inequality may be vague or not balanced, focusing either on demand management or side-side policies.
- L3 (5 – 6 m) – with good economic reasoning and a balanced approach, assessing the relative appropriateness/effectiveness of the policies in reducing income inequality for a more inclusive growth.
- E1(1 - 2m) – Make a sound judgement based on economic reasoning

- ci. With reference to Extract 5, explain the basis for the pattern of trade between Singapore and the other ASEAN members. [3]

Extract 5

Singapore became Southeast Asia's only advanced economy by moving up the technology ladder, turning a trading port into the region's biggest banking centre and a manufacturer of electronics, petrochemicals and pharmaceuticals. As its bigger, less-developed neighbours lure companies with faster growth rates, larger populations and cheaper workers, the island is forced to find new ways to position itself to stay competitive. Singapore cannot afford to attract the same kind of land and labour-intensive industries as in the past but as a services hub, it still has many advantages.

Asia which had seven of the top 10 exporters of textiles and clothing and office and telecommunications equipment in 2011 -- shipped \$5.98 trillion of goods that year, an 18 percent increase from the year before, according to the World Trade Organization. Of that, Southeast Asia sent out \$1.24 trillion of products, compared with \$432 billion in 2000 and \$72 billion in 1980, data from the WTO show.

The pattern of trade between Singapore and the other ASEAN countries can be explained using the theory of CA which is based on the fact that different countries have different factor endowments.

- Singapore is the only advanced economy in SEA with developed technology and economic infrastructure but faces scarcity in land and labour while SEA's technology and service sectors are not yet developed but has a large population size.

Differences in factor endowment lead to differences in relative prices of factors between countries and these differences in turn affect relative prices of goods and services.

- Prices of capital equipment and technology will hence be cheaper in Singapore relative to SEA while prices of labour will be cheaper in SEA relative to Singapore.

Each therefore specialises in producing goods that require the factors for which they have abundant supply and can hence likely to be able to produce at lower opportunity cost while trading to obtain goods and services that they do not produce or produce at higher opportunity cost.

- Hence Singapore specialises and exports services and high valued goods, becoming the region's biggest banking centre and manufacturer of electronics,

- petrochemicals and pharmaceuticals.
- SEA on the other hand specialises and exports labour-intensive goods. In fact, Asia exports seven of the top 10 exporters of textiles and clothing and office and telecommunications equipment in 2011.

Mark Scheme

- Max 2 m if the answer is generic and not applied to given context based on Extract 5.
 - For 3 m, candidate needs to explain how differences in factor endowment between Singapore and SEA -> differences on opportunity costs of producing the same good -> basis for specialisation and hence trade.
- cii Assess the relative importance of internal and external factors in determining ASEAN's economic outlook. [10]

Approach

- Explain what it meant by 'economic outlook'
- Discuss the extent that internal factors in determining ASEAN's economic outlook and assess its importance
- Discuss the extent that external factors in determining ASEAN's economic outlook and assess its importance
- Make a judgement on their relative importance based on a set of criteria (characteristics of ASEAN, prevailing external economic environment etc)

Suggested answer

Discuss how ASEAN outlook is determined by external factors

- *From Extract 7, 'One of the key risks to the ASEAN outlook for 2015 is the impact of Federal Reserve tapering of its quantitative-easing program and eventual policy-driven interest rate rises in 2015 as US recovery continues. This could pose risks of further depreciation of ASEAN currencies versus the USD. [External factor – Outlook depends on US MP. If US r/I increases -> net capital outflow from ASEAN -> depreciation of ASEAN currency -> fall in confidence -> fall in I and C -> fall in actual and potential EG. How important a factor it is, is dependent on how dependent ASEAN is on US for FDI. Note that ASEAN is dependent on trade [See Table 3]. Depreciation of ASEAN currencies could improve its CA. Hence be it trade or investment, ASEAN's economic outlook is dependent on external factors]*
- *From Extract 7, Many ASEAN countries will also remain attractive destinations for foreign mergers and acquisitions inflows, due to their fast-growing domestic consumer markets and their competitiveness as low cost manufacturing hubs. This has already been reflected in surging Japanese mergers and acquisitions inflows to ASEAN over the last three years, with Chinese mergers and acquisitions flows also expected to grow strongly as rapidly rising wages in coastal China make many ASEAN countries more competitive locations for low cost manufacturing. [External factor – Economic outlook depends on FDI from China and Japan into ASEAN to tap on its available resources. Chart 1 shows the high potential growth of China. Hence reinforcing that external factors are indeed more important in determining ASEAN economic outlook.]*

Discuss how ASEAN outlook is determined by internal factors

From Extract 7, it was also stated that Southeast Asia remains one of the most rapidly growing regions of the global economy and the rapidly growing numbers of middle income households -> increase in purchasing power -> increase in Cd; strong growth in intra-Asian trade and manufacturing supply chains -> increase in I and X -> AD; expansion in infrastructure spending and urban development across ASEAN -> Increase in AS . These

megatrends will support rising valuations for ASEAN equity and property markets over the medium to long-term -> increase in wealth -> increase in Cd [Internal factor – Rapid economic growth in ASEAN for the past decade -> increase in HHY + Profits -> increase in Cd + I -> -> ASEAN's economic outlook is dependent on internal factors. How important it is dependent on domestic consumption and investment as a % of AD. Extract 6 stated that 'two-thirds of the world's poor, with more than 800 million Asians still living on less than \$1.25 a day and 1.7 billion surviving on less than \$2 a day. Poverty reduction remains a daunting task'. Given the low per capita GDP (table 3) and the high % of export outside ASEAN, internal factors are relatively less important]

Judgement:

Given its low GDP per capita and high income disparity ASEAN is still in its infant stage of development, it is still very much dependent on the developed economies for external trade and foreign direct investors. Hence its economic outlook hinges on external factors.

Mark Scheme:

- L1 (1-3 m) – statements with economic reasoning
- L2 (4 – 6 m) – with economic reasoning but explanation may be vague or not balanced, focusing either on internal or external factors
- L3 (7 – 8 m) – with good economic reasoning and a balanced approach, weighing the relative importance of the external and internal factors
- E1(1-2m) – Make a sound judgement based on economic reasoning

Name:		Index Number:		Class:	
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DUNMAN HIGH SCHOOL
Preliminary Examination
Year 6

Economics

9732/2

Paper 2 Essay Questions

14 September 2015

2 hours 15 minutes

Additional Materials:
 Writing Papers

READ THESE INSTRUCTIONS FIRST

Write your name and Civics Class in the spaces provided on the answer paper.

Answer three questions in total, of which **one** must be from Section A, **one** from Section B and **one** from **either** Section A or Section B.

Write your answers on the separate writing paper provided.

Write in dark blue or black pen on both sides of the paper.

You may use a soft pencil for any diagrams, graphs or rough working.

Do not use staples, paper clips, highlighters, glue or correction fluid.

The number of marks is given in brackets [] at the end of each question or part question.

At the end of the examination, fasten all your work securely into three separate bundles, one for each question.

Please indicate all questions attempted in the boxes below.

Section A			Section B		
Q1	Q2	Q3	Q4	Q5	Q6

This document consists of **3** printed pages including this cover page.

[Turn over

Answer **three** questions in total.

Section A

One or two of your three chosen questions must be from this section.

1. The US economy has reported economic growth and falling unemployment. Weather conditions have improved in Texas, the top US producing state of cotton. Meanwhile, more consumers have opted for synthetic fibre apparel over cotton apparel due to increased quality and comfort of synthetic fibres.

Using economic analysis, discuss the effects of these events on the U.S. cotton market and its related markets. [25]

2. The increase in foreign worker levy by the Singapore government has led to higher unit labour cost.

(a) Explain how the above measure could affect the survival of firms in different market structures. [10]

(b) Discuss whether firms in the real world set prices at profit-maximising level. [15]

3. With reference to examples, discuss whether there is a need to change the current policies adopted by the Singapore government to achieve efficiency. [25]

Section B

One or two of your three chosen questions must be from this section.

4. Balance of payments serves to highlight a country's competitive strengths and weaknesses.

Assess the extent to which an improvement in the living standards of an economy requires that achieving a healthy balance of payments be the top economic priority. [25]

5. UK is in battle over stagflation. Growth has slowed due to its austerity measures and the European debt crisis, while unemployment and oil prices have risen. Economists consider stagflation particularly tough to battle.

(a) Explain the key causes of stagflation in UK. [10]

(b) Discuss the most appropriate policy that a government could adopt when confronted with stagflation. [15]

6. Trade protection hurts the economy of the country that imposes it.

(a) Explain how a country could impose trade protection to reduce its imports. [8]

(b) Discuss the extent that you agree with the above view. [17]

SUGGESTED ANSWER

Question 1

The US economy has reported economic growth and falling unemployment. Weather conditions have improved in Texas, the top US producing state of cotton. Meanwhile, more consumers have opted for synthetic fibre apparel over cotton apparel due to increased quality and comfort of synthetic fibres.

Using economic analysis, discuss the effects of these events on the U.S. cotton market and its related markets. [25]

Question Interpretation

Three events highlighted:

1. Rising income
2. Improvement in weather
3. Switch from cotton apparel to synthetic apparel

Students need to demonstrate a clear understanding of the impact on the price and output of at least three markets:

1. Cotton market
2. Cotton apparel market
3. Synthetic fibre market
4. Synthetic apparel market

Economic concepts assessed:

1. Determinants of demand and supply for goods and services
2. Determination of equilibrium market prices
3. Applications of demand and supply analysis to various markets
4. Concept of price elasticity of demand/supply, income elasticity of demand

Student should be able to:

1. Identify the main influences on demand and supply
2. Apply knowledge of basic model of demand and supply to various markets
3. Understand the significance of demand and supply factors in influencing the price and quantities traded
4. Explain elasticity concepts and its applications
e.g. an understanding of how elasticities will affect the extent of increase in price and output of respective markets

Student should use the following analytical framework:

1. Price adjustment process

Suggested Approach

Part 1: US cotton market

[Explain] Improved weather conditions in Texas, increase in quantity supplied at each price, increase in supply, rightward shift of supply curve.

[Illustrate] Draw demand-supply curves to show that given different PED, the extent of change in price and quantity is different.

[Outcome] Cotton market sees a larger increase in output and smaller fall in price if demand is price elastic rather than price inelastic.

[Explain] Economic growth and increased employment leads to increased household income and increased purchasing power. Assuming that cotton is a normal good, there will be an increase in demand for cotton.

[Illustrate] Draw demand-supply curves to show that given different PES, the extent of change in price and quantity is different.

[Outcome] Cotton market sees a larger increase in output and smaller increase in price if supply is price elastic than if supply is price inelastic.

[Explain] Consumers start to switch to synthetic apparel from cotton apparel. Since cotton is a raw material (factor input) to production of cotton apparel, the fall in purchase of cotton apparel will lead to a fall in the quantity of cotton required to produce the apparel. This will lead to less quantity demanded of cotton at each price, thus the demand will fall.

[Outcome] There will be a fall in demand for cotton; however there is a corresponding increase in demand due to increased income. The net effect has to be explained and this requires judgment.

[Evaluation] The direction of change is dependent on how much household income has increased and how much of taste and preference has changed in favour of synthetic apparel. Cotton is used to produce items other than apparel, such as bedsheets, stuffing in furniture and components of plastics and insulation, so the increase in demand when income increases can be significant in comparison to fall in demand from people switching over to purchase synthetic apparel. Income elasticity for demand is larger than one. On the overall, demand for cotton could still increase.

[Analysis] Assume that the demand for cotton increases, the combined effect from increase in both demand and supply will lead to increase in output. The new equilibrium price is however ambiguous.

[Illustrate] The combined effects from both demand and supply changes based on the expected value of PED and PES and the expected extent of shifts.

[Evaluation] PES is low due to cotton being agricultural product + increase in supply likely significant due to Texas being largest producer in US.

PED is low due to importance as a factor input to the final goods produced + shift in demand is significant.

Make a reasonable judgment on whether demand shifts more than supply or vice versa.

[Outcome + Evaluation] Both PES and PED of cotton less than one, but $PES < PED$; demand increases more than increase in supply; the outcome is that new equilibrium quantity will increase and significant increase in price. (Show market adjustment process)

Part 2: Cotton apparel market

[Explain] Increase in demand for cotton apparel due to economic growth since cotton apparel is a normal good. Demand for cotton apparel is likely to be price elastic due to the large availability of substitutes available.

[Explain] Decrease in demand for cotton apparel due to consumers switching to synthetic apparel. The net effect on demand depends on the strength of opposing effect.

[Evaluation] It is likely that the improved quality of synthetic fibres may have encouraged consumers to switch over to synthetic apparel, as it has features such as minimal creasing or quick dry. The overall effect on demand could be a fall.

[Explain] Cheaper cotton due to good weather conditions will increase the supply of cotton apparel as it reduces the cost of production. The extent of increase in supply will depend on the proportion of cost of cotton to the entire cost of producing cotton apparel. The supply is likely to be price elastic because cotton apparel is a manufactured good and it can be stored.

[Outcome + Illustration + Evaluation] The price of cotton apparel will definitely fall but the new equilibrium quantity will depend on the extent of fall in demand and rise in supply. If demand falls more than the increase in supply, the new equilibrium quantity will fall. If supply increases more than the fall in demand, the new equilibrium quantity will increase. It is likely that the demand falls more than increase in supply as falling cost of cotton may not be a significant part of production cost for cotton apparel (to consider other aspects such as logistics, wages, rental etc.).

Part 3: Synthetic apparel market

[Explain] The switch from cotton apparel to synthetic apparel will mean increase in demand for synthetic apparel. In addition, economic growth will reinforce the increase in demand as purchasing power of households increase and more synthetic fibre is demanded at each price due to it being a normal good.

[Illustrate] Given the increase in demand, the supply is assumed unchanged. Show on diagram the result of an increase in demand and the outcome on different PES.

[Outcome + Evaluation] The extent of increase in price and quantity depends on the PES of synthetic apparel. The PES is likely to be more than one as synthetic fibre is a manufactured good where its production can be easily adjusted in response to price change. Since $PES > 1$, there will be a more significant increase in quantity as compared to the proportion of increase in price.

Mark Scheme:

Level	Descriptors	Marks
L3	Analysis should include application of elasticities with links to effects on the price and output of respective markets. Combined effects of events on P and Q. All three markets must be considered.	15 – 21
L2	Only two markets, including cotton market are considered. Analysis is incomplete and there is limited use of elasticity concepts. Considers simultaneous shifts that are not well developed.	10 – 14
L1	Smatter of points and unable to consider the effects of events found in preamble on cotton market and its related markets meaningfully. Analyses only one market. Single shifts in each diagram and failed to combine the effects together. Sees each event as independent shifts.	1 – 9
Evaluation		
E2	Able to make judgment on extent of shifts and the relevance of elasticity concepts with well-reasoned arguments.	3 – 4
E1	Attempt to comment on the extent of shifts and relevance of elasticity concepts but no substantiation.	1 – 2

SUGGESTED ANSWER

Question 2

The increase in foreign worker levy by the Singapore government has led to higher unit labour cost.

- (a) Explain how the above measure could affect the survival of firms in different market structures. [10]
(b) Discuss whether firms in the real world set prices at profit-maximising level. [15]

Question Interpretation

In part (a), students need to reference to the preamble given. It is given that the foreign worker levy will affect labour costs and result in higher unit labour cost, including raising marginal cost of production for firms.

Question mentioned different market structures. Students are free to consider any and at least two of the four market structures learnt. However, in view that it is in the Singapore context, there are hardly any monopolies. In addition, perfect competition is a theoretical extreme not to be applied in Singapore context.

Choice of market structures:

1. Monopolistic competition
2. Oligopoly

Economic model: cost-revenue curves

Economic concepts:

1. Survival – make at least normal profit
2. Higher unit labour cost – increase in marginal cost and average cost

In part (b), students need to consider if firms in the real world set prices at profit-maximising level, which is where $MC=MR$. This applies to firms regardless of the type of market structures they operate in.

Thesis-Antithesis-Evaluation structure applies:

Thesis: Firms do seek to profit maximise at $MC=MR$

Antithesis: However, there are certain situations where firms may choose not to profit maximise at $MC=MR$

Evaluation: Judgment on whether firms set prices at profit maximising levels in view of differences in objectives, presence of government intervention, short run vs. long run considerations, contestability or level of information available.

Suggested Approach

Part (a)

Introduction

Firms in Singapore face rising labour costs due to imposition of foreign worker levy. If a firm hires foreign workers, it will have to pay a levy (fixed amount) per head to the government on top of the workers' wages paid. This raises the marginal cost of production (MC) in firms who hire foreign workers. These firms could be operating in the F&B, hospitality, construction or shipping industries.

The survival of a firm requires that the firm at least makes normal profit in the long run. In view that this is a structural change that is permanent in the Singapore labour system, firms are due to consider it as a long term change in MC rather than just a short term increase in costs.

Body

Effect of increase in MC on a monopolistic competitive (MPC) firm:

[Example] MPC firms could be cafes that hire foreign waitresses.

[Explain] These firms will experience an increase in MC, ceteris paribus. MPC firms are characterised by large number of small firms, low barriers to entry (BTEs), some degree of imperfect knowledge and differentiated products. The low BTE results in highly competitive firms that constantly seek to create a niche through creating differentiated products that will capture the likes of a certain group of consumers. This allows them to enjoy a certain degree of market power where increase in price will not result in all quantity demanded lost.

However, due to the large number of substitutes available in the industry, each firm's demand (AR) is likely to be highly price elastic and small relative to the size of the entire industry. The highly competitive environment results in MPC firms making all three types of profits in the short run, but only normal profits in the long run. Some MPC firms do successfully retain their supernormal profits and grow to be large firms over time.

[Illustrate] Cost-revenue curves of a MPC firm that makes normal profit faces the increase in MC. The new $MC=MR$ condition when applied, results in a price that is lower than the AC. The firm will shut down eventually (unable to survive).

In the SR, the MPC firm can remain in operation as long as the $P > AVC$. If the firm manages to differentiate its product according to the likes of the consumers and gains a larger AR, the firm may be able to survive in the LR.

Effect of increase in MC on an oligopoly:

[Example] Oligopolies could be property developers that build residential or commercial properties and hires foreign construction workers.

[Explain] These firms will experience an increase in MC, ceteris paribus. Oligopolies are characterised by small number of large firms, high BTEs, high degree of imperfect knowledge and differentiated/homogenous products. The high BTE results in a less competitive environment where existing firms are able to keep out new entrants and gain large market power and enjoy gains in revenue as the industry size grows. These firms are able to increase price without losing significant quantity demanded. In fact, due to the presence of few substitutes available in the market, each firm's AR is price inelastic and large relative to the size of the entire industry. These firms are able to make supernormal profits (SNP) in the LR as they are able to effectively keep put new entrants from competing away their market share.

[Illustrate] Cost-revenue curves of an oligopoly that SNP faces the increase in MC. The new $MC=MR$ condition when applied, results in a price that is still higher than the AC. The firm retains its SNP and is able to survive.

The main reason is that the oligopoly is likely (though not definitely) to have SNP in existence, thus with the increase in MC, it will reduce the level of SNP available to the firm but not cause it to make losses (subnormal profit) and face the possibility of shut down. The oligopolies seem to be able to survive better than a firm that is operating in the MPC industry.

Mark Scheme:

Level	Descriptors	Marks
L3	Has good description on the firms from different market structures; able to link the effects of foreign worker levy on MC/AC to the features of different market structures in Singapore. Has well developed and explained diagrams to show the possible survival of firms/how a firm does not survive. Cap at 8m for a well-developed answer but no reference to Singapore context.	7 – 10
L2	Able to explain the effects of foreign worker levy on marginal cost and average cost. Underdeveloped explanation on the effect of changes in MC and AC on the profit level of different firms. Little explanation on features of firms in different market structures.	5 – 6
L1	Smatter of points that show some understanding of survival of firms and the different market structures.	1 – 4

Part (b)

Introduction

Profit-maximising level refers to output that is where $MC=MR$, and the corresponding price is a point on the AR. Firms are assumed to be profit maximisers and this is the fundamental assumption applied in the allocation of resources in an economy.

Body

Thesis: Firms do seek to profit maximise at $MC=MR$

[Point] Firms operate to maximise their profits to ensure survival as explained in part (a). This can be observed in the real world and is applied across all types of firms regardless of market structure.

[Example] When the price of sugar and ingredients went up, KOI issued a notice at all its outlets explaining that the price of its bubble tea will increase. This is aligned with the profit-maximising condition.

[Illustrate] The increase in MC will change the $MC=MR$ condition, resulting in an increase in price and fall in output. (Note that this is different from part (a) because this is concerned with how the price and quantity will change following the shift of MC)

[Example] When there is an increase in demand for mandarin oranges during the Chinese New Year season, fruit sellers raise the price of mandarin oranges. This is aligned with profit-maximising condition.

[Illustrate] The increase in AR will change the $MC=MR$ condition, resulting in an increase in price and output sold.

Antithesis: However, there are certain situations where firms may choose not/be unable to profit maximise at $MC=MR$

[Point 1] Lack of perfect information / Costly to acquire the information on cost and revenue

[Explain] The acquisition of perfect information may not be feasible as it is very expensive. In addition, there may be many different types of raw materials involved in the production of a good, thus the precise marginal cost is difficult to determine. An exquisite dish that uses

multiple types of ingredients in creating the broth/course with unique garnishes will be costly but it will be difficult to calculate the actual MC. It is likely that a restaurant may end up applying a cost-plus pricing strategy.

[Explain] Unable to accurately plot the AR and AC curves, thus the MR and MC are not known. This is due to dynamic market conditions that cause the AR and AC to change frequently. This applies especially to fast moving goods or goods that are fashionable only for a short period of time (e.g. rainbow loom kits).

[Point 2] Alternative objective: maximise revenue (can include other objectives such as growth maximisation)

[Explain] This could be tied to lack of perfect information. It is easy to record changes in revenue earned by a firm and also easy to adjust the output when the revenue starts to fall beyond a certain quantity sold. This means that the firm has reached $MR=0$ and there is no need to increase output further.

Another reason could be the nature of the product sold in this firm. Insurance agents, car salesmen are often paid through commission and their remuneration will increase with the value of the products they sell. As such it will naturally create a culture within such firms to seek revenue maximisation rather than profit maximisation.

When a firm has grown very large, the operation of the firm is no longer managed by its owners, but rather its managers. In this case, the managers may find it easier to account to the shareholders on the performance of the firm by showing records that the revenue of the firm has been increasing and maximised. This can be related to managerial utility as well.

[Illustrate] The firm produces at $MR=0$ instead of at $MC=MR$.

[Point 3] Government regulation

[Explain] There are some goods that are considered necessities and should be affordable to the masses. A public utilities/public transport firm may be subjected to the regulation by government authorities to charge prices that are lower than at $MC=MR$. These firms are often natural monopolies that enjoy significant IEOS, thus conferring upon them significant market power and the potential to exploit consumers for their own high levels of SNP. In this case, a government may require the firm to practise MC pricing so that $P=MC$; the allocative efficient quantity is achieved. This is for the sake of equity and equality amongst the population in a country.

[Illustrate] The firm is expected to produce at $P=MC$ instead of $MC=MR$. (Students can draw the natural monopoly diagram or a typical monopoly diagram.)

Evaluation

There are many reasons why a firm may choose to deviate from the profit-maximising level of $MC=MR$. However, this is not to say that a firm does not wish to profit-maximise. They may be subjected to different situations and scenarios that require them to act in their best interests.

For instance, a firm may practise limit pricing or growth maximisation strategy to ensure that its firm can outgrow its competitors and gain monopoly status or high market power. This may not be aligned to the current $MC=MR$ condition presented by their cost revenue curves but it is aligned to the LR perspective of survival and retention of profits. When a government chooses to intervene in the market to increase the contestability, an incumbent may also choose to deviate from the $MC=MR$ condition.

Ultimately, in an environment where there is no government control, any firm would desire to profit-maximise; but the main deterrent would be the difficulty in seeking the perfect information to do so. Also the dynamism of the real world market conditions prevent the firms from profit-maximising at $MC=MR$.

Mark Scheme:

Level	Descriptors	Marks
L3	Well referenced diagrams that explain the alternative objectives of firms. Balanced answer with elaborated thesis and antithesis. At least two well developed antithesis points that explain firms' alternative objectives or reasons for not profit-maximising. Able to use examples to substantiate points mentioned in essay. Considered a thesis even if student gives a theoretical answer (stating that it is an assumption that all firms aim to maximise profit)	9 – 11
L2	Balanced answer but contains some conceptual errors. Underdeveloped thesis/antithesis but able to address question Lack of examples to exemplify points mentioned in essay. Some diagrams but inaccurate analysis OR no diagram to substantiate points mentioned in essay	6 – 8
L1	Shows some attempt to explain profit-maximisation of firms but did not show proper economic analysis. One sided answer that has some reference to the factors attributing to firms not profit maximising.	1 – 5
Evaluation		
E2	Able to make judgment on the importance of different factors affecting the firm's decision to profit maximise.	3 – 4
E1	Attempt to comment on the decision of firms choosing to profit maximise or not.	1 – 2

SUGGESTED ANSWER

Question 3

With reference to examples, discuss whether there is a need to change the current policies adopted by the Singapore government to achieve efficiency. [25]

Suggested Answer Outline

Efficiency → Economic Efficiency → Allocative & Productive Efficiency

Allocative Efficiency

- Production or consumption of a good up to the point where the last unit provides a marginal benefit to consumers equal to the marginal cost of producing/ consuming.
- Price = Marginal Cost: Value society puts on that level of output produced equals to the value of resources used to achieve that level
- Social welfare is maximized with no [deadweight loss](#), not possible to make one better off without making someone else worse off.
- When a market fails to allocate resources efficiently, there is said to be market failure. Market failure may occur because of externalities, imperfect information, and imperfect competition.

Singapore policies to deal with externalities

- Eg, traffic congestion is costly to the individuals, third parties, society → loss of productive hours; costs incurred due to environmental pollution, wasted fuel and adverse health effects.
- Regulating vehicle growth via a quota and bidding system Certificate of Entitlement (COE) and Additional Registration Fee (ARF).
- Managing traffic demand through **Electronic Road Pricing (ERP)** System based on a pay-as-you-use principle, where motorists are charged when they use priced roads during peak hours. ERP rates vary for different roads and time periods depending on local traffic conditions. This encourages motorists to change their mode of transport, travel route or time of travel.
- Need to change? – Price inelastic traffic demand during peak hours leads to greater expenditure/ welfare loss for motorists. Depends on ability of government to put revenue collected to good use to deal with traffic congestion. A holistic and integrated approach is required, including building more roads, implementing traffic engineering solutions and promoting the use of public transport. Need to speed up developments to cope with targeted population growth, improve service standards of public transport by introducing more competition, restore public confidence in view of service disruptions. Also important to change mindset on car ownership as a status symbol.

Singapore policies to deal with imperfect information

- Eg, healthcare
- One party has more or better information than the other.

Productive Efficiency from society's POV

Current Policies adopted by the Singapore Government – Need to change?

Transition Support Package (TSP)

- Launched in 2013, comprises Wage Credit Scheme (WCS), Corporate Income Tax (CIT) rebate, and Productivity and Innovation Credit (PIC) bonus.
- In total, the TSP is estimated to disburse S\$7.5 billion over three years, higher than the original estimate of S\$5.3 billion. TSP will be phased out gradually.

Wage Credit Scheme (WCS)

- In Singapore Budget 2013, the Government announced that it would provide support to help businesses raise workers' wages through WCS. Through WCS, businesses affected by economic restructuring will receive Government support to manage rising labour costs. The payouts will allow businesses to free up resources to make investments in productivity and to share the productivity gains with their employees. Under the scheme, the Government will co-fund 40% of wage increases given to Singaporean employees earning a gross monthly wage of up to \$4,000. Wage increases given in 2013 to 2015 will be eligible. This is part of its three-year transition support package to help companies during this period of restructuring, under its Quality Growth Programme.
- Need to change? – The scheme was refined in Budget 2015, where it was announced that WCS would be extended to 2017, but the government will only co-fund 20%, down 40%, of the wages increases given to Singaporean employees earning a gross monthly wage of up to \$4,000. The WCS will be extended for 2016 and 2017 to give employers more time to adjust to the tight labour market. This extension will cost about S\$1.8 billion in total.

Corporate Income Tax (CIT) Rebate

- To relieve business costs, a 30 per cent CIT rebate, capped at \$30,000 per Year of Assessment, would be granted to companies for three years, from 2013 to 2015.
- Need to change? – The CIT rebate would be extended for 2016 and 2017 at the same rate of 30 per cent of tax payable, but up to a lower cap of S\$20,000 per YA. The reduced cap ensures that SMEs are the main beneficiaries of the rebate. Singapore's corporate tax rate is currently 17 per cent. The extension of the rebates is expected to cost the Government \$800 million over two years.

Productivity and Innovation Credit (PIC) Scheme

- The PIC scheme, introduced in 2010, gives generous tax deductions to companies investing in six qualifying categories related to productivity. The qualifying activities are: acquisition and leasing of automation equipment; training; acquisition of intellectual property rights; registration of patents and trademarks; R&D; and design projects. The programme is part of government efforts to restructure the economy and raise productivity.
- Need to change? – A key limitation of the PIC scheme was that it was inaccessible to firms engaging in research and development (R&D). Many firms, especially small and medium-sized enterprises (SMEs), found it tough to use the scheme for R&D as this type of spending was often more difficult to accurately quantify compared with spending on technology and equipment such as iPads and printers, or staff training. The Government should have a clearer definition of what R&D means, so the money can go to companies that really improve productivity. R&D claims often involve protracted discussions on the technical eligibility of the projects. While it is important to ensure that there is no abuse of the scheme, it is equally important that the process of making R&D claims is not overly onerous or the application of the R&D definition so stringent as to render the scheme ineffective.

- **PIC Bonus:** To encourage businesses to boost their productivity, the government enhanced the PIC scheme by introducing a new cash bonus for participating firms in 2013. Businesses that spend a minimum of \$5,000 in PIC activities in a year will receive a cash bonus equivalent to the amount spent. The bonus will be capped at \$15,000 per year for the next two years of assessment, up to 2015. It will be paid over and above the existing PIC benefits. As at August 2014, more than \$1.8 billion in tax savings and cash payouts had been granted to businesses under the scheme. The PIC bonus will expire in 2015 because it was intended as a transitional measure and has been successful in encouraging businesses to take advantage of the main PIC scheme, spreading the culture of productivity among SMEs (small and medium-sized enterprises).

Policies to help firms achieve greater EOS, more productive efficient from society's POV

3 measures to support local firms to internationalise - a key strategy to help them grow their revenue (Budget 2015)

- First, the Government will raise the support level for small and medium enterprises (SMEs) for all activities under IE Singapore's grant schemes from 50 per cent to 70 per cent for three years. This will benefit about 700 projects.
- The Government will also enhance the Double Tax Deduction for Internationalisation scheme to now cover salaries incurred for Singaporeans posted overseas. This will provide greater support to companies venturing overseas, by co-sharing their risks and initial costs of expanding overseas, as well as creating skilled jobs for Singaporeans.
- The third measure is a new tax incentive, the International Growth Scheme (IGS), to provide support to meet the needs of larger Singapore companies in their internationalisation efforts. Qualifying companies will enjoy a 10 per cent concessionary tax rate on their incremental income from qualifying activities. It will encourage more Singapore companies to expand overseas, while anchoring their key business activities and HQ in Singapore

Collaborative Industry Projects (CIP) initiative

- Budget 2015 announced a new incentive for firms that participate in industry-wide collaborations to help solve productivity challenges in their sector. This Collaborative Industry Projects initiative will be adopted in seven priority industries, including food manufacturing, retail, textile and apparel and furniture manufacturing, and will cost the Government an estimated \$100 million over three years.
- The Collaborative Industry Projects (CIP) initiative supports collaborations between enterprises and industry partners, such as Trade Associations and Chambers and solution providers, to address common industry-specific and business challenges. Enterprises and industry partners across all sectors are encouraged to form consortia to develop and deploy solutions that will help enterprises innovate and improve their productivity.
- Examples of projects include: Optimising resources through resource sharing or shared services, Outsourcing non-core business functions, Streamlining processes or upgrading capabilities along the value-chain, Co-innovating new product, service offerings and co-exploring market opportunities
- Small and medium sized enterprises (SMEs) will also receive more help in working with large multinationals to develop world-class capabilities. The Government will extend the Partnerships for Capability Transformation (PACT) scheme, which was initiated in the manufacturing sector, to other sectors.
- Another new initiative is the Land Productivity Grant, to support firms which intensify their use of land in Singapore. Help will also be given to those who choose to relocate some operations offshore, including to the immediate region, while retaining core functions in Singapore and saving land. This will cost the Government about \$60 million.

The Government is also launching an SME Talent Programme, which will provide awards to encourage polytechnic and Institute of Technical Education (ITE) students to work at SMEs upon graduation. In addition, the Government will improve the accessibility of Government support schemes for SMEs.

Overall

- Current policies are relevant to achieve efficiency and need not be changed. In fact, need to retain current policies due to domestic and external challenges, eg, ageing population, increased external competition, global economic uncertainty.
- Singapore Government needs to constantly review its policies and make regular refinements. Safeguards in place, eg, expiry date for policies, public consultation, annual budget announcements, parliamentary debates.
- Need to change policies adopted to achieve efficiency if circumstances change, eg, if global or regional economic conditions improve, government can remove corporate tax rebates.

Level	Descriptors
L3 [15 – 21]	<ul style="list-style-type: none"> • Clear and well developed economic analysis, good structure. Provides a two-sided discussion on whether there is a need to change the current policies adopted by the Singapore government to achieve efficiency. Discussion focuses on both allocative and productive efficiency. Good use of relevant exemplification. [No cap] • Explains how the Singapore government achieves efficiency by adopting the current policies. Covers either allocative or productive efficiency only, with clear discussion on whether there is a need to change the current policies adopted. Good use of relevant exemplification. [Cap 18m] • Explains how the Singapore government achieves efficiency by adopting the current policies only. Covers both allocative and productive efficiency. Good use of relevant exemplification. [Cap 15m]
L2 [10 – 14]	<ul style="list-style-type: none"> • Explains how the Singapore government achieves efficiency by adopting the current policies. Covers either allocative or productive efficiency. Some attempt to discuss whether there is a need to change the current policies adopted by the Singapore government to achieve efficiency, but lacking clarity and/or consistent reference to context. [Cap 14m] • Explains how the Singapore government achieves efficiency by adopting the current policies only. Covers either allocative or productive efficiency. Uses relevant exemplification. [Cap 12m] • Largely theoretical answer explaining how the Singapore government can achieve efficiency. Covers both allocative and productive efficiency. [Cap 10m]
L1 [1 – 9]	<ul style="list-style-type: none"> • Weak explanation on how the Singapore government achieves efficiency by adopting current policies. Lacking clarity and/or consistent reference to context. [Cap 9m] • Largely theoretical answer explaining how the Singapore government can achieve efficiency. Covers either allocative or productive efficiency. [Cap 7m]
E2 [3 – 4]	Evaluation with good in-depth economic justification
E1	Evaluation without proper economic justification

[1 - 2]	
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SUGGESTED ANSWER

Question 4

Balance of payments serves to highlight a country's competitive strengths and weaknesses.

Assess the extent to which an improvement in the living standards of an economy requires that achieving a healthy balance of payments be the top economic priority.

[25]

1) Introduction:

- Define standard of living (SOL) & explain how material & non-material SOL is measured: SOL refers to the welfare/well-being for the average person in a country. Living standards of an economy can be in terms of material and non-material. In the narrow, measurable sense, material standard of living refers to the amount of goods and services that an average citizen can consume over a period of time, usually a year. Non-material living standard can be defined as the quality of life and measurements usually include stress levels, income inequality and the state of environment.
- Define healthy BOP: A BOP is considered to be healthy as long as the deficit or surplus is not huge or persistent.
- To enjoy an improvements in living standards, government generally aim to achieve the following macroeconomic goals; price stability, sustainable economic growth, low unemployment and healthy BOP but a government's policy decision inevitably leads to conflicts, or trade-offs in macroeconomic objectives and it is impossible to achieve all the goals simultaneously.
- Hence in the light of the above, this essay will assess the extent to which achieving a healthy BOP be the top economic priority to improve the living standards of an economy.

Main Body:

2) Thesis – Achieving a healthy BOP should be the top economic priority to achieve better living standards

[Explain how achieving a healthy BOP will improve living standards]

Thesis:

- In order to pursue a healthy BOP, a country may choose to increase its interest rate or depreciate its currency.
- A depreciation of the currency to improve the current account balance could lead to a rise in net exports causing AD to rise. This will in turn causes firms to produce more output and employ more workers. As a result, there is a fall in unemployment. Higher imports means the country could possibly enjoy a higher national income and more variety of goods and services. [improve material SOL]
- Achieving a healthy BOP can ensure a more stable exchange rate of the country's currency. This will in turn promote higher volume of trade as exporters and importers are more certain of the value of the currency and thereby giving them more confidence to increase trade. It also encourages higher investment in the country since firms are more certain of the returns. Higher investment will increase AD and through the multiplier process, national income will rise by multiple times. This in turn help to create jobs as firms step up their production and reduce unemployment [improve material SOL]

3) Anti-thesis – Achieving a healthy of payments should not be a top priority as there are other objectives are also as important to improve living standards

[Explain that due to trade-offs, conflicts in macroeconomic objectives, achieving a healthy BOP alone will not improve material living standards & non-material living standards and explain that 1 other macro objective (e.g. price stability, sustained economic growth) and 1 micro objective (e.g. income inequality/ environmental standards) or 2 micro objectives are also as important to improve material and non material living standards]

Conflicts in macroeconomic objectives: If the country chooses to increase its interest rate/ depreciate its currency (choose 1 depending on the thesis):

- However, with an increase in interest rate, this will bring about a fall in consumption and investment expenditure due to higher cost of borrowing, this leading to a fall in AD and national income via the reverse multiplier effect. Should the economy operates below full employment, there will be a fall in real national income leading to negative economic growth and rising cyclical unemployment. [worsening material SOL]
- Similarly, a depreciation of the currency causing AD to rise may lead to demand pull inflation if the economy is operating at full employment output. A high inflation can cause the country to lose its export competitiveness and at the same time lowers the purchasing power of the citizens. [worsening material SOL]

Explain any 1 macro-objective (with exemplification) that is more important to improve material SOL

- Sustained economic growth is more important than healthy BOP and should be a top priority to improve SOL.
- To generate sustained economic growth, governments can use demand-management policies such as fiscal or monetary policies, where the former adjusts government spending or taxation, while the latter adjusts interest rates or exchange rates, both to influence the level of economic activity within the economy. This will cause an increase in AD.
- The increase in AS (or the expansion of an economy's productive capacity) can be brought about by the use of supply-side policies such as wage and incomes policies or retraining of workers.
- When there is actual economic growth, SOL will be improved.
- This is because actual economic growth means that there is more output produced within the economy, which then implies that more goods and services is available for consumption. An increase in AD brought about by demand-management policies as mentioned earlier will cause NY to rise by a multiplied amount from Y to Y' through the multiplier effect, where the initial increase in spending brings about additional rounds of spending.
- If economic growth is sustained over a longer period of time due to an increase in *both* AD and AS, the increase in NY can be sustained permanently, leading to an increase in SOL *permanently*. In this case, the rise in NY does not conflict with rising GPL and real income is protected. This increase in SOL is sustained.

Explain any 1 or 2 micro-objective (with exemplification) that is more important to improve non material SOL

- Environmental standards are more important than healthy BOP and should be a top priority to improve SOL.
- Environmental standards refer to the quality of environment that can be measured by indicators such as the PSI (Pollutants Standards Index). Making healthy BOP the top priority in order to improve material SOL can ironically lead to a worsening of non-material SOL causing SOL overall to be lower.
- For example, negative externalities such as pollution have brought harmful effects to the quality of the environment in China because it is the so-called “factory of the world”. Over the last decade China’s key focus was on rapid economic growth driven by exports and FDI inflows. Whilst materially it can be said the SOL in China has jumped significantly (for instance, China has grown to become the second largest economy in terms of size of GDP), it came at a heavy price in terms of high level of pollution from factories and motor vehicles. Out of the world’s 20 most polluted cities, the top 16 came from China. It is not uncommon to see many parts of China covered by smog including Beijing.
- Therefore, if the top priority is instead on improving environmental standards through the focus on green or sustainable growth e.g. the use of green technology; alternative fuels e.g. solar and biofuels; SOL may be improved to a greater extent.

4) Conclusion + Evaluation

- While achieving healthy BOP is no doubt important to improve living standards, given the dynamic nature of economies, it may not always be the top economic priority. This is because the achievement of healthy BOP may not improve non material living standards and there could be tradeoffs which could lower living standards as a whole. Hence there is a need to balance negative impact on the quality of life from achieving a healthy BOP. Policies could be implemented alongside the interest rate/exchange rate policy to also address issues of environmental degradation for instance, to improve living standards of an economy.
- Assess the extent to which depends on the state of the economy. For instance, when an economy like the US is facing high unemployment levels, the top economic priority then could be to stimulate economic growth and provide job opportunities to raise employment levels as taking steps to achieve macroeconomic goal would likely improve material SOL the most.
- Assess the extent to which depends on the stage of development an economy is at. For more developed economies, more emphasis will be placed on distributing the gains of growth more evenly to ensure that SOL is increased uniformly throughout.

Level	Description	Marks
L3	A balanced answer that displays strong economic analyses and conveys good understanding of question requirements by assessing the extent of improvement in living standards through achieving a healthy balance of payments.	15 – 21
L2	For an undeveloped discussion or unbalanced argument on how achieving a healthy balance of payments will improve living standards.	10 – 14

L1	For an answer that briefly displays knowledge of macroeconomic objectives and living standards OR a brief and undeveloped answer.	1 – 9
E2	For well-substantiated opinions with economic analysis.	3 – 4
E1	For non-substantiated opinions without economic analysis.	1 – 2

SUGGESTED ANSWER

Question 5

UK is in battle over stagflation. Growth has slowed due to its austerity measures and the European debt crisis, while unemployment and oil prices have risen. Economists consider stagflation particularly tough to battle.

- a) Explain the key causes of stagflation in UK. [10]
- b) Discuss the most appropriate policy that a government could adopt when confronted with stagflation. [15]

Approach

Part (a) - Explain the key causes of stagflation in UK.

- Define stagflation - persistent high inflation combined with high unemployment and stagnant demand in a country's economy.
- Based on the preamble, UK was facing a few issues which were the key causes of its stagflation:
 - Austerity measures: To improve its budget position, the UK govt had to reduce govt spending and increase taxes. Impact on AD: Fall in G and rise in T (leading to fall in C and I) -> Fall in AD.
 - European debt crisis: \downarrow NY in EU \rightarrow DD UK's export \downarrow (assuming normal goods) \rightarrow \downarrow net exports, c.p condition. Low business confidence \rightarrow Less inflow of FDI \rightarrow \downarrow AD \rightarrow Fall in X_d and I_d \rightarrow Fall in AD
 - Fall in AD \rightarrow fall in GPL and NY (Explain the multiplier process)
 - Note that at the Keynesian range (not at full-employment), fall in AD \rightarrow fall in NY only (GPL may not fall)
 - Note that students may explain AD increases at decreasing rate given that the preamble stated slower growth]. Slower rise in AD \rightarrow rise in GPL and NY
 - Rising oil prices: increase in the unit cost of production \rightarrow firms driven by profit-motive respond by increasing the prices of their goods and decreasing their output level. Consumers respond to increase in prices by reducing consumption \rightarrow \rightarrow Fall in AS (upward shift of AS curve and a movement along AD)
 - Fall in AS \rightarrow rise in GPL and fall in NY
- If fall in AD and AS \rightarrow increase in cyclical unemployment and fall in NY Note: Fall in AS must be $>$ Fall in AD \rightarrow Rise in GPL (Illustrate with a diagram) or
- If rise in AD and fall in AS \rightarrow stagnant / slow economic growth (slower rise in NY and rise in GPL) (illustrate with diagram)
- Stagnant / Fall in NY and Rise in GPL \rightarrow Stagflation

Level	Descriptors
L1 Lower (1 -2 m)	<ul style="list-style-type: none"> Do not understand the meaning of stagflation. Unable to highlight the twin problem of slow or negative economic growth and inflation Answers are mostly irrelevant, or largely descriptive and weak in economic analysis. Only a few valid points and definitions are made incidentally but largely insignificant.
L1 Upper (3 -4 m)	<ul style="list-style-type: none"> Able to explain what is meant by stagflation but unable to respond in the context of UK. Did not make reference to the preamble and did not use them as the key causes of stagflation. A theoretical answer that explains the reasons for recession and inflation. May not link the two together and hence unable to highlight the twin problem of slow or negative economic growth and inflation Did not use AD/AS analysis
L2 (5 – 6m)	<ul style="list-style-type: none"> Answer shows knowledge of how the events in the preamble lead to fall in AD and AS but failed to explain how these in turn leads to increase in GPL and fall / stagnant in NY (stagflation). Have a theoretical explanation of how fall in AD and AS lead to increase in GPL and fall in NY but no / limited reference to the preamble (mentioning only the event). Explanations were accurate but undeveloped. Use AD/AS analysis
L3 Lower (7-8m)	<ul style="list-style-type: none"> Answer shows good knowledge of how the events in the preamble lead to fall in AD and AS and how these in turn lead to increase in GPL and stagnant / fall in NY (stagflation). Each effect may be seen in isolation rather than a combined. Answer shows a good knowledge of how the events in the preamble lead to stagflation. Make good reference to the preamble in the explanation. Clear evidence of the ability to use AD/AS analysis with accurate reference to the question.
L3 Upper (9 – 10 m)	<ul style="list-style-type: none"> Thorough knowledge of facts in the given context (preamble) with an excellent ability to describe & explain in a precise, logical, reasoned manner in explaining why AD and AS falls Clear evidence of the ability to use AD/AS analysis (with accurate reference to the question) to explain how stagflation arose. Able to explain the combined effects using the AD/AS diagram with no contradiction (i.e GPL does not fall) Graphs are properly drawn and explained and consistent with the explanation.

Part (b) - Discuss the most appropriate policy that a government could adopt when confronted with stagflation

[Note that the question is on 'a' government' which is generic. Hence students need not discuss in UK context. Nevertheless, there is a need to discuss in context. There should be conditions set and assumptions made as students discuss the appropriateness of each of the policies in resolving stagflation]

1) Make clear what is meant by 'appropriate policy'

- What are the criteria for a policy to be appropriate? It must be **e**ffective in resolving the economic issues faced by the country (Eg, UK - slow / negative economic growth and inflationary pressure), are **f**easible and have minimal adverse **s**ide-effects. Best if it is targeted at the **r**oot cause of the issues (e.g. austerity measures, European debt crisis, rising oil prices) and the results can be seen in the shortest time **h**orizon possible. (In short, the most appropriate policy should meet the FRESH criteria)

2) Discuss why economists consider stagflation particularly tough to battle

a) Discuss how demand-management policies can be used but may not appropriate

- Briefly explain how expansionary dd-management (FP or MP) policies work to increase economic growth and discuss why they may not be appropriate (e.g. In UK context, FP- not feasible given UK's budget debts, **S** - **worsen inflationary pressure**, E – not effective given the lack of confidence)
 - FP - Slower economic growth arose due to its austerity measures, i.e. fall in G and rise in T (and hence fall in C and I) -> fall in AD. It is in fact a deliberate policy measure to correct its budget deficit. Hence not feasible to adopt expansionary FP to promote growth.
 - MP - Reducing i/r will be more appropriate as the fall in the unit cost of borrowing will increase the net rate of return of its investment -> increase Id and Cd -> increase AD. However, it may not effective as I and C may be interest inelastic if there is low confidence level. Increase AD may also increase inflationary pressure given the rising oil prices. I may -> rise in AS but only in the LR. Cannot resolve the current inflationary pressure
 - Exchange rate P – Allowing pound to depreciate can help increase X but it may not be effective given that its largest trading partners, ie the EU countries are in debt crisis (from preamble). The depreciation of pound may weaken investors' confidence further -> further reducing I and C (Side-effect) and may even lead to capital flight (hence worsening BOP)
- Briefly explain how contractionary demand-management policies (FP or MP) adopted to control inflation and discuss why they may not be appropriate
 - In the context of UK, since inflation is due to rising oil prices which is a cost-push inflation, it does not solve the root of the problem. In any case FP is already contractionary as it is. Increasing r/I and allowing the pound to appreciate will only stagnate the economy further as I, C and X will fall. Although appreciation of pound does help to reduce the increase in oil prices
- Hence both expansionary and contractionary demand management policies are generally inappropriate as they are either ineffective, does not resolve the root cause of the issues or have severe consequences on the economy.

b) Discuss how trade-policies may be deemed more appropriate to resolve stagflation

- In the context of UK, given its austerity measures, it will not be feasible for UK to rely on domestic firms and households for growth and need to look for external sources of growth; with the European debt crisis, it is necessary for UK to expand its trading partners; with the rising oil prices, it is necessary for UK to look for alternative sources of oil too.
- Hence UK govt can sign more FTAs with many different countries so as to diversify trading partners. However, the effectiveness of this policy is questionable as well, especially when there is a global recession (due to contagion effects from EU debt crisis) which affects all economies.

c) Discuss how supply-side policies (SSP) may be deemed even more appropriate to resolve stagflation

- Discuss how short-term SSP can be used to promote actual growth and counter cost-push inflationary pressure (eg. due to increasing oil prices in UK context):
 - Wage policies to help reduce unit cost of production to firms in view of rising oil prices. E.g. UK govt can request for trade union's support in recommending lower wages for its workers in view of the prevailing economic conditions (or at least ensure that the wage increases will lag behind productivity growth) or subsidise the firms by co-paying the workers. These short-term measures will reduce unit labour costs -> increase SRAS (shift AS curve downward) -> raises actual growth and reduce inflationary pressure.
 - However, these short-term measures do not solve the root causes of the problems and may worsen the govt's budget deficit in UK context
- Discuss how long term supply-side policies (SSP) can be used to promote actual and potential growth and achieve non-inflationary sustained economic growth (LR):
 - Industrial policies to develop dynamic CA - A government can disburse grants and provides tax rebates to attract FDI to promote the development of new growth industries and develop industries with potential CA. E.g. clean energy sector, bio-medical sector, etc. In the LR, with the CA established in these sectors -> promotes export growth-> increase export revenue -> increase AD-> increase real NY more than proportionately through the k effect -> raises actual growth. With increase in FDI in these sectors -> increase capital stock accumulation, technology transfer -> increase productive capacity -> achieves potential growth.
 - Manpower policies to increase productivity. Manpower policies in the form of government spending on training of workers to enhance skill sets of workers (e.g. WTS) -> raise labour productivity -> i) lowers labour cost -> increase SRAS, achieves actual growth; ii) increase quality of labour -> raises productive capacity -> achieves potential growth.
- However, it is important to note that although SS-side policies do not lead to conflicting goals unlike DD-management policies, and can improve economic growth and reduce inflationary pressure in theory, it may not be effective for the following reasons
 - SS-side policies do not resolve the root causes of the economic issues faced by the country. E.g., in UK, the stagflation was essentially due to lack of AD and a supply-shock issue.
 - Increasing productive capacity which is a LT solution cannot resolve current economic issues.

- Providing grants will again worsen its budget deficit problem which may not be feasible.

Judgement

- Agree that stagflation is tough to battle. If the stagflation is purely caused by cost-push inflation, Short term SSP will be the best solution. If there are multiple causes of its stagflation, e.g. in the case of UK, then there is a need to have a **best combination** of policies instead.
- In the **short term**, SSP to reduce unit COP and trade policies such as FTA to diversify sources of input (to avoid higher oil prices) and markets (to reduce contagion effects due to external crisis) and **long term** ss-side policies to develop CA to enhance competitiveness in the international arena.
- **Conditions for success**
 - Sufficient **business confidence** without which I will not increase even with fall in r/i
 - **Effectiveness** of industrial and manpower **policies** without which US will not be able to increase its competitiveness and its expenditure may even worsen its fiscal position

Level	Descriptors
L1 (1-5 m)	<ul style="list-style-type: none"> • Answers are mostly irrelevant, or largely descriptive and weak in economic analysis. • Inadequate development of economic analysis • An answer with very limited ideas relevant to the given context, or containing some conceptual errors.
L2 (6-8 m)	<ul style="list-style-type: none"> • For an under-developed analysis or an imbalanced/ unconvincing discussion of the policies to curb stagflation though there are some correct use of concepts • Expect a theoretical answer with no application to real world context • Use AD/AS framework in the analysis
L3 (9 – 11 m)	<ul style="list-style-type: none"> • For an excellent and comprehensive analysis of each of the policies, how they work and why they may not be appropriate given the context. • It should have at least three policies each focusing on a different aspect of AD or AS, although one could be briefer than the other 2). Only two policies were well discussed (Max 9m) • It should be a balanced discussion examining the pros and cons of each policy in given contexts (may not be based on the preamble) • Excellent use of the AD/AS framework in the analysis
E1	<ul style="list-style-type: none"> • Attempt to make a judgement on the most appropriate policy but justifications are weak.
E2	<ul style="list-style-type: none"> • A sound judgement on the most appropriate policy with strong economic justifications based on the characteristics of the mentioned economy (ies), highlighting necessary conditions, stating implicit assumptions and with a good understanding of the given context / prevailing external economic conditions.

SUGGESTED ANSWER

Question 6

Trade protection hurts the economy of the country that imposes it.

a) Explain how a country could impose trade protection to reduce its imports. [8]

b) Discuss the extent that you agree with the above view. [17]

a) Explain how a country could impose trade protection to reduce its imports. [8]

Approach

To use at least 2 different protectionist measures to explain how a country reduces its imports.

To include tariff as one of the measures to ensure rigour given that it is the only measure where the impact can be analysed using a diagram (quota can be used too)

[Note that in the real world, many countries adopt a wide range of tools that restrict imports. They include Tariffs, Quotas, Exchange controls, Import licensing, Subsidies, Administrative barriers and Procurement policies]

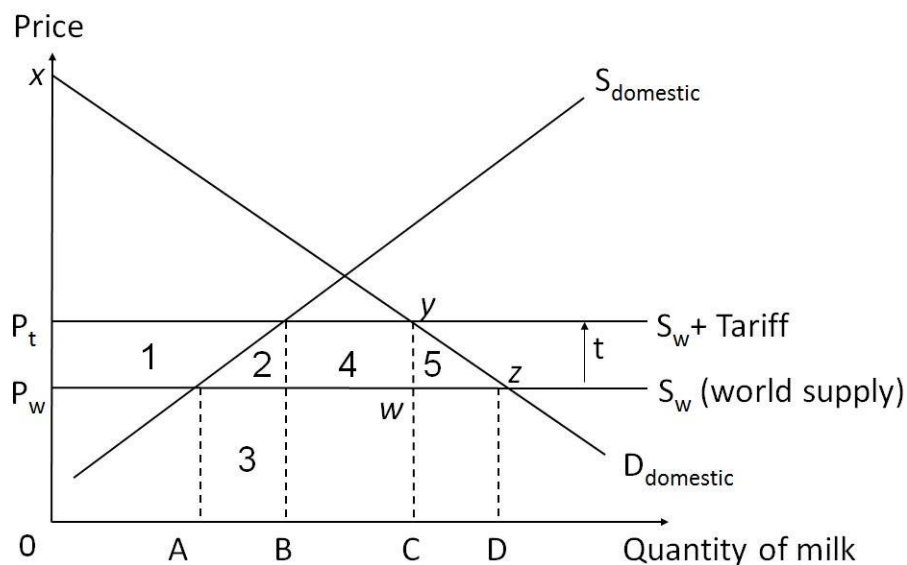
i) Explain how Tariffs can be used to reduce a country's imports

These are taxes on imports imposed by the government. Tariffs can be levied in two ways:

- A specific tariff is a tax calculated as a fixed amount of money per unit of the import, independent of the price of the product
- An ad valorem tariff is a tax on an import calculated as a fixed percentage of its price.

Diagrammatic illustration of the effects of Tariff on Imports

Figure 1: Imposition of specific tariff on imports



To understand how tariff can be used to reduce imports, consider a good, e.g. milk, that is partly home produced and partly imported. Domestic demand and supply are given by D_d and S_d respectively. It is assumed that firms in the country produce under perfect competition and therefore the supply curve is the sum of the firms' marginal cost curves.

Assume also that the country is too small to affect world prices, meaning that the amount of milk she imports is not able to impact upon the imported price of milk¹. This results in the country being a price taker, where she can import as much milk as she likes at the prevailing world price of milk, which is OP_w . The supply curve of imported milk is perfectly elastic.

Under free trade, domestic price cannot differ from the world price².

At OP_w , the level of:

- Domestic production = OA
- Domestic consumption = OD
- **Imports = AD**

After the imposition of a specific tariff of \$t per unit,

- Supply curve of imports shifts up by the amount of the tariff since the tariff adds to the foreign producer's costs of every unit sold in the country imposing the tariff.
- Domestic price rises from OP_w to OP_t

At OP_t , the level of:

- Domestic production = OB (increased by AB)
- Domestic consumption = OC (decreased by CD)
- **Imports = BC**

To sum up, based on the diagram, by raising the price of imports when they enter the domestic market, governments have given the domestic producers an advantage as more of them are now able and willing to increase their quantity supplied (i.e. from OA to OB) at the higher price of P_t . In addition, due to the increase in price, quantity demanded fell from OD to OC. As such, due to the imposition of tariff, imports reduced from AD to BC.

[Not nec to explain the impact on society]

¹ The quantity a country imports makes up a small part of overall world demand for the good. The country has no means to change world price even if she chooses to purchase more or less imports. If the country is a large buyer of imports, the world price could increase/decrease if she demands a larger/lower quantity of imports, assuming world supply unchanged.

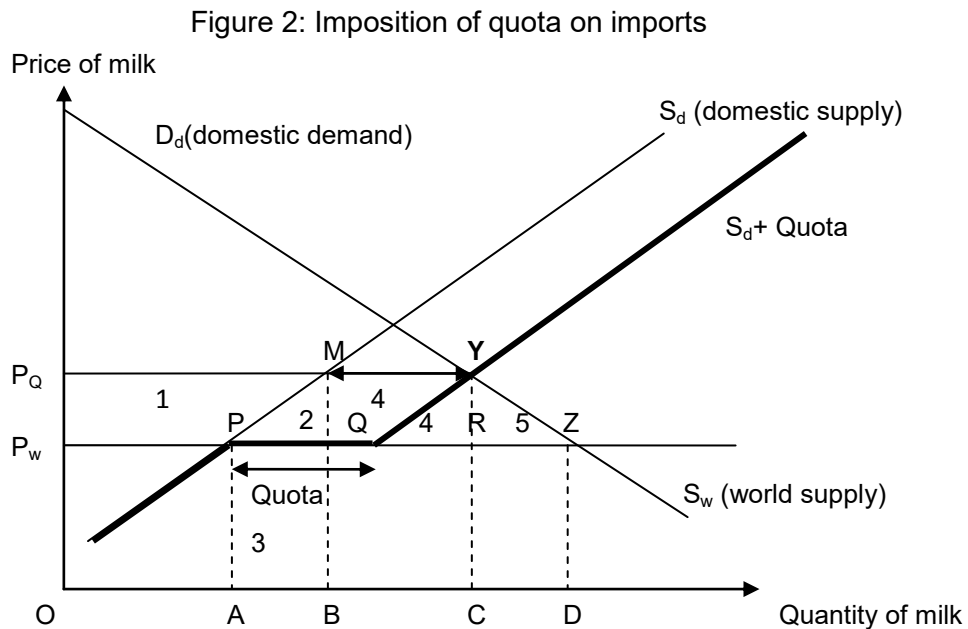
² This is because when free trade is allowed, consumers in the domestic market can always choose to purchase cheaper import substitutes, therefore domestically produced goods must be at least the same price as these imports.

OR

ii) Explain how Quotas can be used to reduce a country's imports

These are limits imposed on the physical quantities or values of goods imported into during a period of time. By restricting the quantity of imports, quotas directly lower supply, causing equilibrium price higher than under free trade (P_w to P_Q).

Diagrammatic illustration of the effects of a Quota on Imports



Assuming foreign milk producers are willing to supply all the milk that is demanded by the country at OP_w . The supply curve of imported milk is perfectly elastic at S_w

Under free trade, domestic price cannot differ from the world price.

At OP_w , the level of:

- Domestic production = OA
- Domestic consumption = OD
- **Imports = AD**

After the imposition of a quota $PQ (= MY)$

- Total supply curve of cars shifts rightward from S_d to $S_d + Quota$ (Max that can be imported)
- Domestic price rises from OP_w to OP_Q

At OP_Q , the level of:

- Domestic production = OB (increased by AB)
- Domestic consumption = OC (decreased by CD)
- **Imports = BC (= PQ = MY)**

To sum up, quotas are limits to the quantity of a good that can be imported. If the quotas are binding (i.e. set below the original level of imports), imports will fall to the limit set by the government.

- iii) Explain how other protectionist measures can be used to reduce a country's imports

Other Protectionist Measures

- (i) Subsidies

Subsidies are alternatives to tariffs. Subsidies are cash grants given by the government to domestic producers to give a cost advantage, allowing them to lower their prices and compete with imported goods. If effective, the level of imports will fall.

- (ii) Exchange Controls

This involves government control over the purchase and sale of foreign exchange and hence limits on the amount of foreign exchange made available to importers (financial quotas). Alternatively, they can be in the form of charges made on people purchasing foreign currencies. International trade is carried out in terms of foreign currencies, so the control over the purchase of foreign exchange will limit the amounts as well as the types of imports.

- (iii) Import Licensing

Import licensing is typically used with exchange controls as a way of enforcing the exchange controls. This comes in the form of import licenses that importers need to acquire before they are able to acquire foreign exchange or are able to import goods. This is also used as a way to enforce quotas.

- (iv) Embargo

This is a complete ban on certain imports or exports from or to certain countries. This could be done for social (e.g. with demerit goods) and political reasons.

- (v) Recent Forms of Protectionist Measures

These are more subtle and less obvious forms of trade barriers (disguised restrictions) developed in recent years (perhaps as a result of the successful negotiations for tariff reductions by GATT and subsequently the WTO).

- The implementation of *technical specifications and standards* which discriminate in favour of home producers e.g. safety and hygiene regulations on food and pharmaceutical products.
- *Administrative regulations* regarding import procedures which may be so bureaucratic as to seriously delay and therefore reduce the volume of imports which are seen as a threat to domestic producers
- *Voluntary export restraints (VER)* or voluntary restraints agreements (VRA) where the exporting country is persuaded by the importing country to voluntarily reduce their exports under threats of all-round trade restrictions. VERs were negotiated by the US on textile, automobile, steel and shoes when home industries were threatened by more efficient, lower cost imports from Japan.

Level	Descriptors
L1 Lower (1 -3 m)	<ul style="list-style-type: none"> Answers were mostly irrelevant. Only a few valid points and definitions are made incidentally but largely insignificant. Answers are largely descriptive and weak in economic analysis. Can name the measures but could not explain how the measures can be used to reduce imports.
L2 (4 – 5m)	<ul style="list-style-type: none"> Answer shows knowledge of how the measures reduce imports. Included tariff/quota as one of the measures but may not have illustrated with a diagram. Explanations were accurate but undeveloped. Max 5 m if student explains only tariff / quota but it must be well explained and well-illustrated.
L3 (6 – 8 m)	<ul style="list-style-type: none"> At least two measures including tariff or quota. Tariff / quota diagram was properly drawn and explained Clear evidence of the ability to analyse how tariff/quota <u>can be used to reduce imports</u>. Explanations of the measures must be accurate, precise, logical and reasoned.

(b) Trade protection hurts the economy of the country that imposes it. Discuss the extent that you agree with the above view. [17]

Approach

- Thesis: Explain the basis for this view - that trade protection hurts the economy of the country that imposes it.
- Anti-thesis: Discuss the limitations and contradictions of this view – i.e. trade protection will not hurt the economy that imposes it.
- Judgement – whether trade protection hurts the economy or not depends on whether there is justification for protectionism.

Introduction:

- Make clear what 'hurting' an economy entails. Relate it to the macro economic goals of the economy – high and sustained economic growth, full employment, price stability and healthy BOP. Hurting the economy -> going against the achievements of these macroeconomic goals -> worsening economic performance
- Note that the implementation of trade protection is always with good intent for the economy of a country, although it may favour some industries / sectors at the expense of others as well as consumers.
- There are 3 main reasons why countries impose trade protection – as a measure (i) to resolve current economic issues, (ii) to sustain its economic growth and (iii) to retaliate against unfair trade practices. Within each, there are reasons pertaining to specific economies. For each of the reason cited, there must be a discussion on the extent you agree with the above view, that protection will hurt the economy that imposes it.

(i) Trade protection is often used to resolve current economic issues faced by the country. For instance

Thesis 1: Trade Protection to avoid structural unemployment will slowdown restructuring process and adversely affect potential economic growth -> Trade protection hurts the economy of the country that imposes it.

- Trade protection to avoid structural unemployment may unnecessarily slow down the restructuring process, depriving the other thriving industries of valuable resources
- The problem is often a lack of willingness to restructure when a country loses its comparative advantage over time. If the developed country has lost its CA, it should re-look these industries and if necessary, let them shut down to divert resources to other more productive uses.
- Tariff protection against low-cost producing countries will safe-guard workers in the protected high wage industries but at the expense of firms which use these products as factor inputs.
- Consumers will also be denied the opportunity to buy from the cheaper source of supply. Therefore, benefits from trade will be lost.

Anti-thesis 1: Trade Protection may not hurt the economy of the country imposing it

- Structural unemployment arises from occupational or geographical immobility of labour and structural change, each of which is a necessary but insufficient condition for structural unemployment to occur.

- **Unless there is perfect factor mobility**, if not, trade protection is indeed a way to avoid the structural unemployment when structural change occurs due to the loss of comparative advantage due to, say, the emergence of a low cost country,
- Without protection, the local industries will be edged out and have to close down, resulting in the fall in employment and standard of living.
- **To protect jobs**, countries hence press for higher tariffs and other means to keep out cheaper imported goods. This argument has been used in the US to protect the automobile, steel and textile industries.

Evaluation 1:

- The argument hinges on the fact that retraining takes time. Trade protection here can be justified only as a **short-term measure** while retraining of workers take place. A better way to prevent structural unemployment and its concomitant negative effects would be to retrain the displaced labour so that they can be effectively re-channelled into other industries.

Thesis 2: Trade Protection to increase domestic production and employment in times of recession will lead to beggar-thy-neighbour effects -> reduce export revenue -> adversely affecting domestic production and employment -> Trade protection hurts the economy of the country that imposes it.

- Protectionism in these economies is usually brought about under the pressures of trade unions. Many of the protected domestic industries can no longer compete with foreign counterparts even in their domestic markets. Their wages have risen faster than the growth in their labour productivity and thus their products have been priced out of the market.
- Protectionism under such circumstances will not increase total employment. It merely perpetuates domestic inefficiency and leads to misuse of resources. Protectionism given for this reason is akin to a 'beggar-thy-neighbour' policy. This means that the benefits of increased employment enjoyed by the protected country are achieved at the expense of its trading partners.
- The partners who experience a decline in export sales and consequently a lower employment level will trigger off similar retaliatory measures.

Anti-thesis 2: Trade Protection may not hurt the economy of the country imposing it

- Trade protection can be justified during periods of recession and economic stagnation. Protection here is an emergency measure against general depression to avoid unemployment. Money spent on imports will only create employment in foreign countries and not at home. Imposition of tariffs and quotas on imported goods create jobs by raising the prices of imports and diverting demand towards domestic production.

Evaluation 2:

- Only effective for countries with large domestic market

Thesis 3: Trade Protection to reduce Current Account Deficit will lead to beggar-thy-neighbour effects -> reduce export revenue -> adversely affecting domestic production and employment -> Trade protection hurts the economy of the country that imposes it.

- Trade protection may result in a fall in import expenditure, therefore improving the current account.
- But such measures beggar-thy-neighbour and invite retaliation from trading partners in the long run, resulting in a reduction of the country's exports and hence reduce the total volume of world trade

Anti-thesis 3: Trade Protection may not hurt the economy of the country imposing it

- Current account deficit can be caused by importing too much and is undesirable as it leads to a depletion of foreign currency reserves. Young nations whose foreign reserves are low are vulnerable to this. These limited amounts of foreign reserves are needed for importing raw materials and capital for nation building. Imports of consumer goods only serve to drain the foreign reserves.

Evaluation 3:

- At best a short-term measure to improve current deficit. In the long run, it is better to look at the root causes. For example, the root of the problem may be the rate of inflation. The best remedy should be to deflate the economy with contractionary monetary and fiscal policies rather than protective measures.

(ii) Trade protection is also used to reduce vulnerability and sustain economic growth. For instance

Thesis 4: Trade Protection to develop infant industries may lead to inefficiency and adversely affect economic growth and employment -> Trade protection hurts the economy of the country that imposes it.

- It is difficult to identify with certainty industries that are presently unprofitable but which may acquire comparative advantage in the long run. The government may incorrectly choose those industries without any potential comparative advantage. This leads to wastage of resources as government incur opportunity costs from subsidies given to these industries, and domestic consumers do not get to maximise their welfare due to higher domestic price compared to imports. If investments were made in other areas, the rate of economic growth and employment creation could be faster.
- It is difficult to decide when the industry is fully and sufficiently established to do without protection. Some may remain as 'perpetual infants', requiring continual protection for survival and may continue to be inefficient and backward for a long time. This is because they are not subjected to the 'discipline of the free market' and hence suffer from X-inefficiency to lower unit cost of production sufficiently to become internationally competitive on their own.
- It is difficult to remove protection once it is given due to vested interest and political pressures, especially if the government receives political funding from firms in such industries.

Anti-thesis 4: Trade Protection may not hurt the economy of the country imposing it

- An infant or newly established industry does need help in its initial stages because heavy initial costs are likely to be incurred and these costs cannot be completely covered by the initial small output. Time is needed to develop skilled management, reputation and exploit efficient technologies.
- Based on the fact that such industries have potential comparative advantage, a guaranteed home market will enable them to gain EOS and gain experience in production. Once they have achieved comparative advantage, the protection will be

removed. They will be able to compete in the world markets as their prices are now comparable to similar exports from other countries.

Evaluation 4:

- Despite the inefficiency that restricting imports cause, government can sometimes justify the use of these protectionist methods if the long term benefits of growing the infant industries outweigh the short term deadweight losses to society.

Thesis 5: Trade Protection to diversify for stability and growth may lead to inefficiency and adversely affect economic growth and employment -> Trade protection hurts the economy of the country that imposes it.

Anti-thesis 5: Trade Protection may not hurt the economy of the country imposing it

- This argument is based on the undesirable consequences of narrow specialisation and over-reliance on other countries. Specialised industries are vulnerable to economic changes resulting from changes in tastes, technology, etc. An economic decline in these industries may result in massive unemployment, given the structural rigidity of the economy. Countries that are highly specialised in agricultural goods or other primary products are also subject to frequent price fluctuations and financial speculations as these goods tend to have price inelastic demand and supply. As such, these countries would like to diversify their economies into other less volatile industries. While they may not possess the comparative advantage to do so, protectionism is sought as a means to develop new industries.
- This argument for protection is given to support the diversification of economies especially if the terms of trade have been moving against the products which they specialise in. For example, less developed countries (LDCs) are encouraged to move into manufactured exports so that reliance on export goods with low income elasticity of demand³ (e.g. agricultural products) can be reduced.

Evaluation 5:

- Such a policy may not be sound based on the Theory of CA. However, theories of development have shown that there is justification for a balanced economic growth. Moreover, it is believed that the pattern of comparative advantage can change over time, either naturally (discovery of new raw materials) or as a result of deliberate policies (in the field of education, capital investment or technological research) to acquire the advantage. For example, the successes of NIE's such as Brazil, Hong Kong, Singapore and Taiwan are seen to be based on acquired skills and government policies that create favourable business conditions.
- Again, protectionism is not the only solution for these countries. Developing a comparative advantage in the long term by building up their infrastructure and improving education may be a better solution. And in the short term, there are other ways to mitigate the fluctuations in the primary products markets such as the use of international price fixing agreements or forward markets to hedge against erratic price changes.

(iii) Trade protection is also used to reduce unfair trade practices. For instance

³ Exports with low income elasticity (assuming $YED < 1$) will mean that the increase in demand for these exports will increase less than proportionately to increase in world incomes. Countries exporting such goods will not experience economic growth as rapidly as those countries that export income-elastic goods.

Thesis 6: Trade Protection to discourage unfair competition arising from exploited foreign labour may lead to inefficiency and adversely affect economic growth and employment -> Trade protection hurts the economy of the country that imposes it.

- This is an outright rejection of the Theory of CA especially if the cheaper foreign labour costs are due to CA. The basis of specialisation and trade is to exploit international differences in relative factor prices due to differences in factor endowments. Developing countries can produce labour-intensive products cheaply because of their relatively abundant labour endowment. It is cheaper for developed countries to import such products than to produce it themselves.

Anti-thesis 6: Trade Protection may not hurt the economy of the country imposing it

- It is argued that imports from developing countries are cheap not because they have CA but because they are made via exploitation of labour, especially child labour. Developed countries (where the people enjoy high wages) have often claimed that developing countries pay their workers miserably low wages and force them to work in severe environments. This has created import prices that are lower than what it should have been, creating an unfair advantage against the domestic goods. Hence, trade barriers should be established to restrict imports from developing countries to discourage such exploitation.

Evaluation 6:

- Justified only if it can be proven that the workers are paid below their marginal revenue product. If workers are paid lowly because of their low efficiency (i.e. productivity) level and the low value of the output that they produce, then it is not considered as exploitation. Reducing import will not help these workers as it will lead to unemployment -> greater hardship.

Thesis 7: Trade Protection to counter foreign subsidies and dumping may lead to inefficiency and adversely affect economic growth and employment -> Trade protection hurts the economy of the country that imposes it.

Anti-thesis 7: Trade Protection may not hurt the economy of the country imposing it

- Dumping is a trade practice where exporters sell their products below marginal cost. This is often made possible with government subsidies. The objective is to drive out domestic producers so that the exporter can monopolise the market. The effect would be a reduction in domestic output and employment. Prices would be increased after the collapse of the home industry. To counter this, the affected industries' governments use punitive tariffs as an anti-dumping measure.

Evaluation:

- While this is frequently used, dumping is not easy to prove. Countries accused of dumping and have punitive tariffs imposed on them typically retaliate by imposing their own tariffs on the other country, and a trade war can very quickly ensue.
- If proven true, trade protection is justifiable as dumping could result in possible loss of domestic employment and closure of domestic firms not due to the firms being less cost efficient than foreign producers.. However, the level of protection should only cover the difference between the export price and the normal price paid by consumers in the exporting country.
- If foreign producers sell at a lower price in the international market than in its home market simply because of differences in the price elasticity of demand (i.e. 3rd degree price discrimination), the importing country's consumers can actually benefit in the

long term from the lower import prices. In this case, protectionism is not necessarily justified.

Judgment

Whether trade protection will hurt the economy of the country not depends on whether there is justification for trade protection. For example,

- Benefits from free trade are derived based on the assumption of fair trade. If it is proven that domestic industries are subject to unfair practices due to dumping or foreign government subsidies or exploitation of workers, then trade protection will not hurt the economy.
- Benefits from free trade are also derived based on the assumption of perfect factor mobility within the country and no changes in relative factor endowments. In reality, there is factor immobility and eroding CA -> structural unemployment and hence the need to restructure economy and develop new CA. Trade protection will not hurt the economy in condition that the right industries are chosen

If there is no justification, then there will be welfare loss as firms are retained unnecessarily by protection in activities in which their productivity is lower than it could have been in another activity. Sheltered by protective barriers, firms have less incentive to respond swiftly to changes in market conditions or to reduce prices, produce better quality products and/or improve productivity. Once a protectionist measure is imposed, it is not easy to remove it. All sorts of industries may also clamour for protection and political corruption may be encouraged. As such, it is important for a government to find out the root causes of economic problems that the economy faces.

Level	Descriptors
L1 (1-6 m)	<ul style="list-style-type: none"> • Answers are mostly irrelevant, or largely descriptive and weak in economic analysis. • Inadequate development of economic analysis • An answer with very limited ideas relevant to the given context, or containing some conceptual errors.
L2 (7-9 m)	<ul style="list-style-type: none"> • For an accurate but under-developed analysis, imbalanced or unconvincing discussion of whether trade protection will hurt the economy of the country that imposes it. • AD / AS framework is needed
L3 (10 – 13 m)	<ul style="list-style-type: none"> • For an excellent and comprehensive analysis of whether trade protection will hurt the economy of the country that imposes it • It should have at least three justifications with exemplifications to ensure that the discussion is contextualised • It should be a balanced discussion examining the justification for and against trade protectionism focusing on the issue on whether it hurts or benefits the economy that imposes it. • Excellent use of the AD/AS framework in the analysis
E1 (1-2 m)	<ul style="list-style-type: none"> • Attempt to make a judgement but justifications are weak.
E2 (2-4 m)	<ul style="list-style-type: none"> • A sound judgement on whether trade protection will indeed hurt the economy of the country that imposes it, based on validity of the justifications cited, highlighting necessary conditions, stating implicit assumptions and contextualised.



HWA CHONG INSTITUTION
C2 Preliminary Examination
Higher 1

CANDIDATE NAME

CT GROUP

CENTRE NUMBER

INDEX NUMBER

ECONOMICS
Paper 1

8819/01
28 August 2015
3 hours

Additional Materials: Answer Paper

READ THESE INSTRUCTIONS FIRST

Write your **Name, CT group, Centre number and Index number** clearly in the spaces at the top of this page and on every page you hand in.

Write in dark blue or black pen on both sides of the paper.

You may use a soft pencil for any diagrams, graphs or rough working.

Do not use staples, paper clips, highlighters, glue or correction fluid and tape.

Section A

Answer **all** questions.

Section B

Answer **one** question.

Begin each question on a fresh sheet of writing paper.

At the end of the examination, fasten the answer scripts to Section A Question 1, Section A Question 2 and Section B **separately** with the 3 cover pages provided.

The number of marks is given in brackets [] at the end of each question or part question.

You are advised to spend several minutes reading through the questions before you begin writing your answers.

You are reminded of the need for good English and clear presentation in your answers.

This document consists of **8** printed pages.

[Turn over

Section A

Answer **all** questions.

Question 1

The Market for Liquefied Natural Gas

Extract 1: LNG Production

Natural gas accounts for approximately 1/4 of global energy consumption. One source of natural gas, liquefied natural gas (LNG) involves squeezing and cooling gas until it becomes a liquid, and then shipping it by tanker. While this method is inherently costlier than sending it down a pipeline, 50 years since the first shipment left Algeria, LNG is no longer exotic, complicated or marginal. It has been the fastest growing source of natural gas supply and is set to play a greater role in its contribution to natural gas supply when existing LNG projects under construction in Australia come to fruition.

Existing exporters such as Russia, which supplies just under 5% of the world LNG market, aim to raise production to 20% by 2030. Following Russia's decision last year to liberalise LNG exports, Total, a French energy company, and its Russian partner Novatek agreed in 2013 to invest in the Yamal project in the Arctic to extract LNG from Russia's vast natural gas reserves and ship it via a new maritime route to Europe and Asia. It requires high performance technologies to manage production in extremely cold temperatures.

Capacity in LNG shipping is rising too, with 16 new giant tankers entering the global fleet in 2013, and another 31 due for delivery this year. The International Gas Union (IGU) forecasts a "deep softening" of the cost of shipping LNG.

Source: *The Economist*, 31 May 2014 and International Gas Union, 2014

Extract 2: Evolving Market Dynamics of Global LNG

Japan, South Korea, and Taiwan have been and are expected to remain the backbone of the global LNG market. They are characterized as heavily industrialized with limited domestic energy options. Countries where LNG consumption is new and growing such as China and Europe tend to have more available competitive options, including coal and crude oil.

The principal risks for LNG market growth come from uncertainties around the global and regional economies and from increasing gas-on-gas competition. Global economic growth has been decelerating, with the recovery from the global financial crisis of 2008/2009 being relatively slow and uneven. More importantly, relatively new, "unconventional" sources of natural gas, including shale gas and coal bed methane, could transform the world's energy markets. While global gas reserves have been growing steadily for decades, over the last decade the so-called unconventional gas revolution has roughly tripled the resource base that can be economically recovered. Adding to the pressures from unconventional gas development are the planned or proposed new/expanded gas pipelines from Russia, the Caspian and/or Central Asia into Europe or Asia that could also threaten potential LNG markets.

Source: *Oil and Gas Financial Journal*, 1 May 2013

Table 1: Crude Oil and LNG Prices 2010 – 2014

	2010	2011	2012	2013	2014
Crude Oil (\$ per barrel)	79.0	104.0	105.0	104.1	96.2
LNG (\$/mmbtu*#)	10.9	14.7	16.6	16.0	15.8

*million British thermal units – a measurement of energy content in fuel

LNG prices primarily reflects the Japanese market for LNG

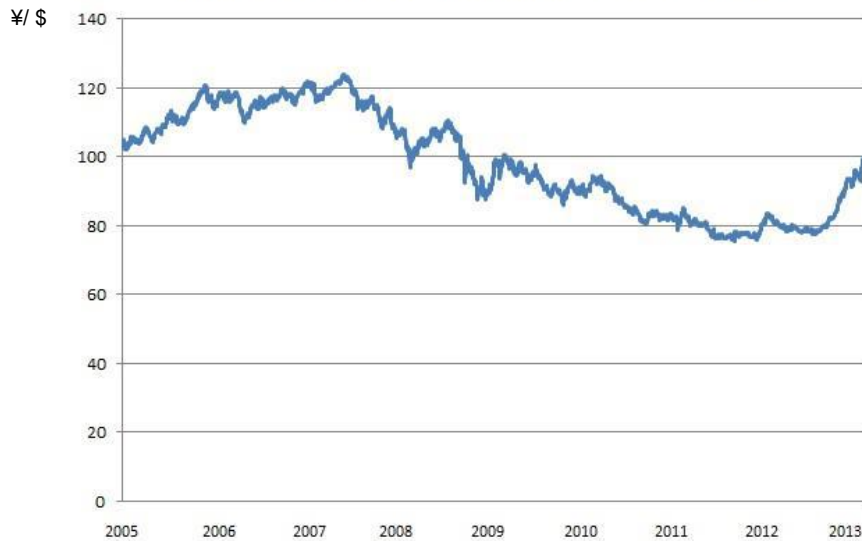
Source: World Bank

Extract 3: Oil dive set to transform LNG market

The downward spiral in oil prices is poised to shake up the LNG market, a critical source of energy in East Asia and an alternative to Russian gas supplies in Europe. Given that many Asian customers are locked into LNG contracts which fix quantities traded, crude oil's price slide should be reflected in LNG prices by early next year. The coming decline in LNG prices would benefit consumers.

Source: Adapted from *The Financial Times*, 13 November 2014

Figure 1: Japanese Yen to U.S. Dollar Exchange Rate (2005 – 2013)



Source: Bank of Japan

Extract 4: U.S. agrees to export LNG to Japan

The United States has decided to allow exports of its LNG to countries with which it has not concluded free trade agreements, such as Japan. The U.S. decision has a potentially huge favourable impact on Japan's economy, promising lower LNG prices and assured supply. Even if Japan does not buy U.S. gas, its availability will give Japan leverage in negotiations with other suppliers. In 2012, Japanese LNG imports totalled ¥6 trillion, up from ¥3.5 trillion in 2010, worsening its trade account. Japan suffered the first annual trade deficit in 31 years in 2011.

Given the many unknowns surrounding Japan's energy policies in the wake of the nuclear accident at Tokyo Electric Power Co.'s Fukushima No. 1 nuclear power station, the one thing that is certain is that Japan will need every option to ensure that its economy is not crushed by high energy prices. No wonder then that Japanese trade minister Mr. Toshimitsu Motegi said he welcomed the U.S. decision "from the bottom of my heart."

Source: Adapted from *The Japan Times*, 3 June 2013

Extract 5: The Gas Is Greener

One factor which drives the adoption of natural gas as a fast-growing fuel is its sustainability as clean burning gas produces significantly fewer emissions than oil and coal. It produces 25 per cent less carbon when used in the power sector compared with fuel oil and 50 per cent less carbon compared with coal, 99 per cent fewer particulates, 99 per cent less sulphur oxide (SOx), and 85 per cent less nitrogen oxide (NOx) than traditional fossil fuels.

"Gas is safe, clean, and inexpensive – representing a rare win-win opportunity, in which operational expense and emissions are reduced," says John Hatley, Vice President, Americas, Wärtsilä Ship Power. Hatley explains that nowhere in the world is the LNG shift more apparent than in North America. The "shale gas revolution" has made gas abundant and affordable.

Increasingly stringent emission standards are also behind the shift, as they are enforced both on land and at sea. When the North American Emission Control Area (ECA) was introduced in 2012 it brought stricter controls, rigorously limiting emissions in Canadian and U.S. coastal areas. "LNG contains no sulphur, far fewer particulates and less carbon, making it one of the fuels that complies with the limits enforced by the ECA," Hatley says.

Europe, meanwhile, finds itself in a different situation, where the price of natural gas is lower than in Asia, but higher than the price of coal. The transition from coal to natural gas is being driven by governmental programmes that promote the use of renewable gas through subsidies. However, Torstein Indrebø, secretary general of the International Gas Union notes that, to date, European policy has led to an increase in the use of coal while gas demand has declined.

"It is economically more attractive to produce power from coal as the penalty for polluting the environment is far too low," he says. "It is currently one of the International Gas Union's key objectives to encourage the European Commission to put policies in place to make cleaner fuels, such as gas, more competitive in Europe.

"Natural gas is key to supporting and facilitating the use of renewables," continues Indrebø. "In Europe, wind power typically only works about 30 per cent of the time, while solar power can only be generated 15 per cent of the time. However, people need energy 24/7. Gas is very reliable and flexible; it can easily be switched on and off, making it an excellent back-up system for the less predictable energy sources."

Source: article in Twentyfour7.com, 2014

Questions

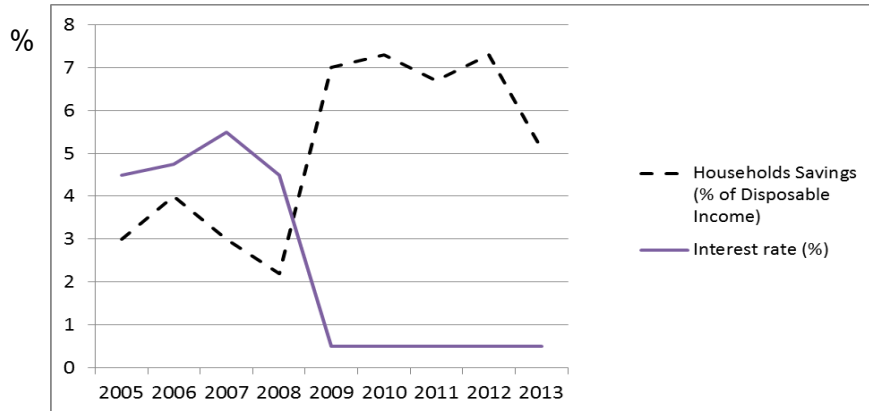
- (a) With reference to Extracts 1 & 2, identify and explain **one** demand and **one** supply factor which could account for a slight fall in the world price of LNG. [6]
- (b) (i) Using Table 1 and Extract 4, explain how you would deduce the price elasticity of demand for imports for LNG in Japan between 2010 and 2012. [3]
- (ii) Explain whether the change in the Japanese yen between 2011 and 2013 (Figure 1) can correct Japan's worsening trade account (Extract 4). [4]
- (c) Compare the change in price of crude oil and LNG in Table 1 from 2010 – 2014. [2]
- (d) Explain and comment on the view that 'the U.S. decision has a potentially huge favourable impact on Japan's economy' (Extract 4). [5]
- (e) (i) Explain the negative externality that arises with the use of oil and coal as fuel. [2]
- (ii) Discuss the effectiveness of U.S. and European government policies to respond to the negative externalities from the use of coal. [8]

[Total: 30]

Question 2

Financial Crisis, Austerity Measures and Cost of living Issues

Figure 2: Bank of England Interest Rates and UK Household Savings (% of Disposable Income)



Source: OECD & Bank of England

Extract 6: Austerity plan in UK is failing

The International Monetary Fund (IMF) has never been wildly enthusiastic about the UK Finance Minister George Osborne's tough austerity plan to shrink growing budget deficits by cutting back on government spending and raising taxes. It has been saying for at least a year that there should be a reassessment of fiscal policy if the recovery falters.

The IMF, while supporting the need for budget deficits to be reduced, believes action should not be so aggressive as to derail growth. It has done some recent work on fiscal multipliers which affect national income – the multipliers are much higher during nasty downturns than at other times. Research suggests that when interest rates are near zero, the multiplier could be quite high. Besides, the knock-on effects of tax and government spending on households and firms are more powerful than was previously thought.

However, Osborne's advisers have pointed out that the fiscal multipliers are weaker in open economies such as Britain than they are in more closed economies such as the US or Germany.

But austerity is still having a dampening effect on the economy, and is making it harder for the Finance Minister to hit his deficit reduction targets. The IMF is right. It is time to take stock. It would be a risk for Osborne to announce tax cuts and a slower pace of spending cuts in the budget. But it will be a risk – and probably a bigger one – if he does nothing.

Source: *The Guardian*, 24 January 2013

Extract 7: 'Recessions can hurt, but austerity kills'

Mass of data reveals that more than 10,000 additional suicides and up to a million extra cases of depression have been recorded across the two continents since governments started introducing austerity programmes in the aftermath of the crisis. In the US, more than five million people have lost access to health care. In Greece, there's a 200% increase in HIV cases. And in some of the worst-hit countries, both suicide and crime rates are up. David Stuckler, author of an explosive new book, says the facts speak for themselves.

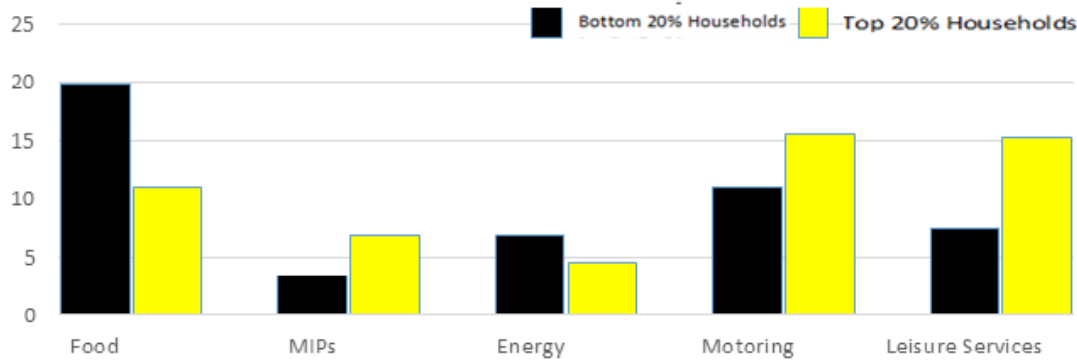
"Recessions," Stuckler says bluntly, "can hurt. But austerity kills."

Source: BBC News, 15 May 2013

Extract 8: Post-Crisis Living Standards and Rising Cost of living in the UK

Average UK living standards have fallen "dramatically" since the recession. The Institute for Fiscal Studies (IFS) calculated that a mid-range household's income between 2013 and 2014 was 6% below its pre-crisis peak. Rising childcare, food and energy costs, coupled with stagnating wages and cuts to benefits and tax credits, have widened the poverty gap. For the first time since the 1930s, benefits for pensioners are being cut in real terms by not being linked to inflation.

Figure 3: UK Households Budget shares (%) for key goods and services, 2011 – 2012



Note: 'MIPs' are mortgage interest payments and 'Other housing' refer to mainly rented apartments.

Source: Office for National Statistics, UK

Everyone is hit by the higher cost of living, but those with low incomes could feel the squeeze more. The report said that inflation between 2008 and 2013 was 20%, while energy prices rose by 60% and food prices were up by 30%. This had a disproportionate impact on poorer households. It also found that the pensioners had been hit hardest with 4.2% increases in their costs compared with the 2.4% rise as indicated by the CPI.

And when mortgage interest payments dropped by 40% since January 2008, those with relatively high incomes benefited from it. The report also found people with lower incomes are less likely to switch suppliers and shop around than those with a higher income. This is partly due to the rich having bank accounts for direct payments, or access to buy online or compare prices across a range of suppliers.

The government has already taken action to help families with the cost of living, including: increasing the tax-free personal allowance to £10,000; freezing council tax for five years; and freezing fuel duty.

Source: Various

Extract 9: Singapore's High Cost of Living May Come at a Cost

In the Economist Intelligence Unit's Cost of Living Survey, Singapore catapulted five places to become the most expensive city in the world.

Singapore, one of Asia's largest financial centres, has seen a big inflow of expatriates in recent years. Foreigners make up about 38 per cent of Singapore's population, up from about 25 per cent in 2000. More than 7,000 multinational companies operate in the city and expat workers are seen as key to developing Singapore, not just as a regional hub in finance but also in other sectors such as oil and gas. While low taxes, good air quality and less crime lure workers to Singapore from across the world, the recent push up in housing, schooling and transport costs could discourage expats from moving or staying in the city long-term, analysts said.

Rising costs and a growing population, which the government expects could increase to almost 7 million by 2030 from the current 5.3 million, has also led to discontent among locals who feel the influx of foreign workers has led to overcrowding on trains and buses, higher property prices and contributed to the overall rise in living costs.

Singapore is one of the most expensive places in the world to buy a car, with permits to buy new vehicles called a certificate of entitlement (COE) adding to the cost of buying a car in Singapore. High property prices, pushed up by increased demand from a growing population, have been one of the major contributors to the rising cost of living. For instance, Singapore property prices surged 50 percent between 2007 and 2011, driven partly by foreign buying.

For economists the implications of rising costs in Singapore could not be clearer: wage pressures could build up, they warn. Singapore could lose some of its competitive edge to fast-developing neighbors in Southeast Asia, if costs continue to rise, said regional experts. Despite the high expense of living in Singapore, some expats are willing to pay a premium for the quality of life offered by this island state.

Source: *Wall Street Journal*, 4 Mar 2014 and CNBC, 30 Jan 2013

Questions

- (a) (i) Use the concept of opportunity cost to explain the theoretical relationship between interest rates and level of savings. [3]
- (ii) Comment on whether the relationship is shown in Figure 2 from 2009 onwards. [2]
- (b) Using the data provided in Extract 6, explain whether the call by IMF for a reassessment of the UK austerity policy is justified. [4]
- (c) Using AD/AS analysis, explain the statement in Extract 6, 'austerity is still having a dampening effect on the economy, and is making it harder for the Finance Minister to hit his deficit reduction targets'. [4]
- (d) Based on Extract 7, explain how austerity measures have adversely impacted the standard of living in some countries. [3]
- (e) Extract 9 mentions the impact of rising cost of living on Singapore. Comment on the view that Singapore's economic growth will suffer due to inflation caused by rising cost of living. [6]
- (f) Assess to what extent has living standards in UK been eroded by the austerity measures and rising cost of living. [8]

[Total 30]

Section B

Answer **one** question from this section.

- 3** Self-interested consumers and producers are only concerned with their own benefits and costs.
- (a) Explain how the pursuit of self-interest addresses the central problem of economics. [10]
- (b) Discuss the view that the use of subsidies is better than direct provision to correct the problem arising from positive consumption externalities, even as consumers and producers pursue self-interest. [15]
- 4** (a) Explain how international trade can lead to improved standards of living in a country. [10]
- (b) One cost of globalisation is structural unemployment. Discuss the extent to which it is of most concern for different governments. [15]

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Question 1 H1 Prelims Paper 1 2015 Suggested Answer and Marking Scheme

(a)	With reference to Extracts 1 & 2, explain one demand and one supply factor which could accounts for a slight fall in the price of LNG.	[6]
	<p><u>Possible demand factors (select one) [2]</u></p> <p>1. Fall in income due to 'decelerating economic growth' (Extract 2): fall in demand for consumer goods and energy consumption. LNG as a derived demand, hence fall in demand for LNG. (<i>Slow rise in income can also be considered</i>)</p> <p>2. Price of related goods – non-gas substitutes (eg. coal or oil), gas substitutes (eg. 'unconventional' gas such as shale gas, coal bed methane gas) Fall in price of gas substitutes (due to increase in supply - 'unconventional gas revolution has roughly tripled the resource base' Extract 2) results in fall in demand for LNG.</p> <p><u>Analysis for PES for LNG [1]</u></p> <p>'Capacity in LNG shipping is rising' indicates supply for LNG is becoming more price elastic. Fall in price of LNG leads to a more than proportionate fall in quantity supplied.</p> <p><u>Possible supply factors (select one) [2]</u></p> <p>1. Advancement in technology: 'high performance technologies to manage production in extremely cold temperatures' (Extract 1) - cost of production to access previously inaccessible natural gas fields fall, increasing supply of natural gas</p> <p>2. Increase in number of projects: Australia 'existing projects under construction in Australia come to fruition' (Extract 1), Russia 'the Yamal project'</p> <p>3. 'Capacity in LNG shipping is rising' leading to "deep softening" of the cost of shipping LNG', therefore increase in supply of natural gas</p> <p><u>Analysis for PED for LNG [1]</u></p> <p>PED >1 Evidence: Countries 'tend to have more available competitive options, including coal and crude oil' – availability of substitutes - indicates demand for LNG is becoming more price elastic. Fall in price of LNG leads to a more than proportionate fall in quantity demanded.</p> <p>OR</p> <p>PED <1 Evidence: countries with 'heavily industrialized with limited domestic energy options' (Extract 2). Fall in price of LNG leads to a less than proportionate rise in quantity demanded.</p> <p>Alternatively, students may compare the extent of the fall in both the demand and supply factor to explain why price falls slightly.</p>	
(b)	(i) Using the data in Table 1 and Extract 4, explain how you would deduce the PED of LNG imports to Japan between 2010 and 2012.	[3]
	<ul style="list-style-type: none"> • Table 1 shows that price of LNG increases (by about 60%) between 2010 and 2012. [1] • Extract 4 indicates that import expenditure on LNG has increased between 2010 and 2012 (almost doubled from ¥3.5 trillion to ¥6 trillion). [1] • Therefore, the above observations imply that PED of LNG imports for Japan is less than one 	

	or demand for LNG imports to Japan is price inelastic. [1]	
(ii)	Explain whether the change in the Japanese yen between 2011 and 2013 in Figure 1 can reduce Japan's worsening trade account (Extract 4).	[4]
	<p>No [2]:</p> <ul style="list-style-type: none"> Figure 1 shows a depreciation of the yen between 2011 and 2013. This increases the price of LNG imports in Japanese yen. Given PED of LNG imports is <1, the increase in price of LNG imports will result in less than proportionate fall in quantity demanded – increase in import expenditure on LNG. Assuming no change in export revenue, Japan's trade deficit will worsen. <p>Yes [2]:</p> <ul style="list-style-type: none"> Price of exports will become more price competitive in foreign currency, assume $PED_x > 1$, export revenue is likely to increase. Therefore, there is the need to consider the net effect of the increase in import expenditure relative to the increase in export revenue. 	
(c)	Compare the change in price of crude oil and LNG in Table 1 from 2010 – 2014.	[2]
	<p>Similarity [1]:</p> <ul style="list-style-type: none"> Both crude oil and LNG prices increased from 2010 to 2013 before falling in 2014. <p>Difference [1]:</p> <ul style="list-style-type: none"> LNG price increases and decreases by a smaller extent / at a slower rate compared to price of crude oil. 	
(d)	Explain and comment on the view that 'the US decision has a potentially huge favourable impact on Japan's economy' (Extract 4).	[5]
	<p><u>Explanation [3]</u></p> <ul style="list-style-type: none"> Japan has 'limited domestic energy options', since they are the 'backbone of the global LNG market' (Extract 2) With accessibility to an additional supply source of LNG - from the US, it will facilitate greater availability of energy and lower LNG prices. This adds to Japan's resources which could in turn increase the productive capacity of the economy, resulting in an increase in the LRAS and hence <u>potential growth</u>. With lower LNG prices (either by buying from the US or by having greater bargaining power to negotiate a lower price with other suppliers), the cost of energy production will fall, making it more attractive for firms to invest in Japan. This increases investments and hence AD in the economy, boosting national income via the multiplier effect. This results in <u>actual growth</u> and a <u>fall in cyclical unemployment</u>. <p><u>Comment [2]</u> (<i>One well-elaborated anti-thesis will do</i>)</p> <p><u>Anti-thesis 1: There are unfavourable effects on the economy</u></p> <ul style="list-style-type: none"> However, while it has favourable effects on the internal economy, Japan's huge demand for LNG is unlikely to reduce her <u>existing trade deficit</u>. In fact, this could counter the increase in AD, limiting the extent of economic growth. 	

	<p><u>Anti-thesis 2: There are other factors besides the US decision which contribute to the favourable impact on the economy</u></p> <ul style="list-style-type: none"> Given the direct relationship between the fall in crude oil prices and LNG price (Table 1 and Extract 3), it is likely that the US decision may not have as huge an impact compared to the fall in crude oil price, especially after the LNG contracts have expired. 	
(d)	(i) Explain the negative externality that arises with the use of oil and coal for fuel.	[2]
	<ul style="list-style-type: none"> The use of oil and coal for fuel generates costs to third parties who are not part of the production process and these costs are not considered by the price mechanism The excessive emission of carbon, particulates, sulphur oxide and nitrogen oxide can harm the health of people in the surrounding areas. They incur medical expenses and may affect labour productivity with their absence at work. 	
	(ii) Discuss the effectiveness of US and European government policies to respond to the negative externalities from the use of coal.	[8]
	<p>Introduction:</p> <ul style="list-style-type: none"> Efficient allocation of resources refers to the use of the price mechanism to allocate resources in a way which maximizes society's welfare – to produce goods most desired by consumers in the exact quantities using the most efficient production methods. Given the negative externalities created with the use of oil and coal for fuel as described in (ei), governments need to intervene to ensure the market failure problem is corrected. <p>Thesis: Government polices to counter extensive carbon emissions help achieve efficient allocation of resources</p> <p>US policies: A form of regulation: Stringent emission standards enforced by the North American Emission Control Area (ECA) was 'strict' and 'rigourous' in limiting emissions in the US coastal areas. (Extract 5)</p> <p>EU policies: Use of subsidies to promote the use of renewable resources - theoretically this should help encourage consumption of renewable resources (and hence reduce the negative externality from using coal and oil for fuel). Use diagram analysis for subsidies.</p> <p>Anti-thesis 1: Government policies do not help achieve efficient allocation of resources</p> <p>EU: The subsidies on renewable resources have been unsuccessful at encouraging consumption of renewable energy as the subsidy is limited/ insufficient such that the price of renewable energy is still higher than that of coal i.e. cleaner fuels are less price competitive compared to use of coal.</p> <p>Lack of other reliable renewable energy alternatives: Wind power only works 30% of the time, solar power generated only 15% of the time.</p> <p>Government failure: Current regulation for polluting the environment via the use of coal is not acting as a deterrent – penalty is far too low such that the use of coal becomes more attractive despite subsidies on gas.</p> <p>Anti-thesis 2: Other policies (not directly addressing the market failure problem) are responsible for helping to correct market failure.</p>	

US: It is the 'shale gas revolution' which helps to make gas cheaper, 'more affordable' hence 'lower(ing) cost and (providing) economic savings' – this encourages the consumption of LNG fuel and implicitly reduces the use of oil and coal for fuel.

Synthesis/ Conclusion:

The effectiveness of government intervention depends on the types of policies used as well as the degree of implementation by the respective governments:

- US policies are more effective due to the ability of the government to implement the regulation strictly and to accurately set the appropriate emission standard which helps to internalize the externality.
- EU needs to re-examine their regulation to reduce pollution and set a higher penalty to ensure the policy deters the use of power from coal and induces the switch to renewable resources. They are also encouraged to increase the subsidies for renewable resources.

L3	For an answer which provides a balanced discussion that explains and evaluates both US and European policies using economic analysis.	6 - 8
L2	For an answer which skews towards either analyzing how existing policies can help respond to the negative externalities or how policies are ineffective in address the problem. Answers could also analyse either US or European policies, but not both.	4 - 5
L1	For an answer which strays from the question and /or possesses major conceptual errors.	1 - 3
E1	A clear judgment is provided for both US and European policies with some attempt to justify the stand.	1 - 2

Question 2

(a) (i)	<p>Use the concept of opportunity cost to explain the theoretical relationship between interest rates and level of savings</p> <hr/> <p>State the theoretical relationship: Direct/positive (1m)</p> <p>Explain relationship using O.C. concept:</p> <ul style="list-style-type: none"> • O.C. is cost measured in terms of the next best alternative forgone. • Interest rates affect choices made by households between saving and consumption. <ul style="list-style-type: none"> ○ When interest rates fall, O.C. of consumption, measured in terms of interest returns forgone, falls – thus making saving less attractive (or consumption more attractive) (1m). ○ Therefore, rational households spend more and save less (1m). (and vice versa for the case of rise in interest rates) <p style="text-align: center;">OR</p> <ul style="list-style-type: none"> ○ When interest rates fall, O.C. of saving, measured in terms of enjoyment of 	[3]
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	<p>goods and services, rises. (1m)</p> <ul style="list-style-type: none"> ○ Therefore, rational households spend more and save less (1m). (and vice versa for the case of rise in interest rates) 	
(a) (ii)	<p>Comment on whether the relationship is shown in Figure 1 from 2009.</p> <p>Compare the trends in savings rate and interest rate, and state if relationship is shown:</p> <ul style="list-style-type: none"> • Relationship is not shown. <ul style="list-style-type: none"> ○ Graph shows a clear divergence of saving and interest rate. Interest rate fell and remained very low at close to zero, while saving rate rose sharply and remained relatively high. (1m) • Financial crisis: households are pessimistic about the economic outlook and they will tend to save more (paradox of thrift). (1m) <p>[FYI: Test is on the psychological impact on S and C or so-called pessimism or loss of confidence to spend in bad times]</p>	[2]
(b)	<p>Using the data provided in Extract 1, explain whether the call by IMF for a reassessment of the UK austerity policy is justified.</p>	[4]
	<p>Justified (1m for evidence and 2m for explanation):</p> <ul style="list-style-type: none"> • (Extract 6 para 2) Austerity measures are believed to ‘<i>derail growth due to larger multiplier ($k > 2$) during recession and when interest rates are near zero</i>’ and have “<i>knock-on effects...more powerful than was previously thought</i>”. (1m) <p><i>Any 2 of the below for the 2m explanation</i></p> <ul style="list-style-type: none"> • Dampening effect of Austerity policy: <ul style="list-style-type: none"> Fall in G + Fall in C (due to rise in income tax reducing disposable income) + Fall in I (due to rise in corporate tax reducing after-tax profits) result in fall in AD and hence real national income. (1m) • $K > 2$ means that the fall in real NI is more than twice the fall in $G+C+I$. (i.e. large reverse multiplier effect) (1m) • Knock-on effects *: <ul style="list-style-type: none"> - Austerity policy result in ‘knock on effects’ of a <u>further</u> fall in C and I due to a fall in business confidence. This <u>reinforces</u> the dampening effect of austerity measures. (1m) <p>[FYI: *The knock on effects refer to the positive impact on PRIVATE sector consumption and Investment “sparked off” by public sector pump-priming measures initiated by the government to brighten up economic outlook and restore confidence in the economy. Unlike pump-priming, the knock-on effects in this context have a negative impact on private C + I because of fiscal austerity. In other words, fiscal austerity dampens or causes “loss of confidence” in private sector spending.]</p> <p>Not justified (1m):</p>	

	<p>Any of the below points (and other reasonable contextualised arguments)</p> <ul style="list-style-type: none"> • (Extract 6, para 3) “Fiscal multipliers are weaker in open economies such as Britain” due to higher MPM. Thus, the extent of the fall in NI due to austerity will not be as significant (as explained above). • (Extract 6, para 2) “need for budget deficits to be reduced”, but “tax cuts and a slower pace of spending cuts” (Extract 6, para 4) will slow down the reduction in budget deficits, and possibly lead to an even larger debt, which the UK will have more problems clearing in the future. 							
(c)	<p>Using AD/AS analysis, explain the statement in Extract 6, ‘austerity is still having a dampening effect on the economy, and is making it harder for the Finance Minister to hit his deficit reduction targets’.</p> <p>Use AD/AS to analyse ‘dampening effect on the economy’:</p> <ul style="list-style-type: none"> • A reduction in government spending • Higher income taxes reduces disposable income and hence purchasing power to reduce consumption spending • Higher corporate taxes reduces after-tax profits to reduce investment spending • Thus, AD falls. (1m) • This causes national income to contract and leads to rise in cyclical unemployment. (1m) <p>Explain ‘harder... to hit... deficit reduction targets’</p> <ul style="list-style-type: none"> • When income falls, lesser income taxes are collected. (1m) • higher unemployment benefits pay-outs due to rise in cyclical unemployment. (1m) • Thus, government budget deficit increases. 	[4]						
(d)	<p>Based on Extract 7, explain how austerity measures have adversely impacted the standard of living in some countries.</p>	[3]						
	<p>Note: Any 1 of the below can be linked to non-material standard of living with relevant evidence</p> <ul style="list-style-type: none"> ○ Contractionary effects on the economy – fall in national income and/or rise in cyclical unemployment ○ Specific workings of austerity measures – reduction in government spending and/or increase in income taxes <p>Suggested answer:</p> <table border="1"> <thead> <tr> <th>Evidence (1m)</th> <th>Explanation linking from austerity and linking to non-material standard of living (2m)</th> </tr> </thead> <tbody> <tr> <td> <p>“Mass of data reveals that more than 10,000 additional suicides and up to a million extra cases of depression have been recorded”</p> <p>Or</p> <p>“And in some of the worst-hit countries, both suicide and crime rates are up.”</p> </td> <td> <p>Fall in consumer income or becoming unemployed causes stress over making ends meet, thereby leading to depression/suicide, or engagement in crime – all of which are disamenities that lower non-material standard of living (i.e. quality of life).</p> </td> </tr> <tr> <td> <p>In the US, more than five million people have lost access to health care. In Greece, there's a 200% increase in HIV cases.</p> </td> <td> <p>Cuts in healthcare spending by the government leads to deterioration of health and contraction of diseases, which are disamenities that lower non-material standard of living (i.e. quality of life).</p> </td> </tr> </tbody> </table>	Evidence (1m)	Explanation linking from austerity and linking to non-material standard of living (2m)	<p>“Mass of data reveals that more than 10,000 additional suicides and up to a million extra cases of depression have been recorded”</p> <p>Or</p> <p>“And in some of the worst-hit countries, both suicide and crime rates are up.”</p>	<p>Fall in consumer income or becoming unemployed causes stress over making ends meet, thereby leading to depression/suicide, or engagement in crime – all of which are disamenities that lower non-material standard of living (i.e. quality of life).</p>	<p>In the US, more than five million people have lost access to health care. In Greece, there's a 200% increase in HIV cases.</p>	<p>Cuts in healthcare spending by the government leads to deterioration of health and contraction of diseases, which are disamenities that lower non-material standard of living (i.e. quality of life).</p>	
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Note: Students may also explain loss of access to healthcare as reduced quantity and/or quality of service consumed, thereby linking it to lowering of material standard of living (which is quantity and quality of goods and services available for consumption).

(e) Extract 9 mentions the impact of rising cost of living on Singapore. Comment on the view that Singapore’s economic growth will suffer due to inflation caused by rising cost of living.

[6]

(Thesis) Yes: Singapore’s economic growth will suffer due to inflation

Case evidence	Analysis
(Ext 9 last para) “wage pressures could build up...Singapore could lose some of its competitive edge to fast-developing neighbors in Southeast Asia, if costs continue to rise”	<p>Step 1) Higher prices of goods and services result in workers demanding higher wages to sustain rising cost of living</p> <p>Step 2) Contribute to rising cost of production, which reduces SRAS when firms cut back on production</p> <p>Step 3) <u>Interpretation 1:</u> Consumers respond to the high prices of goods and services by reducing consumption of goods and services (movement along the AD).</p> <p><u>OR Interpretation 2:</u> Higher price of exports reduces quantity demanded for exports. Assuming $PED_x > 1$, X falls. AD falls.</p> <p>Step 4) Thus, real national income falls (i.e. actual growth falls)</p>
(Ext 9 para 2) “recent push up in housing, schooling and transport costs could discourage expats from moving or staying in the city long-term”	Expats add to Singapore’s quantity of labour, as well as bring about transfer of knowledge and expertise, thereby adding to Singapore’s quality of labour. Thus, expats staying away would cause a slower increase in LRAS, thereby adversely affecting potential growth.

(Anti-thesis) No: Singapore’s economic growth may not suffer

Possible arguments and analysis:

Case evidence	Analysis
(Ext 9 para 2) “low taxes, good air quality and	Low taxes (both corporate and personal

less crime lure workers to Singapore from across the world"	income tax) are likely to have an expansionary effect on the economy by encouraging consumption and investment spending, to boost real national income and hence actual growth.
(Ext 9 last para) "Despite the high expense of living in Singapore, some expats are willing to pay a premium for the quality of life offered by this island state"	Hence, there would not be an adverse impact on potential growth. Moreover, in the long-run, Singapore's growing population and education/training can also add to both the quantity and quality of workers in the economy, resulting in potential growth.
-	<ul style="list-style-type: none"> Continued pursuit of productivity growth can help lower cost of production. National Wage Council ensures that rise in wage will be in line with rise in productivity. Given appreciation of S\$ and high import content in our exports, a fall in import prices in S\$ terms will ensure export price competitiveness. X may not fall given the quality and branding of our exports.

Justified Conclusion

It is likely in the short run that the negative effect of inflation may persist, but in the long run, Singapore will be able to enjoy favourable actual and potential growth.

Mark Scheme

Band	Band Descriptors	Marks
L3	Answer will provide in-depth and accurate analysis that considers both impact on actual and potential growth, using relevant data. Evaluative comments & judgment is evident—reaches a conclusion based on the analysis offered.	5-6
L2	Accurate analysis of impact on either actual growth or potential growth, using some data. OR Superficial analysis of both actual and potential growth, without much use of data.	3-4
L1	Superficial explanation with little or no reference to the data. OR Use of data only without any analysis.	1-2

(f) Assess to what extent has living standards in UK been eroded by the austerity measures and rising cost of living. [8]

Define material SOL: Quantity and quality of resources available for consumption.
Define non-material SOL: Quality of life, in general.

Suggested answer:

Case evidence	Economic analysis linking trigger event(s)
----------------------	---

	to SOL
<p>(Ext 8 para 1) "Rising childcare, food and energy costs, coupled with stagnating wages and cuts to benefits and tax credits, have widened the poverty gap."</p> <p>(Ext 8 para 2) "Everyone is hit by the higher cost of living, but those with low incomes could feel the squeeze more. The report said that inflation between 2008 and 2013 was 20%, while energy prices rose by 60% and food prices were up by 30%. This had a disproportionate impact on poorer households."</p>	<ul style="list-style-type: none"> • Inflation coupled with austerity measures meant that real disposable income falls. • Thus, material SOL worsens in general. • OR in general, austerity measures reduces real national income. Thus, assuming constant population growth, there will be falling real GDP per capita, a basic indicator of material SOL. • Inflation mainly due to rising prices of necessities, which have demand that is price inelastic. • Total expenditure on these necessities thus rises. • Since the low income group spends a larger proportion of their income on food (20% as opposed to the 10% for high income group, from Figure 3) especially, they face a disproportionately larger impact of the rising cost of living. • Thus, income inequality rises, lowering material standard of living in the UK.
<p>(Ext 8 para 1) "For the first time since the 1930s, benefits for pensioners are being cut in real terms by not being linked to inflation."</p> <p>(Ext 8 para 2) "pensioners had been hit hardest with 4.2% increases in their costs compared with the 2.4% rise as indicated by the CPI"</p>	<ul style="list-style-type: none"> • Possibly cuts to pension benefits, coupled with inflation, leads to fall in real value of pension. Thus, material SOL worsens. • Similar to the low income group, the pensioners suffer a disproportionately larger impact of rising cost of living.
<p>(Ext 8 last para) "The government has already taken action to help families with the cost of living, including: increasing the tax-free personal allowance to £10,000; freezing council tax for five years; and freezing fuel duty."</p>	<ul style="list-style-type: none"> • These measures increase purchasing power to mitigate the worsening of material SOL (explained above).
<p>(Ext 8 para 2) "mortgage interest payments dropped by 40% since January 2008, those with relatively high incomes benefited from it"</p>	<ul style="list-style-type: none"> • Real interest rate (on mortgages) = nominal interest rate – inflation rate. Hence, with inflation, real value of debt falls, thus freeing up money for homeowners on mortgage to spend on other goods and services. Thus, material SOL improves. • This benefits the high income group, because they spend a larger proportion of their income on MIPs (7% as opposed to the 3% for low income group, from Figure 3). The high income group are more likely to be the property owners. • As such, income inequality rises, especially since the properties owned are

		likely to experience an increase in value amidst inflation.												
No evidence for intangibles given for the UK		<ul style="list-style-type: none"> But if austerity measures in the UK are as aggressive as in the US and Greece, non-material SOL would have worsened (as explained in part (d)). 												
<p>Justified Conclusion</p> <ul style="list-style-type: none"> Average UK living standards have fallen "dramatically" since the recession, and both austerity and inflation will worsen material and likely, non-material SOL. However, the impact differs for different income groups. Thus, government mitigation measures should be more targeted at the low income and pensioners. However, given the UK government's budget deficit, there may be limited scope for mitigation. 														
<p>Mark Scheme</p> <table border="1"> <thead> <tr> <th>Band</th> <th>Band Descriptors</th> <th>Marks</th> </tr> </thead> <tbody> <tr> <td>L3</td> <td>Answers will provide sound analysis using UK data of both tangible and intangible indicators, considering extent of impact, together with a justified stand.</td> <td>6-8</td> </tr> <tr> <td>L2</td> <td>Answers will provide some attempt to elaborate on tangible or intangible aspects of standard of living with some reference to UK data. (i.e. lacks scope) OR Answer covers both tangible and intangible indicators though analysis is either mainly theoretical (without much reference to UK data) or mainly evidence (without analysis). (i.e. lacks contextualization or depth)</td> <td>4-5</td> </tr> <tr> <td>L1</td> <td>Superficial explanation or descriptive answers.</td> <td>1-3</td> </tr> </tbody> </table>			Band	Band Descriptors	Marks	L3	Answers will provide sound analysis using UK data of both tangible and intangible indicators, considering extent of impact, together with a justified stand.	6-8	L2	Answers will provide some attempt to elaborate on tangible or intangible aspects of standard of living with some reference to UK data. (i.e. lacks scope) OR Answer covers both tangible and intangible indicators though analysis is either mainly theoretical (without much reference to UK data) or mainly evidence (without analysis). (i.e. lacks contextualization or depth)	4-5	L1	Superficial explanation or descriptive answers.	1-3
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Question 3

Self-interested consumers and producers are only concerned with their own benefits and costs.

(a) Explain how the pursuit of self-interest addresses the central problem of economics. [10]

Suggested Outline:

CPE	Pursuit of self-interest	
<ul style="list-style-type: none"> Unlimited wants, limited resources Need to make choices (below): 	<ul style="list-style-type: none"> Consumers base decisions on PMB Producers base decisions on PMC 	
What to produce?	For what there is higher demand/PMB for	
How much to produce?	Where PMB=PMC	
How to produce?	Producers aim to minimise cost of production -> link to firms' profits	
Introduction		For who has highest willingness
<ul style="list-style-type: none"> Define self-interest: According to Adam Smith, consumers and producers are self- 		

interested and rational individuals, who serve to maximise their own interests (consumer surplus and producer surplus or profits respectively).

and ability to pay -> link to firms' profits

- **Define central problem of economics:** Consumers have unlimited wants, which cannot be met by limited resources (land, labour, capital and entrepreneurship), thereby giving rise to **scarcity**.
- **Outline essay approach:** This essay aims to explain how the pursuit of self-interest addresses the central problem of economics.

Body Paragraph 1: Elaborate on the central problem of economics

- **Unlimited wants** refer to the desire for ever higher levels of consumption of goods and services. *To exemplify.*
- **Scarcity results in the society having to make choices** on what and how much to produce, how to produce and for whom to produce.
- **Assuming a free market**, the **marginalist principle** behind consumers' and producers' demand and supply decisions, through their effect on price, is able to address the questions of "what and how much to produce?", and "for whom to produce?"
- The question of "how to produce?" is answered based on the **assumption that producers are profit-maximising**.

Body Paragraph 2: What and how much to produce? For whom to produce?

- **Private marginal benefit** is the benefit to the consumer of an additional unit of good consumed. OR **Demand** refers to the various quantities which consumers are willing and able to buy of a good at various prices, *ceteris paribus*.
- Hence, PMB/ DD represents consumers' tastes and preferences for a good/service.
- **Private marginal cost** is the cost to the producer of an additional unit of good produced. OR **Supply** refers to the various quantities which producers are willing and able to sell of a good at various prices, *ceteris paribus*.

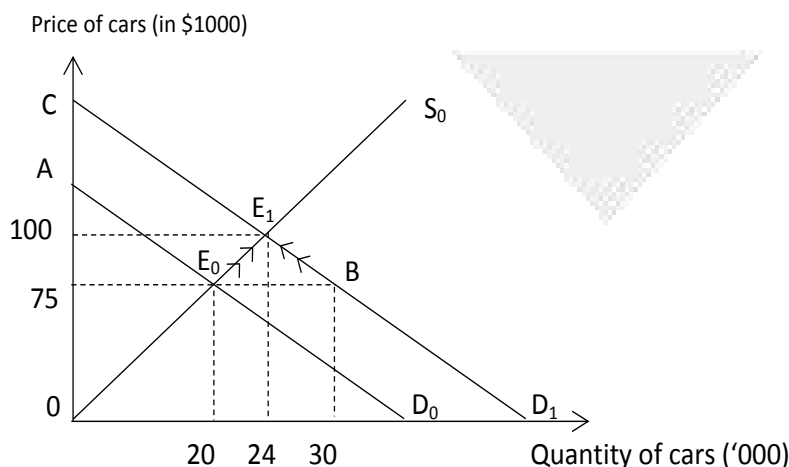
What to produce?

- Goods and services with higher demand/PMB fetch higher prices, which thus **signal to /incentivises producers** to produce them, given the possibly higher profits (since profits = total revenue – total cost).
- **Thus, resources are channeled to producing goods and services in accordance to what society wants.**

How much to produce?

Use price mechanism

- Initially, consumers have to pay a price of \$75,000 for each car. At this unit price, the total quantity of cars demanded is 20,000. Car makers respond to this by channeling resources towards the production of 20,000 cars.



<ul style="list-style-type: none"> When consumers have a stronger preference and/or a greater willingness and ability purchase cars, demand for cars increase from D_0 to D_1. At the same price \$75,000, there is a shortage of 10,000 cars at point B. This shortage p upward pressure on car prices. Producers respond to this by channeling more resources towards the production of 4,000 m cars (E_0 to E_1), since producers now stand to receive a price of higher than \$75,000 for ea car. Yet as the price increases, some consumers may realise that they are unwilling or unable to the higher price, hence total quantity of cars demanded falls by 6,000 (B to E_1). The market thus reaches a new equilibrium where quantity demanded equals quan supplied at a higher price \$100,000. Therefore, the pursuit of self-interest encourages the use of resources in line w consumers' preferences.
<p>Body Paragraph 3: How to produce?</p> <ul style="list-style-type: none"> To maximize profits, the producers in deciding how to produce, will strive to produce using the most efficient methods, i.e. least-cost production techniques to achieve the maxim output by fully utilizing the limited resources efficiently.
<p>Conclusion</p> <p>In summary, pursuit of self-interest allows interaction between consumers and producers in a market to achieve an outcome where scarce resources are used efficiently (assuming no market failure).</p>
<p>For whom to produce?</p>

Mark Scheme

L3 (7-10)	<p>High L3: <u>Excellent</u> analysis of how decisions based on PMB and PMC (OR DD/SS) answers the 3 questions of choice in the central problem of economics, with <u>accurate</u> graphical analysis.</p> <p>Low L3: <u>Clear and reasoned</u> analysis of how decisions based on PMB and PMC (OR DD/SS) answers the 3 questions of choice in the central problem of economics, with graphical analysis. <u>Minor errors.</u></p>
L2 (5-6)	<p>Underdeveloped explanation of how decisions based on PMB and PMC (OR DD/SS) answers the 3 questions of choice in the central problem of economics. (i.e. lacks depth)</p> <p>OR</p> <p>Lopsided answer with explanation of either pursuit of self-interest or central problem of economics only. (i.e. lacks breadth)</p>
L1 (1-4)	<p>Answer is mostly irrelevant and contains only a few valid points made incidentally. Major conception errors.</p>

(b) Discuss the view that the use of subsidies is better than direct provision to correct the problem arising from positive consumption externalities, even as consumers and producers pursue self-interest. [15]

Suggested Outline:

<ul style="list-style-type: none"> Briefly elaborate on how positive externalities results in market failure (with reference to diagram)
<p><u>Thesis:</u></p>
<p><u>Anti-thesis:</u></p>

Subsidies is the better policy for market failure due to positive externalities <ul style="list-style-type: none"> Explain how subsidy works (with reference to diagram) 	Direct provision is the better policy for market failure due to positive externalities <ul style="list-style-type: none"> Explain how direct provision works
<u>Compare advantages of subsidies and direct provision</u>	
- Subsidies is market-based whereas government takes over the role of the free market with direct provision	
<u>Compare limitations of subsidies and direct provision</u>	
- Lack of information on EMB at Qs for optimal subsidy rate, and lack of information on Qs for direct provision	
- Both over-subsidy and over-provision strain government budget	
- Subsidies may breed complacency and inefficiency in private firms, whereas direct provision if carried out by the government may breed inefficiency since government is not profit-maximising	

Mark Scheme

L3 (8-11)	High L3: Excellent analysis of both policies and their limitations, with appropriate and even novel exemplification and graphical analysis. Low L3: Clear and reasoned analysis of both policies and their limitations, with appropriate exemplification and reference to graph. Minor errors.
L2 (5-7)	Underdeveloped explanation of both policies work and their limitations of the policies. (i.e. lacks depth) Weak exemplification. OR Lopsided answer with explanation of either both policies only or 1 policy and its limitations only. (i.e. lacks breadth) Weak exemplification.
L1 (1-4)	Answer is mostly irrelevant and contains only a few valid points made incidentally. Major conception errors.
E2 (3-4)	Justified conclusion with clear comparisons between the 2 policies.
E1 (1-2)	Unjustified conclusion.

Question 4

(a) Explain how international trade can lead to improve standards of living in a country. [10]

Introduction

Define Standard of Living

Standard of living refers to the quality of life that is enjoyed by the people. For the purpose of this essay, material welfare refers to the quantity and quality of goods that are consumed.

1. Inter-Industry Trade can help increase the quantity of goods consumed.

According to the Theory of Comparative Advantage, between 2 countries, countries should produce, between 2 goods, the good that they have a comparatively lower opportunity cost in.

PRODUCTION BEFORE	Specialisation and Total World Output	
	Computer	Textile

USA	40	10
Vietnam	5	10
Total world output	45	20

Referring to Table 1 above:

- Due to different factor endowment and by devoting half of their resources among the production of computer and textile, USA is able to produce 40 units of computers and 10 units of textile while Vietnam is able to produce 5 units of computers and 10 units of textile.

Opportunity Cost Ratios: Area of Comparative Advantage

Table 2: Opportunity Cost Ratios

	1 Unit of Computer	1 Unit of Textile
USA	$10/40 \text{ 1C} = 0.25\text{T}$	$40/10 \text{ 1T} = 4\text{C}$
Vietnam	$10/5 \text{ 1C} = 2\text{T}$	$5/10 \text{ 1T} = 0.5\text{C}$

Referring to Table 2 above:

- For USA, she can produce 4 units of computers for 1 unit of textile. This means that to produce each unit of computer, she has to give up 0.25 unit of textile. Thus the opportunity cost of 1 unit of computer in USA is 0.25 unit of textile; and the opportunity cost of 1 unit of textile in USA is 4 units of computers.
- By the same argument, the opportunity cost of producing 1 unit computer in Vietnam is 2 units of textile; and the opportunity cost of producing 1 unit of textile is 0.5 unit of computer.
- Thus, we see that USA has a comparative advantage in computer production since it needs to give up lesser textile than Vietnam for producing computers whereas Vietnam has a comparative advantage in textile production since it gives up lesser computers than USA for producing textile.

PRODUCTION AFTER Specialisation and Total World Output

	Computer	Textile
USA	80	0
Vietnam	0	20
Total world output	80	20

If TOT is 1C: 1T,

CONSUMPTION after Trading at 1C:1T

	Computer	Textile
USA	70	10
Vietnam	10	10

- By specialisation and trading based on a suitable term of trade within their opportunity cost ratios, countries will gain as they are able to enjoy a bundle of goods beyond their production possibility curve.

Intra-Industry

With intra-industry trade, especially across similar industries, this will increase the variety of goods available to consumers. For instance, Europe exported 2.6 million motor vehicles in 2002, and imported 2.2 million of them. Through importing, the general European community gets to enjoy different varieties and models of cars.

Trade as Engine of Growth

- Through trade, it can help grow the economy as the increase in their exports in areas of their comparative advantage will in fact aid in increasing their AD and national income and employment.

- Free trade provides greater access to global markets for domestic producers, as the establishment of FTAs means producers in each country face a much larger market. This thus increases demand for their exports – thus increasing export revenue (X) and hence AD. With more real output, more factors of production are hired, leading to higher employment levels as producers hire more FOPs to address unexpected shortfall in goods.
- Insert AD/AS diagram

(b) One cost of globalisation is structural unemployment. Discuss the extent to which it is of most concern for different governments. [15]

Define Globalisation: Globalisation refers to the increasing integration or inter-connectedness of national economies through trade of goods and services, foreign direct investment, capital flows, spread of technology and labour migration.

Thesis: Structural Unemployment occurs due to dynamic CA and Technology flows.

Due to the increasing movement of factor inputs like capital, skilled labour and even natural resources,

Level		Descriptors
L3	7-10	<ul style="list-style-type: none"> • Inter-industry trade: CA theory explained analytically with most of the following key elements (table is optional): <ul style="list-style-type: none"> ○ Different factor endowments lead to different opportunity costs for production ○ Specialisation of production of the product with the lower opp cost will lead to increased world production ○ Exchange via terms of trade which is within the respective opportunity costs will benefit everyone – consume outside PPC • SOL was defined clearly • Trade as an engine of growth or intra-industry trade leading to greater variety of goods for consumption with examples
L2	5-6	<ul style="list-style-type: none"> • Inter-industry trade: CA theory explained descriptively • SOL was defined clearly • Trade as an engine of growth or intra-industry trade leading to greater variety of goods for consumption
L1	1-4	<ul style="list-style-type: none"> • SOL undefined • CA theory sketchily explained or not explained

comparative advantage is more dynamic than ever. Nations can gain and lose comparative advantages in a

Level	Descriptors
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matter of months. As such whenever a nation loses its comparative advantage, the workers in the particular industry will lose their jobs. Structural unemployment is caused by a mismatch of skills, whereby there are jobs in the market but the workers do not have the skills to do those jobs. An example would be the widespread structural unemployment in the city of Detroit after they lost their comparative advantage in car manufacturing to Japanese firms.

Another reason for structural unemployment is the use of technology by developing nations to replace labour intensive industries. With globalization, countries do not have to develop their own technologies and can leverage on existing technology elsewhere in the world to speed up their development. For example, the Chinese modernized their Economy in mere decades while the developed nations took hundreds of years to modernize. This process is good but inevitably displaces a lot of workers and may lead to structural unemployment if they cannot adapt quickly enough.

Anti-thesis 1

There are other costs which may be higher in degree of damage than structural unemployment depending on the state and nature of the economy.

1. Contagion/externally induced cyclical unemployment
2. Brain Drain
3. Imported inflation
4. Any other logical cost

Anti-thesis 2

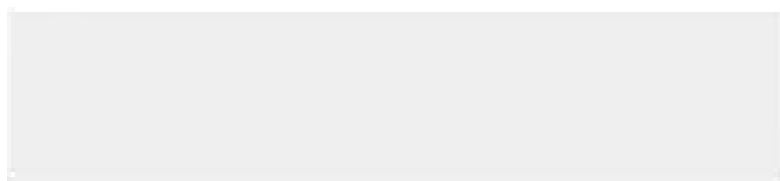
There are policies which can solve or prevent/mitigate the numbers of structurally unemployed.

1. Having a broad based education ensures that workers are adaptable and can pick up skills very quickly.
2. Subsidies for retraining programmes
3. Protectionism for sunset industries to delay the onset of massive structural unemployment
4. Any other logical policy

Possible Conclusion

There are many costs that arise from globalization and structural unemployment is unlikely to be the main cost. This is because policies to solve structural unemployment can be domestically controlled and are less dependent on external factors, even for small and open economies.

L3	9-11	<ul style="list-style-type: none"> • Structural unemployment analytically explained with clear economic links to globalisation – especially dynamic CA leading to structural unemployment by 1) Being out competed by a country who discovered its CA 2) Off-shoring 3) Outsourcing • Other costs of unemployment well explained • Policies to mitigate structural unemployment caused by globalisation explained • Good attempts at exemplification <p>Note: It is not compulsory for policies to be present for the candidate to hit high L3. An approach of using consequences to gauge the severity of the cost in various contexts is also welcome.</p>
L2	6-8	<ul style="list-style-type: none"> • Structural unemployment descriptively explained • Some attempt to link globalisation to structural unemployment • Either other costs or policies explained • Some attempt at exemplification
L1	1-5	<ul style="list-style-type: none"> • Structural unemployment not explained • No attempt to link globalisation with structural unemployment • Other costs/policies not mentioned at all • No attempt at exemplification • Sketchy/off track answer
E2	3-4	<ul style="list-style-type: none"> • Justified evaluation using various contexts/examples e.g. state of economy and nature of economy
E1	1-2	<ul style="list-style-type: none"> • Unjustified or generic evaluation





HWA CHONG INSTITUTION
C2 Preliminary Examinations
Higher 2

CANDIDATE NAME

CT GROUP

CENTRE NUMBER

INDEX NUMBER

ECONOMICS
Paper 1 Case Study Questions

9732/01
28 August 2015
2 hours 15 minutes

Additional Materials: Answer Paper

READ THESE INSTRUCTIONS FIRST

Write your **name, CT group, Centre and Index numbers** clearly in the spaces at the top of this page and on every page you hand in.

Write in dark blue or black pen on both sides of the paper.

You may use a soft pencil for any diagrams, graphs or rough working.

Do not use staples, paper clips, highlighters, glue or correction fluid and tape.

Answer **all** questions.

Begin each question on a fresh sheet of writing paper.

At the end of the examination, fasten your answers to Question 1 and Question 2 **separately** with the two cover pages provided.

The number of marks is given in brackets [] at the end of each question or part question.

You are advised to spend several minutes reading through the questions before you begin writing your answers.

You are reminded of the need for good English and clear presentation in your answers.

Answer all questions

Question 1: Singapore Maritime Industry - Future Challenges and Prospects**Table 1: Total Cargo Tonnage through Singapore, 2008-2013**

	2008	2009	2010	2011	2012	2013
Cargo tonnage* (in million tonnes)	515.4	472.3	503.3	531.2	538.0	560.9
Annual Change in cargo tonnage (%)	6.6	-8.4	6.6	5.5	1.3	4.3

*Note: Cargoes that are carried on shipping vessels are generally bulk items such as cars, machineries and furniture, and raw materials such as oil, chemicals, iron, steel and cement.

Source: Maritime Port Authority, Singapore

Table 2: Growth in World Gross Domestic Product (GDP), 2008-2013

	2008	2009	2010	2011	2012	2013
Real GDP growth (%)	3.1	-0.7	4.9	3.7	3.0	2.9

Source: CIA World Factbook

Extract 1: The melting ice cap and the Singapore port

Last week, news broke that Singapore had gained admission as permanent observer into an exclusive club in the cold north, the Arctic Council. At first glance, it may seem odd for a tiny republic on the equator to be joining a council whose members ring around the North Pole and focus on issues facing their territories, especially on the melting polar ice cap.

The Arctic's vast covering of sea ice has rendered it mostly inaccessible to commerce throughout the year. But that looks set to change. With the melting of the Arctic ice cap, the Northern Sea Route (NSR) is predicted to have up to 125 days per year suitable for navigation by 2050. By some estimates, it could be as early as 2030.

The new route via the North Pole can cut the time taken by ships from Europe to reach the East by almost half. It has the potential to divert Southern Sea Route (SSR) shipping traffic that has gone via the Suez Canal and the Malacca and Singapore Straits. In 2009, only 2 vessels with a combined load of about 40,000 tonnes used the NSR. In 2012, a staggering 46 vessels with a cargo load of 1.26 million tonnes sailed through the same route.

This would threaten Singapore, which is one of the world's busiest ports, in time to come. However, an important consideration for shipping firms lies with the fact that global economic hotspots such as the powerhouses of the rich Arabian states, India and Southeast Asia are within the SSR. A vessel would normally have a few stopovers to offload and reload the cargo, rather than merely commuting between two destinations. In addition, using the NSR may not be as straightforward as it seems. They would have to consider paying additional allowances for workers due to harsher climate and a higher insurance premium. Even during summer months, ice breaker ships are hired to clear the route.

Source: Adapted from *the Straits Times*, 21 May 2013

Table 3: Selected Indicators for a Container Vessel from Rotterdam (Netherlands) to Pusan (South Korea), 2013

	Northern Sea Route (NSR)*	Southern Sea Route (SSR)#
Distance (nautical miles)	6857	10754
Length of Journey (in days)	11	18
Fuel Consumption (ton MFO [®])	2695	4410

*NSR is a new shipping lane that links the Europe and Asia Pacific via the Russian Arctic Sea.

SSR is the traditional shipping lane that links Europe and Asia Pacific via Suez Canal (Egypt), the Indian Ocean, the Straits of Malacca and the South China Sea.

[®]Marine Fuel Oil

Source: Korea Maritime Institute

Extract 2: Singapore's port losing its lustre?

Since the founding of Singapore, its free port has always been instrumental in developing the country to a first world economy. In 2013, it takes up 7% of Singapore's GDP and employs more than 170,000 people.

In 2010, Shanghai overtook Singapore as the world's busiest port for containers shipping due to China's rapid economic growth, and is set to widen the gap. Indeed, if the Chinese economy continues expanding at its current pace, it is almost certain that several other Chinese ports, including Shenzhen and Guangzhou will overtake Singapore as well during the next decade or so.

The Singapore port operator, PSA, likes to point out that although Shanghai's overtaking of Singapore looks impressive, it conceals the fact that the two ports are quite different in how they operate. Shanghai is overwhelmingly a "through port", where raw materials come in to be assembled or manufactured and then leave as televisions or plastic toys. Singapore, in contrast, is a trans-shipment port, where containers arrive to be transferred to other vessels to continue their onward voyage. Singapore's port activities revolve around connecting oil and cargo markets to the West (Europe, Africa, Middle East, and South Asia) with that of East Asia, while China's ports mainly serve its domestic market. In the long run, Singapore's port should welcome its Shanghai counterpart's growth. Some of Singapore's trans-shipment traffic depends on China.

Shipping lines are increasingly forced to explore the cheapest cost options which in turn impose downward pressure on the port charges. For instance, the attractiveness of neighbouring Johor's Port of Tanjung Pelapas' (PTP) port price, which is some 30% lower than that of PSA's, becomes apparent. So far, PSA is reluctant to give way to lower price demand.

To keep its nose ahead, PSA Singapore is also investing in the soft power of maritime supremacy as much as the hard power of container metal boxes. The city is becoming a centre of maritime architecture and green maritime technology to complement its lead in terms of the legal and financial aspects of maritime technology. Realising also the need to diversify, PSA has gone beyond its own shores by venturing into port management in other countries. In 2013, PSA International, the overseas arm of PSA, was involved in the management of 26 ports in 15 countries. It has consistently been voted as the top port operator in the world. Since 2006, PSA International combined overseas operations moved more containers than were handled in Singapore. The Singapore government is also set to build a new mega container terminal for PSA in Tuas by 2027 which will double the existing handling capacity.

What is important is that Singapore is able to manage its port resources effectively - providing maximum connectivity at lowest possible cost. It is more important that Singapore remains a vital global hub for logistics and get these policies correct. Once that is done, shipment volumes and economic activity will follow.

Source: Various

Extract 3: The Cold North: A risky frontier for Singapore

The Intergovernmental Panel on Climate Change (IPCC) last year concluded that manmade activities primarily from the West had directly caused ice in the Arctic to shrink and thin. Emission of greenhouse gases from the use of fossil fuels to power cars, factories and electricity production, resulted in the warming in the atmosphere and ocean.

Melting ice could also cause coastal flooding, a real problem for Singapore. More resources will have to pour into the construction of dykes and flood management infrastructure sooner rather than later.

“Human and economic activities ironically could benefit from warmer temperatures and reduced Arctic sea ice,” concluded the report by IPCC. The region has rich deposits of oil, gas and other minerals, which will become more accessible as the ice caps melt. The Arctic now holds 30 per cent of the world's undiscovered gas and 13 per cent of oil.

Singapore's Arctic involvement is driven primarily by an ambition to exploit an emerging market niche in which it sees itself as a technological and expertise leader. The republic is also home to firms with offshore and marine engineering experience. In 2008, state-controlled Keppel Singmarine broke new ground when it completed Asia's first two ice breakers for a subsidiary of Russian Lukoil. These ice breakers carve out shipping passages by breaking through huge blocks of ice during summer months in the Arctic. Singapore is now developing the next generation of oil rigs and ships, including Arctic life boats for Arctic oil companies. Faster responses to emergencies in the Arctic are needed as the area opens up for more development.

In addition, tourism in the Arctic is expected to get much needed boost. Already, the volume of tourist trips throughout Greenland, Norway, Alaska and Canada has increased rapidly. Killer whales and grey whales sighting tours are expected to benefit from melting ice. This would prove to be a lucrative prospect for Singapore's travel industry.

Without government pushing for the agenda, Singapore businesses lack the necessary manpower and expertise in this field of Arctic exploration, research or even Arctic travel. Singapore is also far from the Arctic for firms to do first-hand research in freezing temperatures using equipment suited for warmer weather.

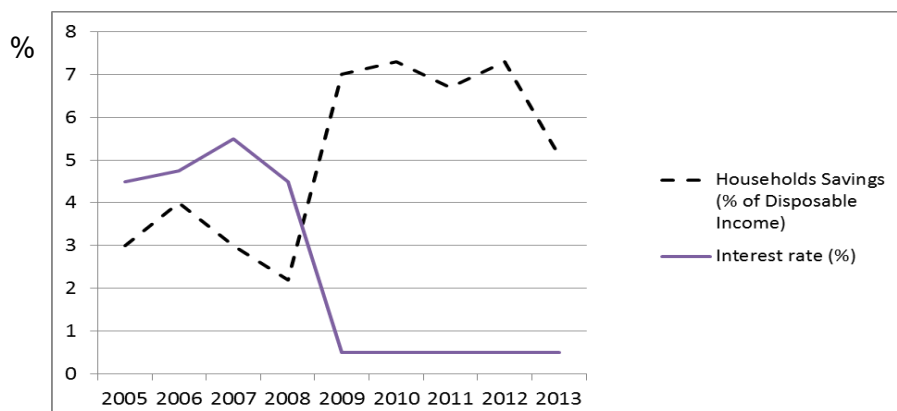
Nevertheless, for a tropical country, Singapore seems bent on sharing the spoils from a potentially lucrative market way up north but its limitations will persist.

Source: Various

Questions

- (a) With reference to Tables 1 and 2, use a relevant elasticity of demand concept to explain the likely reason for the changes in cargo tonnage passing through Singapore. [4]
- (b) Explain whether data suggest the melting Arctic ice cap has significantly affected the volume of cargo tonnage handled by Singapore between the period 2009 and 2012. [2]
- (c) How might shipping firms make the decision to take either the NSR or SSR route? [4]
- (d) Despite being overtaken by Shanghai as the world's busiest container port, explain why Singapore Port Operator (PSA) should 'welcome its Shanghai counterpart's growth'. [2]
- (e) Given the emergence of major shipping ports like Shanghai, Shenzhen and Guangzhou, discuss the appropriate strategies that you would recommend for PSA to maintain its profitability. [8]
- (f) Assess whether the government or the private sector in Singapore should play a more important role in view of the economic inefficiencies in resource allocation brought about by the melting polar ice cap. [10]

[Total 30 marks]

Question 2: Financial Crisis, Austerity Measures and Cost of living Issues**Figure 1: Bank of England Interest Rates and UK Household Savings (% of Disposable Income)**

Source: OECD & Bank of England

Extract 4: Austerity plan in UK is failing

The International Monetary Fund (IMF) has never been wildly enthusiastic about the UK Finance Minister George Osborne's tough austerity plan to shrink growing budget deficits by cutting back on government spending and raising taxes. It has been saying for at least a year that there should be a reassessment of fiscal policy if the recovery falters.

The IMF, while supporting the need for budget deficits to be reduced, believes action should not be so aggressive as to derail growth. It has done some recent work on fiscal multipliers – they are much higher during nasty downturns than at other times. Research suggests that when interest rates are near zero, the multiplier could be higher than two. Besides, the knock-on effects of tax and government spending on households and firms are more powerful than was previously thought.

However, Osborne's advisers have pointed out that the fiscal multipliers are weaker in open economies such as the UK than they are in more closed economies such as the US or Germany.

But austerity is still having a dampening effect on the economy, and is making it harder for the Finance Minister to hit his deficit reduction targets. The IMF is right. It is time to take stock. It would be a risk for Osborne to announce tax cuts and a slower pace of spending cuts in the budget. But it will be a risk – and probably a bigger one – if he does nothing.

Source: *The Guardian*, 24 January 2013**Extract 5: 'Recessions can hurt, but austerity kills'**

Mass of data reveals that more than 10,000 additional suicides and up to a million extra cases of depression have been recorded across the two continents since governments started introducing austerity programmes in the aftermath of the crisis. In the US, more than five million people have lost access to health care. In Greece, there's a 200% increase in HIV cases. And in some of the worst-hit countries, both suicide and crime rates are up. David Stuckler, author of an explosive new book, says the facts speak for themselves.

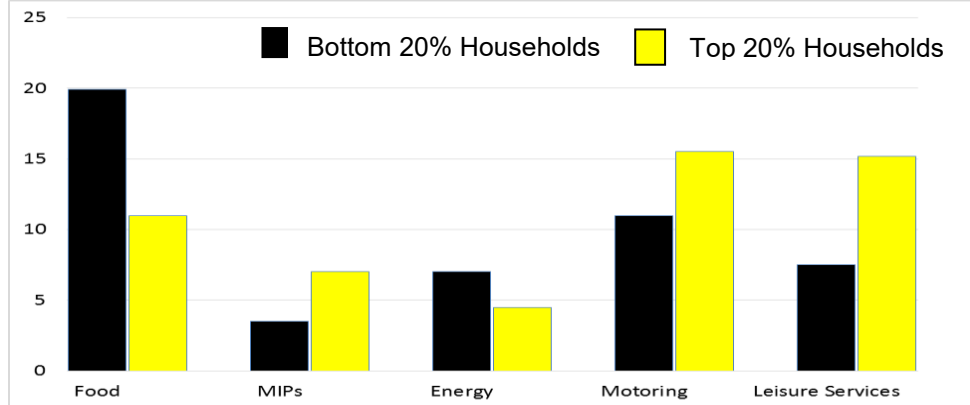
"Recessions," Stuckler says bluntly, "can hurt. But austerity kills."

Source: BBC News, 15 May 2013

Extract 6: Post-Crisis Living Standards and Rising Cost of living in the UK

Average UK living standards have fallen "dramatically" since the recession. The Institute for Fiscal Studies (IFS) calculated that a mid-range household's income between 2013 and 2014 was 6% below its pre-crisis peak. Rising childcare, food and energy costs, coupled with stagnating wages and cuts to benefits and tax credits, have widened the poverty gap. For the first time since the 1930s, benefits for pensioners are being cut in real terms by not being linked to inflation.

Figure 2: UK Households Budget shares (%) for key goods and services, 2012



Footnote: 'MIPs' are mortgage interest payments and 'Other housing' are mainly rented apartments.

Source: Office for National Statistics, UK

Everyone is hit by the higher cost of living, but those on low incomes could feel the squeeze more. The report said that inflation between 2008 and 2013 was 20%, while energy prices rose by 60% and food prices were up by 30%. This had a disproportionate impact on poorer households. It also found that the pensioners had been hit hardest with 4.2% increases in their costs compared with the 2.4% rise as indicated by the CPI.

And when mortgage interest payments dropped by 40% since January 2008, those with relatively high incomes benefited from it. The report also found people on lower incomes are less likely to switch suppliers and shop around than those on a higher income. This is partly due to the rich having bank account for direct payments, or access to buy online or compare prices across a wide range of suppliers.

"The government has already taken action to help families with the cost of living, including: increasing the personal tax rebates and freezing fuel duty.

Source: Various

Extract 7: Singapore's High Cost of Living May Come at a Cost

In the Economist Intelligence Unit's Cost of Living Survey, Singapore catapulted five places to become the most expensive city in the world.

Singapore, one of Asia's largest financial centers, has seen a big inflow of expatriates in recent years. Foreigners make up about 38 percent of Singapore's population, up from about 25 percent in 2000. More than 7,000 multinational companies operate in the city and expat workers are seen as key to developing Singapore, not just as a regional hub in finance but also in other sectors such as oil and gas. While low taxes, good air quality and less crime lure workers to Singapore from across the world, the recent push up in housing, schooling and transport costs could discourage expats from moving into the city or staying on long-term, analysts said.

Rising costs and a growing population, which the government expects could increase to almost 7 million by 2030 from the current 5.3 million, has also led to discontent among locals who feel the influx of foreign workers has led to overcrowding on trains and buses, higher property prices and contributed to the overall rise in living costs.

Singapore is one of the most expensive places in the world to buy a car, with permits to buy new vehicles called a certificate of entitlement (COE) adding to the cost of buying a car in Singapore. High property prices, pushed up by increased demand from a growing population, have been one of the major contributors to the rising cost of living. For instance, Singapore property prices surged 50 percent between 2007 and 2011, driven partly by foreign buying.

For economists the implications of rising costs in Singapore could not be clearer: wage pressures could build up, they warn. Singapore could lose some of its competitive edge to fast-developing neighbors in Southeast Asia, if costs continue to rise, said regional experts. Despite the high cost of living in Singapore, some expats are willing to pay a premium for the quality of life offered by this island state.

Source: *Wall Street Journal*, 4 Mar 2014 and CNBC, 30 Jan 2013

Table 4: Ranking of Most Expensive Cities in the World: Selected Asian Cities 2014

City	Rank 2014
Singapore	1
Tokyo	6
Hong Kong	13
Shanghai	14

Source: Economist Intelligence Unit

Extract 8: Singapore world's most expensive city for expats, not local

A day after the Economist Intelligence Unit (EIU) ranked Singapore the priciest city in the world, Finance Minister Tharman Shanmugaratnam came out to say that such surveys which focus on expatriates do not reflect the living costs of Singaporeans.

The costs measured differ from those facing an average Singaporean in two important ways: the role of currency, and which goods and services are considered. "An important reason why we've become expensive for expatriates is that the Singapore dollar has strengthened," said Mr Tharman, noting that the EIU report itself points out this reason. That makes things pricier for an expatriate paid in a foreign currency, but it improves Singaporeans' purchasing power, both at home when buying imported goods and when travelling. Next, the EIU consumption basket includes imported cheese, four best seats in a theatre, and three-course dinners in high-end restaurants for four people. "And indeed for these items, Singapore's expensive," said Mr Tharman. But such items would not feature in the average Singaporean's consumption basket.

Few surveys measure living costs for ordinary residents, but Mr Tharman cited one that did. A 2012 Asia Competitiveness Institute report had separate rankings of living costs for expatriates and a typical local household. Singapore was the fifth most expensive city out of 109 for expatriates but only 61st for locals, comparable to Hong Kong at 58 and Seoul at 60. "So that's the basic difference," said Mr Tharman.

Source: *The Straits Times*, 6 Mar 2014

Questions

- (a) (i) Use the concept of opportunity cost to explain the theoretical relationship between interest rates and level of savings. [2]
- (ii) Comment on whether the relationship is shown in Figure 1 from 2009 onwards. [2]
- (b) Using the data provided in Extract 4, explain whether the call by IMF for a reassessment of the UK austerity policy is justified. [4]
- (c) Explain the statement in Extract 4, 'austerity is still having a dampening effect on the economy, and is making it harder for the Finance Minister to hit his deficit reduction targets'. [2]
- (d) Based on Extract 5, explain how austerity measures have adversely impacted the standard of living in some countries. [2]
- (e) Discuss how inflation has affected different types of households in post-crisis UK. [8]
- (f) Singapore was ranked the most expensive city in the world in 2014 according to the Economist Intelligence Unit's Cost of Living Survey. [10]

Discuss the validity of this ranking and consider whether high cost of living is a threat to long-term economic growth for Singapore.

[Total 30 marks]

[END OF PAPER]*Copyright Acknowledgements:*

Question 1 Extract 1:	The Straits Times, www.straitstimes.com.sg
Question 1 Extract 2:	Container-transportation.com, assessed 4 August 2015 and Maritime Port Authority, Singapore
Question 1 Extract 3:	www.carbonbrief.org , assessed 28 May 2015 and The Straits Times 16 May 2013
Question 1 Table 1:	Maritime Port Authority Singapore
Question 1 Table 2:	CIA World Factbook
Question 1 Table 3:	Korea Maritime Institute
Question 2 Extract 4:	http://www.theguardian.com/business/2013/jan/24/imf-george-osborne-austerity-failing
Question 2 Extract 5:	http://www.theguardian.com/society/2013/may/15/recessions-hurt-but-austerity-kills
Question 2 Extract 6:	http://www.bbc.com/news/uk-23083218 http://www.bbc.com/news/business-25966075 http://www.thisismoney.co.uk/money/news/article-2821716/Energy-food-inflation-hit-poorest-twice-hard-rich-benefit-mortgage-cuts.html
Question 2 Extract 7:	http://www.cnn.com/id/100418370 http://blogs.wsj.com/indonesiarealtime/2014/03/04/the-worlds-most-expensive-city-now-sits-in-southeast-asia/
Question 2 Extract 8:	http://ifonlinsingaporeans.blogspot.sg/2014/03/most-expensive-city-for-expats.html#.dpuf
Question 2 Figure 1:	OECD Bank of England
Question 2 Figure 2:	Office of National Statistics, UK
Question 2 Table 4:	Economist Intelligence Unit

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HWA CHONG INSTITUTION
JC2 Preliminary Examinations
Higher 2

CANDIDATE NAME

CT GROUP

CENTRE NUMBER

INDEX NUMBER

ECONOMICS
Paper 2 ESSAY

9732/02
15 September 2015
2 hours 15 minutes

Additional Materials: Answer Paper

READ THESE INSTRUCTIONS FIRST

Write your **name, CT group, Centre and Index numbers** clearly in the spaces at the top of this page and on every page you hand in.

Write in dark blue or black pen on both sides of the paper.
You may use a soft pencil for any diagrams, graphs or rough working.
Do not use staples, paper clips, highlighters, glue or correction fluid and tape.

Answer **three** questions in total, of which **one** must be from Section A, **one** from Section B and **one** from either Section A or Section B.

Begin each question on a fresh sheet of writing paper.

At the end of the examination, fasten the answer sheets to each essay question separately together with the 3 cover pages provided.

If you only attempt 2 essays, please submit a nil return with the 3rd cover page, indicating the possible essay question you would have attempted. If you only attempt 1 essay, please submit 2 nil returns with the other 2 cover pages, indicating the possible essay questions you would have attempted.

The number of marks is given in brackets [] at the end of each question or part question.
You are advised to spend several minutes reading through the questions before you begin writing your answers.

You are reminded of the need for good English and clear presentation in your answers.

This document consists of 2 printed pages.

[Turn over

Answer **three** questions in total.

Section A

One or two of your three chosen questions must be from this section.

- 1 In 2013, the Pollution Standards Index (PSI) in Singapore hit a record high. It was reported that there was a shortage of face masks used to protect individuals from the harmful effects of the haze.
- (a) Explain the likely reasons for the shortage of face masks and the role of price mechanism in correcting the shortage. [10]
- (b) Discuss whether it is justified for the Singapore government to distribute free face masks to households during a haze. [15]
- 2 The government collects revenue from sale of Certificates of Entitlement (COEs). There have been large increases in the COE prices for cars in Singapore over the past few years.
- Discuss the likely effects of higher COE prices on government revenue and expenditure by consumers on different types of cars. [25]
- 3 In recent years, natural calamities such as floods and earthquakes have caused the cost of raw materials to rise.
- (a) Distinguish between variable costs and fixed costs and explain whether a rise in these costs will affect a firm's pricing decision differently. [10]
- (b) Discuss the extent to which a rise in cost of raw materials will result in an oligopolistic firm changing its price in reality. [15]

Section B

One or two of your three chosen questions must be from this section.

- 4 (a) Explain what might cause a current account deficit in the balance of payment. [10]
- (b) When faced with a deteriorating trade balance, some countries turn to protectionism. However, countries like Singapore do not engage in protectionism. Discuss why governments use different policies to achieve healthy trade balance. [15]
- 5 (a) Using the concepts of scarcity and opportunity cost, explain why governments are often concerned with high levels of unemployment. [10]
- (b) High youth unemployment rates are increasingly a problem in many parts of the world. Weak economy, too many graduates and the lack of suitable jobs created are often cited as the culprits. Assess the relative importance of the various reasons for youth unemployment in different countries. [15]
- 6 Discuss the extent to which economic growth of countries depend more on government policies than the amount of natural resources they possess. [25]

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C2 H2 Economics Prelims 2015 Case Study Question 1 and suggested answers

(a)	With reference to Tables 1 and 2, use a relevant elasticity of demand concept to explain the likely reason for the changes in cargo tonnage passing through Singapore.	[4]
	<ul style="list-style-type: none"> • Changes in Container tonnage into Singapore is larger than the changes in world's GDP and generally it is positively related. (1m) • Evidence: the cargo carried are luxury goods e.g. cars, furniture as well as raw materials used as factors of production in goods which are likely to be luxury goods.(1m) • Thus the income elasticity of demand would be positive and greater than one.(1m) • As global economic activities increases, world income increases leading to higher demand for goods, thus the derived demand for transportation (shipping) increases leading to a rise in volume of cargo, c.p. (1m) <p>Note: Normal good argument is acceptable too. Basic necessities argument should be used with the correct evidence e.g. with cars, to be acceptable. If candidate equate cargo tonnage as Singapore's export cannot be accepted. If candidate quote uses only one year of evidence (assuming the rest are correct), max 3 marks. Candidates may analyse in terms of both increase of tonnage and increase of world GDP for the time period.</p> <p>Direct relationship – 1m YED > 0 or YED > 1 – 1m evidence (normal/luxury) – 1m Derived demand – 1m</p>	
(b)	Explain whether data suggest the melting Arctic ice cap has significantly affected the volume of cargo tonnage handled by Singapore between the period 2009 and 2012.	[2]
	<ul style="list-style-type: none"> • The tonnage of ships using the NSR has grown tremendously (from 40,000 to 1.26million which is phenomenal at more than a 3000% growth. On the other hand, Singapore's cargo tonnage increased by 14%.(1m) • However, the represent a small percent of the cargo traffic that passes through Singapore for both years. The 1.26 m ton that passes through NSR is very insignificant (less than 1%) relative to total tonnage of 472 .3m and 560.9m handled by Singapore. (1m) • OR • However, it is not known if the cargo that passed through the NSR are those that were meant to go through Singapore. So it has no basis for comparison. <p>Note: Candidates must 'prove' that they understand the significance of the data. They shouldn't just state that melting Arctic ice cap has small significance for Singapore to obtain full marks.</p> <p>If candidate says NSR is insignificant and world income factor is more significant can give 2m.</p>	
(c)	How might shipping firms make the decision to take either the NSR or SSR route?	[4]
	<p>Cost reasons (2m) Higher variable costs:</p> <ul style="list-style-type: none"> • Wages for sailors through NSR could be higher due to harsh climate they have endure. • Even during summer months, ice breaker ships are hired to guide the ship. 	

	<p>Lower variable costs: Lower fuel cost by taking the NSR. In Table 3, The benefit is in terms of cost savings where the fuel consumption can be reduced by 39%</p> <p>Revenue reasons (1m +1m) Economic growth lies with countries along the SSR not NSR. Or reduced number of days increases the ability of firms to make more trips thus revenue increases</p> <p>In most cases, containers go where the demand for the good is. So firms would use the SSR if the destination of the cargo is within the countries that it traverse, even with higher fuel cost.</p> <p><i>Note: Table 3 must be used in order to obtain all 4 marks. 'benefit' alone is not acceptable, must linked to revenue.</i></p>	
(d)	<p>Despite being overtaken by Shanghai as the world's busiest container port, explain why Singapore Port Operator (PSA) should 'welcome its Shanghai counterpart's growth'.</p>	[2]
	<ul style="list-style-type: none"> • Shanghai overtook Singapore – appears to rivalrous and substitutes. • But since Shanghai is a 'throughport' and serves China, while Singapore is a 'transshipment' port which serves slightly different market. Both are not considered close substitutes to one another. • In fact, the cargo that goes out of Shanghai may use Singapore as a transshipment port. In that sense, both may be complementary in their operations <p><i>1m for evidence plus "not closed substitutes" only</i></p> <p><i>2m for Evidence plus complementary in operations</i></p> <p><i>Derived demand not acceptable</i></p>	
(e)	<p>Given the emergence of major shipping ports like Shanghai, Shenzhen and Guangzhou, discuss the appropriate strategies that you would recommend for PSA to maintain its profitability.</p>	[8]
	<p>Shanghai overtaken Singapore as world's busiest container port and set to widen. Singapore may consider examining price competition, non-price competition and other acceptable strategies in order to maintain its profitability.</p> <p>PSA strategies to maintain profitability</p> <p>Revenue factors Price Competition</p> <ul style="list-style-type: none"> • Lower price to attract more shipping firms to use Singapore port. • <i>'Shipping lines are forced to explore the cheapest-cost options which in turn impose downward pressure on the port charges. For instance, the attractiveness of Johor's Port of Tanjung Pelapas' (PTP) port price, which is some 30% lower than that of PSA's, becomes apparent.'</i> • Evaluation – not likely to reduce price to attract the shipping firms as demand is inelastic due to its transshipment status. 	

	<p>Non-price competition</p> <ul style="list-style-type: none"> Product Service innovation – design centre for maritime technology, green technology, legal and financial centre. Elaborate using concepts of leading to rising demand, reduce PED and CED. <p>Other methods</p> <ul style="list-style-type: none"> Diversification – venturing into overseas markets, to increase revenue for the firm. <p>Cost factors</p> <ul style="list-style-type: none"> Capacity expansion – increase scale of production by doubling the capacity and perhaps gain more internal economies of scale that can reduce long run average costs in the future. <p>Conclusion</p> <ul style="list-style-type: none"> Shanghai is a port that is tied to the economic growth of China, while Singapore is a transshipment port for West and East Asia. Both serve different nature of markets. The challenge of losing its status as world’s busiest port looks inconsequential to Singapore’s PSA. The firm looks quite well placed to tackle them by enhancing effectiveness of the strategies both in Singapore and overseas. <p>Mark Scheme</p> <table border="1"> <tr> <td>L3 (6-8)</td> <td>Balanced answer that considers on how to increase revenue and reducing cost based on the context. Candidates should attempt at arriving at justified conclusion to reach a L3 mark.</td> </tr> <tr> <td>L2 (4-5)</td> <td>Either: Lopsided answer with in-depth analysis, Or: Balanced answer but lacks depth in analysis. Both with some use of case evidence. (No use of case evidence – capped at Low L2: 4m)</td> </tr> <tr> <td>L1 (1-3)</td> <td>High L1: List of relevant concepts and/or case evidence without adequate explanation. Low L1: Largely irrelevant answer with major conceptual errors.</td> </tr> </table>	L3 (6-8)	Balanced answer that considers on how to increase revenue and reducing cost based on the context. Candidates should attempt at arriving at justified conclusion to reach a L3 mark .	L2 (4-5)	Either: Lopsided answer with in-depth analysis, Or: Balanced answer but lacks depth in analysis. Both with some use of case evidence. (No use of case evidence – capped at Low L2: 4m)	L1 (1-3)	High L1: List of relevant concepts and/or case evidence without adequate explanation. Low L1: Largely irrelevant answer with major conceptual errors.	
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(f)	Assess whether the government or the private sector in Singapore should play a more important role in view of the economic inefficiencies in resource allocation brought about by the melting polar ice cap.	[10]						
	<p>Introduction</p> <p>The melting polar ice cap brought about both challenges and opportunities and both</p>							

the Singapore government and private sector have to work together to mitigate the negative impact and work to benefit from the opportunities. Whether the government or private sector has a bigger role to play, shall be discussed.

Body

Negative externalities and public goods - government

- *Manmade activities ...” Emission of greenhouse gases from the use of fossil fuels to power cars, factories and electricity production, resulted in the warming in the atmosphere and ocean.*
- *But melting ice could also cause coastal flooding, a real problem for Singapore.*
- Briefly explain the **negative externalities** involved and resulted in flooding problem in Singapore.
- In response, government has to pour into the construction of dykes and flood management infrastructure sooner rather than later. The market will not be building this due to missing market. No private firms will undertake this projects.
- Explain the concepts of **non-rivalry and non-excludability of public goods**.

Opportunities and challenges – government

- *Singapore's Arctic involvement is driven primarily by an ambition to exploit an emerging market niche in which it sees itself as a technological and expertise leader. The republic is also home to firms with offshore and marine engineering experience.*
- *Singapore is now developing the next generation of oil rigs and ships, including Arctic life boats for Arctic oil companies.*

Immobility in Factor of Production

- **Occupational Immobility:** Singapore businesses lacks the necessary manpower and expertise in this field of Arctic exploration and research.
- **Capital Immobility:** Singapore is also far from the Arctic to do first-hand research in freezing temperatures using equipment suited for warmer weather.

+ High risks involved in such venture

As a result, government needs to take the lead to provide education and training opportunities and funds for R&D in such areas; provide information; reduce risks involved for private firms to enter the business.

Opportunities - private sector involvement

In addition, tourism in the Arctic is expected to get much needed boost. Already, the volume of tourist trips throughout Greenland, Norway, Alaska and Canada have increased rapidly. Killer whales and grey whales sighting tours are expected to benefit from melting ice. This would prove to be a lucrative prospect for Singapore's travel industry.

Lucrative such as Arctic tourism – private sector can work with the countries involved in tourism.

Government Intervention could come to support or nurture 'infant industries' related to melting ice caps e.g. provision of training for new skilled manpower, subsidise R&D so as to acquire new Comparative Advantage; provide financing to overcome barriers to entry such as very high initial capital outlay; negotiations for rights to operate tours to the Arctic with international organisations or foreign governments.

Conclusion

Government seems to be in a better position to take the lead such as in provision of public good and rectifying immobility of factors of production while the private sector may be slower to take respond to these changes as they are long run changes.

Both private sector and government have key roles to play in the economy, albeit in different aspects. Correcting certain market failures must be left to government to ensure an efficient allocation of resources. Nurturing new growth sectors/industries requires the active partnership of both private sector and government to succeed. To survive, Singapore economy has to be able to restructure and reinvent. The government traditionally/historically plays an active role in helping to nurture/grow new sectors e.g. bio- medical, petrochemical to Gaming industry/casinos in the past. Therefore, should continue to play the same role in developing new growth sectors related to melting ice caps to make SG relevant to the rest of the world in order to sustain future economic growth.

Mark Scheme:

L3 (6-8)	Balanced and accurately-analysed answer which is contextualised. Candidates must demonstrate good application of the data to the relevant Market Failure concepts. (Note: No need for diagram(s) for L3.)
L2 (4-5)	Either: Lopsided answer with in-depth analysis, either from the private sector or the government sector. Candidates showed the ability to incorporate answers relating to Market Failure in the answer. Or: Balanced answer but lacks depth in analysis. Both with some use of case evidence. (No use of case evidence – capped at Low L2: 4m)
L1 (1-3)	High L1: List of relevant concepts and/or case evidence without adequate explanation. Low L1: Largely irrelevant answer with major conceptual errors.
E2 (2)	Gives a justified stand. Able to point out that Singapore's weak private sector is 'lagging' behind the government sector in this respect and government perhaps need to take a leading role.
E1 (1)	Gives an unjustified stand. Some attempt to compare both

	sectors.	
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Mark Scheme & Suggested Answers

(a) (i)	Use the concept of opportunity cost to explain the theoretical relationship between interest rates and level of savings	[2]
	<p>State the theoretical relationship: Direct/positive</p> <p>Explain using O.C. concept O.C. is cost measured in terms of the next best alternative forgone. Interest rates affect choices made by households between saving and consumption. When interest rates fall, O.C. measured in terms of interest forgone falls thus making saving less attractive or consumption more attractive (1m). Therefore, rational households spend more and save less (1m).</p>	
	<p>Marking policy:</p> <p>Wrong relationship but correct explanation - Can award 2 marks Correct relationship but wrong explanation - Can award 1 mark</p> <p>Accept alternative approaches touching on the key elements:</p> <ul style="list-style-type: none"> • Interest rate linked to choice between S and C • OC of S is higher the lower the i/r • OC of C is lower the lower the i/r • Rational decision is C more and save less, if i/r falls. 	
(ii)	Comment on whether the relationship is shown in Figure 1 from 2009.	[2]
	<ul style="list-style-type: none"> • No: Graph shows a clear divergence of saving and interest rate. Interest rate was very low (close to zero and remain flat) yet saving rate rose sharply and remain relatively high (1m) • Financial crisis: households are pessimistic about the economic outlook and they will tend to save more (paradox of thrift). (1m) <p>[FYI: Test is on the psychological impact on S and C or so-called pessimism or loss of confidence to spend in bad times]</p>	
	<p>Marking policy: Not required to state explicitly the concept paradox of thrift. Correct explanation with indirect reference e.g. psychological impact on consumption and saving in bad-times is sufficient.</p>	
(b)	Using the data provided in Extract 1, explain whether the call by IMF for a reassessment of the UK austerity policy is justified.	[4]
	<p>Yes (1m for evidence and 2m for explanation) – Extract 1, para 2:</p> <ul style="list-style-type: none"> • Case Evidence: Austerity measures are believed to <i>'derail growth due to larger multiplier (k>2) during recession and the strong 'knock-on effects'</i>. (1m) <p>Analysis:</p> <ul style="list-style-type: none"> • Larger k: Higher than expected negative or downward K effect generated by a cut in G spending as a result of fiscal austerity. The size of the K is determined by the marginal propensity to consume (mpc) or withdraw 	

	<p>(mpw). Since, interest rate is close to zero (using case evidence) this elevates k by increasing the propensity to consume (bigger MPC) rather than save (smaller MPS). (1m)</p> <p>[FYI: The value for UK multiplier =1.28, Source: Colin Bamford 26 August 2015]</p> <ul style="list-style-type: none"> • Knock-on effects *: Knock on effects further reinforced the negative K effects due to the austerity measures. Government cutting back on spending and higher taxes further DISCOURAGES autonomous consumption and investment by the private sector (1m) <p>[FYI: *The knock on effects refer to the positive impact on PRIVATE sector consumption and Investment “sparked off” by public sector pump-priming measures initiated by the government to brighten up economic outlook and restore confidence in the economy. Unlike pump-priming, the knock on effects in this context have a negative impact on private C +I because of fiscal austerity. In other words, fiscal austerity dampens or causes “loss of confidence” in private sector spending]</p> <p>No (1m) Case evidence: Extract 1, para 3</p> <p>Analysis: Fiscal multipliers are weaker in open economies such as Britain due to higher MPM. Accept other reasonable contextualised arguments such as tax cuts will lead to an even larger debt which the UK will have more problems clearing in the future.</p>	
(c)	Explain the statement in extract 1 ‘austerity is still having a dampening effect on the economy, and is making it harder for the Finance Minister to hit his deficit reduction targets’.	[2]
	<ul style="list-style-type: none"> • A reduction in government spending and higher taxes reduce AD and causes national income to contract that leads to cyclical unemployment. (1m) • When income falls, lesser income taxes are collected due to progressive taxation system and higher unemployment benefits pay-outs due to cyclical unemployment. (1m) <p>[FYI : This question test on automatic stabilisers]</p>	
(d)	Based on Extract 2, explain how austerity measures have adversely impacted the standard of living in some countries.	[2]
	<ul style="list-style-type: none"> • Evidence: Countries that practice austerity measures: cut in health-care e.g. Greece, USA: Suicide, depression, HIV + rising crime issues (1m) • Theory: Intangible dimension of living standards or quality of life worsens. (1m) 	
(e)	Discuss how inflation has affected different types of households in post-crisis UK.	[8]

Introduction

- Define inflation as a sustained or persistent rise in general price level
- The data provides information on the impact of inflation on rich and poor households in UK.
- Inflation caused a redistribution of income amongst different types of households resulting in 'losers' and 'gainers'.

Body

A. Losers (Thesis)

Explain why the poorer households are worse off with inflation.

a. Incomes

Case evidence:

'*Stagnating wages, cuts to benefits and tax credits*' due to austerity measures have reduced purchasing power of households.

b. Household expenditure pattern ie consumer basket

Case evidence:

From Figure 2, rising food, rented apartments and energy prices, formed a bigger proportion of the spending of poorer households than the rich.

Explain why pensioners are hit hardest.

- *Pensioners had been hit hardest with 4.2% increases in their costs compared with the 2.4% rise as indicated by the CPI.*
- Pensioners have fixed income; spend more on food and energy.
- Benefits delinked to inflation.

Evaluative comments:

The impact on poor were mitigated by government policies.

Case evidence:

'*increasing the tax-free personal allowance to £10,000; freezing council tax for five years; and freezing fuel duty.*'

B. Gainers (Anti-Thesis)

Explain why rich households benefit.

a. Incomes

Asset prices and investment income rising e.g. property income. Such assets appreciate in value in times of inflation.

b. Expenditure pattern

The rich has benefited from *cheaper mortgage rates (dropped by 40% since 2008)*

Case evidence:

According to Figure 2, rich households spend a much larger proportion on MIP.

Debtors (borrowers) gain because a fall in the value of money (due to inflation) means that the payments of their debts will be less in real terms: real interest rate = nominal interest rate – inflation + Figure 1 shows interest rates have fallen.

Large part of their consumption is on non-essentials (e.g. luxury cars, fine dining, expensive

overseas holidays) of which prices were not the culprits of rising COL in the UK.

c. Shoe-leather costs

the rich having bank account for direct payments, or access to buy online or compare prices across a wide range of suppliers. The rich have access to resources which allowed them to shop for the 'best deal' ie Stretch their Consumer dollar or spending power.

Conclusion

Whilst all households suffered a fall in real disposable incomes in post-crisis UK, the poor were hit hardest. It can be said that the poor households were the 'losers' and the rich households were the gainers. Stagnating wages of the poor and rising COL affecting key items such as food and energy, which accounted for a substantial proportion of the expenditure pattern of poor households, led to widening "poverty gap" or income disparity between the rich and poor.

Mark Scheme

Band	Band Descriptors	Marks
L3	Answer will provide in-depth and accurate analysis that links consumption pattern of rich and poor households in UK to the impact on their respective purchasing power as well as differences in sources and change in the level of incomes. There will be due reference to the data provided in both extracts and figure 2. Evaluative comments & judgement –reaches a conclusion based on the analysis offered.	6-8
L2	Answer will provide basic analysis that links consumption pattern of either poor or rich households, but not both, to the impact on their purchasing power. Not much reference to income levels e.g. stagnating wages. Limited reference made to the data.	4-5
L1	Superficial explanation with little or no reference to the data.	1-3

(f) Singapore was ranked the most expensive city in the world in 2014 according to the Economist Intelligence Unit's Cost of Living Survey.

[10]

Discuss the validity of this ranking and consider whether high cost of living is a threat to long term economic growth for Singapore.

Key issue : Ranking (Statistical discrepancy issues)
Sub-issue : Implication for growth prospects (Growth issues)

Introduction

Clarify Singapore being the 'most expensive' city to live in the world' means it has the highest cost of living in the world. This ranking has negative implication for growth. Thus, if the ranking is valid, it might suggest in the LR the country will experience difficulties in maintaining healthy growth rates.

Body

Thesis: Ranking is valid

Anti-thesis: Ranking is invalid

<p>(a) Issues with using CPI indicator as a measure of COL</p> <p>(1) COL based on local consumption pattern</p> <ul style="list-style-type: none"> • High cost of living in Singapore is mainly due to rising food, transport and housing costs. • High COE prices have added on to cost of production to businesses and higher transport costs due to higher fuel price, caused cost-push inflation. • Strong demand in the property market has resulted in demand-pull inflation in Singapore. <p>Case evidence:</p> <ul style="list-style-type: none"> • <i>Singapore property prices surged 50 percent between 2007 and 2011, by strong foreign demand; rising costs and a growing population, has also led to discontent among locals who feel the influx of foreign workers has contributed to the overall rise in living costs.</i> <ul style="list-style-type: none"> • In fact, there is a fear of a wage-price spiral. [Didn't happen] <p>(2) Currency Factor</p> <p>The strong\$ favour the purchasing power of locals in SG. The purchasing power of their incomes increases as the currency appreciates. The same amount of income can now be used to purchase more imported goods such as cars, consumer durables and even imported foodstuff and fresh produced. Therefore, the strong Sing\$ will have a dampening effect on rising COL in SG. This is alluded to in Tharman's remarks.</p>	<p>(a) Issues with using CPI indicator</p> <p>(1) COL based on expat consumption pattern.</p> <ul style="list-style-type: none"> • This ranking applies to expatriates living in Singapore only and mainly due to the strengthening of SGD over the years. • It is not representative of an average Singaporean because the basket of goods taken into calculation for the cost of living is not of a typical Singaporean. • Cost of living of a country is the average cost of the basic necessities of life, including food, shelter, and clothing. That is the price of goods and services required for maintaining an average level standard of living. It is measured by the consumer price index. <p>Case evidence:</p> <ul style="list-style-type: none"> • But the EIU consumption <i>basket includes imported cheese, four best seats in a theatre, and three-course dinners in high-end restaurants for four people</i> <p>(2) Currency Factor</p> <p>Moreover, given the strength of the Sing\$ vis-à-vis other major currencies, the COL for expats would be "inflated" by a strong sing\$. Expats would need more of their own home currency to convert to the same amount of Sing\$ in order to spend in Singapore.</p> <p>Case evidence:</p> <p><i>A 2012 Asia Competitiveness Institute report had separate rankings of living costs for expatriates and a typical local household. Singapore was the fifth most expensive city out of 109 for expatriates but only 61st for locals, comparable to Hong Kong at 58 and Seoul at 60</i></p>	
<p>(b) Threat to growth prospects.</p> <p>(1) Actual growth</p> <p>High COL retards growth: Reduces real incomes or purchasing power => falling AD</p> <p>High COL disadvantage exporters. It raises their cost of production (e.g.</p>	<p>However..... Not a major threat/concern at least for the foreseeable future</p> <p>(1) Mitigating Policies to curb rising COL</p> <p>SG government swift to implement policies to curb rising domestic sources of inflation e.g. cooling measures to slow down rise in property prices. Measures</p>	

wages raise/Office rentals/fuel cost) making export price uncompetitive vis-à-vis our rivals/competitors. These rising business costs are domestically generated (not imported cost push), therefore cannot be mitigated by our GRAMA policy.

Evaluative comment:

The COL based on typical local consumption pattern or consumer basket suggests that the COL isn't as high as that suggested by EIU. SG ranked only 61/109 countries.

(2) Potential Growth

High COL for expats might hinder the inflow of foreign manpower which is important to augment our local workforce e.g. foreign talent. As a result, growth might be adversely affected by the lack of skilled manpower & entrepreneurs to boost productive capacity.

Case evidence:

- *Foreigners make up about 38 percent of Singapore's population, up from about 25 percent in 2000. More than 7,000 multinational companies operate in the city and expat workers are seen as key to developing Singapore, not just as a regional hub in finance but also in other sectors such as oil and gas.*
- *As seen from Table 1, there are other comparable cities to Singapore yet relatively cheaper to live in, namely, Hong Kong and Shanghai.*
- Thus, it is important for the government to ensure Singapore stays competitive and attractive to foreign talents and FDIs.

to moderate increases in transportation costs (e.g. MRT and bus fares); improve public transport infrastructure to encourage more people to give up driving, ease road congestion and moderate rise in COE prices; measures to contain wages-prices from spiraling out of control.

Evaluative comment:

Such policies are best complemented by raising productivity to enable wage growth to rise faster than prices, so that real income rises

(2) Better quality of Life

The threat to expats rising COL is mitigated by the fact that our quality of life remains very high and attractive to foreign expats e.g. clean safe and green environment compared to HK polluted environment. Politically more stable than HK. In recent years, HK rocked by 'yellow umbrella' protests. All things considered, SG remains an attractive destination for FDI inflows as well as a place for foreign talent to live and work.

Conclusion

- While the ranking may be misrepresentative of an average Singaporean, it is still a concern as it is still relatively high by world standard for expatriates (1st according to EIU and 5th according to ACI).
- Being the most expensive city to live in for expatriates deters the influx of foreign talent and even FDI which may threaten potential growth. Whether rising COL pose a serious threat to future growth prospects will depend on the effectiveness of government policies to rein in inflationary pressures as well as sharpen our international competitiveness. All things considered, at least for the present moment and foreseeable future, rising COL is unlikely to pose a major threat to future growth prospects for SG.

Mark Scheme

Band	Band Descriptors	Marks
L3	Answers will provide sound analysis based on differing basket of goods for expats and locals to assess the validity of the ranking. There will be due reference to the data provided, and coherent links to the implication of the ranking for LT economic growth for SG.	6-8
L2	Answers will provide some understanding of the link between differing consumption pattern of expats and locals and its implication on the ranking. But, the explanation is not well-developed. The focus is either slanted towards ranking or growth-related issues (lop-sided)	4-5
L1	Superficial explanation or descriptive answers	1-3
E2	Substantiated Judgment / well-reasoned conclusion based upon consideration of the analysis. For example, high COL is a deterrence but not yet a threat to the influx of expats and FDI as the returns from investment is still attractive + quality of life is better compared to other Asian cities like HK. Or Some evaluative judgement on the validity of the ranking. It is high based on expats COL (1 or 5) not locals (61/109). Should be a concern to SG because we depend on FDIs and foreign talent to drive economic growth.	2
E1	Unsubstantiated judgement on validity of ranking. No judgement is required for growth-related issues since the command word is "consider whether".	1

28 August 2015

Q1

In 2013, the Pollution Standards Index (PSI) in Singapore hit a record high. It was reported that there was a shortage of face masks used to protect individuals from the harmful effects of the haze.

(a) Explain the likely reasons for the shortage of face masks and the role of price mechanism in correcting the shortage. [10]

INTRODUCTION

A shortage exists when the market is not in equilibrium at existing prices. The demand-supply framework can be used to account for the shortage and the 3 roles (or functions) of the price mechanism can be used to explain how the shortage can be corrected in a free market. Demand refers to the quantities of a good that consumers are willing and able to purchase at each possible price during a period of time, ceteris paribus, while supply refers to the quantities of a good that producers are willing and able to offer for sale at a given set of prices during a period of time, ceteris paribus.

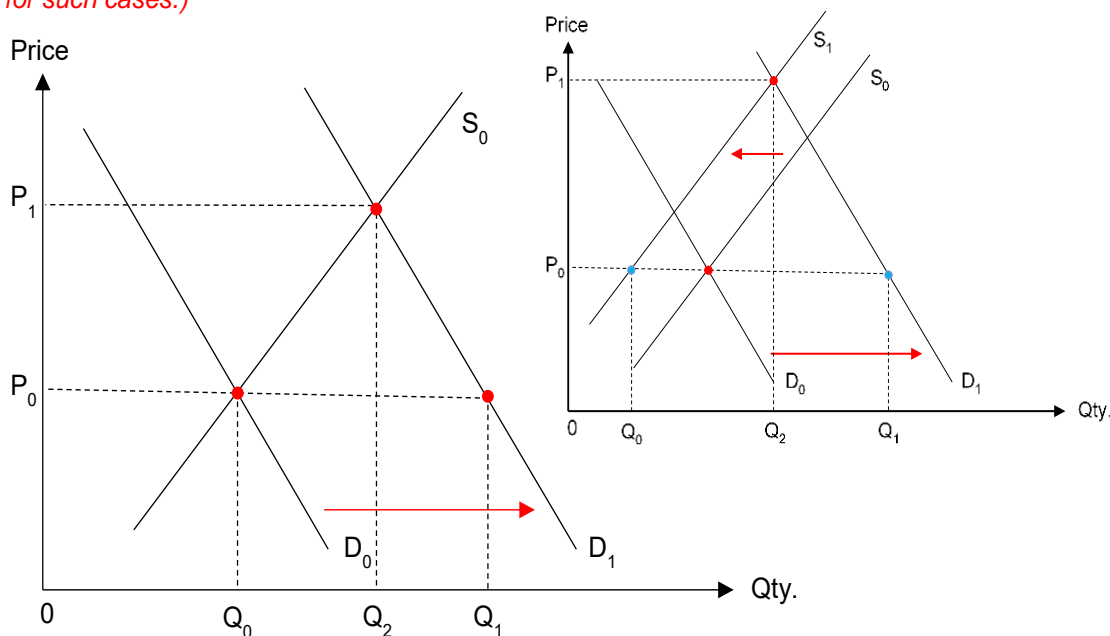
BODY

Explain the Shortage

With the PSI hitting a record high, there will be a rise in the number of consumers who need the masks. This is especially true for those who work in open areas. Furthermore, reports on the ill-effects of the haze had brought about demand even by those with a cursory exposure to the haze or by parents worried for the well-being of their school-going children. The fear of the haze being prolonged might have also brought about further demand from those who stockpile the face masks. Profiteering behaviour might also occur by some who purchase more than they require in order to resell them at a higher prices during the short-term shortages. These result in an increase in demand for face masks.

(*Candidates just need to have a decent analysis of the demand factors. Need not be too "long-winded", but expect 2 demand factors for a good answer)

(*If candidates highlight reasonable supply factor(s) too, it is acceptable too but the analysis will be more complicated. In such cases, a demand and a supply factor would suffice. Markers will have to be careful that the correct amount of shortage is identified for such cases.)



As seen in the figure above, at the initial market equilibrium price of P_0 , the increase in demand from D_0 to D_1 will result in a shortage of $Q_1 - Q_0$ as quantity demanded is more than quantity supplied. However, assuming that this is a free market without any price controls, the shortage will create an upward pressure on prices.

Explain how the Price Mechanism can Correct the Shortage

Explain how the signalling, incentive and rationing role of the price mechanism will correct the shortage such at $Q_d = Q_s$ at the higher mkt. equi. Price P_1 . (Note: Our C1 notes Chap 3 PG 26-27 have only signalling and rationing functions)

CONCLUSION

In conclusion, demand factors and an unchanged price in the short-run are the likely reasons for the shortage of face masks. However, in a free-market, the price will increase and through the 3 roles of the price mechanism correct this shortage over time.

Marking Scheme

LEVELS	DESCRIPTION	MARKS
3	<ul style="list-style-type: none"> • Able to identify 2 demand factors OR 1 supply and 1 demand factor to account for the shortage of face masks AND elaborate how these factors shift the demand &/or supply curves. • Factors raised are reasonable for the Singapore and haze context. • Able to correctly illustrate and identify the shortage. • Able to explain clearly (& best via the diagram) how the price mechanism can correct the shortage through its signalling OR incentive and rationing functions. • 	7-10
2	<ul style="list-style-type: none"> • Lack scope in the sense that only 1 DD OR SS factor was raised. • Lack scope in the sense that only one function of the price mechanism (5-6) was covered or not at all • Lack depth as DD/SS factors raised lack the accompanying explanation. • Lack depth as the functions of the price mechanism may be identified, but not explained. <p>* Cap at 5m if candidate did not attempt to explain how the price mechanism can correct the shortage.</p>	4-6
1	<ul style="list-style-type: none"> • Major conceptual errors with little coherent explanations 	1-3

(b) Discuss whether it is justified for the Singapore government to distribute free face masks to households during a haze. [15]

INTRODUCTION

- To consider the source(s) of mkt. failure that warrants govt. intervention.
- To consider if the type of intervention (free masks for all) is justified.

BODY

Efficiency Considerations (+ve ext)

Thesis: Solution is justified	Anti-thesis: Solution is not justified
<p>During a haze, market failure exists in the market for face masks due to +ve externalities from consumption and income inequality → hence warrants govt. intervention.</p> <p>Positive externality: third parties such as <u>employers</u> will benefit from lower absenteeism due to health problems amongst employees brought about by the haze. National productivity would be less affected. Less subsidies by <u>govt.</u> for public healthcare required if the face masks reduce the incidence of people seeking treatment at public hospitals and polyclinics for haze-related health problems.</p> <p>Given the severity of the pollution and the large numbers</p>	<p>However, the size of the +ve ext. might not be large enough to warrant free provision. This is because the majority of Singaporeans worked in skilled jobs that are in enclosed environments such as air-conditioned factories or offices. Furthermore, both public transport and private transport are air-conditioned. Hence the exposure to pollution air is brief.</p> <p>Hence if the externalities is not as large, the socially efficient solution is to partially subsidise the masks but not to provide them for free.</p> <p>Illustrate and explain how free provision in this case will result in DWL and an inefficient outcome. (* Candidates</p>

that it affect, the external benefits offered by the mask can be so large that the socially efficient level of consumption is where $P = 0$. In this case, distributing free masks will ensure the socially efficient level of consumption.

Illustrate the mkt failure & show how giving out free masks can resolve the MF.

should use the prior diag. on -ve to illustrate this point to save time)

In this case, free masks might be a popular measure but not socially efficient.

Efficiency Considerations (Imperfect Information)

Thesis: Solution is justified

As it is the first time that the haze has reached such a high level, there may be imperfect information about the dangers to health brought about by such a record level of PSI. Hence consumers might downplay the need for masks and hence underestimate the private marginal benefits of the masks and hence under-consume them.

Illustrate the mkt failure & show how giving out free masks can resolve the MF.

*(*Note: Theoretically, it is possible to illustrate a sufficiently large gap between PMB_{actual} and $PMB_{perceived}$ to justify free provision of masks. However, realistically it is difficult to argue that imperfect information alone can justify free provision of the masks. The shortage seems to suggest that consumer demand is strong rather than lacking due to imperfect information. The best candidates who focus only on efficiency arguments would most likely combine the 2 sources of inefficiencies to justify free provision of masks. i.e. Candidates may argue that masks in the context of a serious haze can be considered as a merit good by the government.)*

Anti-thesis: Solution is not justified

The educational attainment of Singapore residents is high and the reach of the mass media in Singapore is widespread as we are a developed country. Hence any lack of knowledge about the importance of face masks when the PSI levels are high is likely to be addressed within a short period of time. Hence there is no need for the government to intervene by giving out free masks due to the temporal nature of the imperfect information problem.

Income Inequality/Equity Considerations

Thesis: Solution is justified

Income inequality/Equity: face masks become a basic necessity for all. Need to ensure poor households who need them, especially those prone to respiratory problems such as asthma, are able to have access to them regardless of their purchasing power. The poor also tend to work in more manual jobs with greater exposure to the polluted air, such as road cleaning, security and gardening. Hence these masks are an even greater necessity for them.

Evaluation: This is even more crucial as prices of face masks is expected to rise in response to the shortage, putting this necessity further out of reach for poor income households. However, means testing should be applied to prevent abuse of this scheme.

Anti-thesis: Solution is not justified

Providing things for free can created a crutch mentality and a disincentive to work harder to break out of the poverty trap. A better solution might still be to subsidise/co-payment instead of free provision to mitigate the moral hazard arising from free provision.

Furthermore, it is not justifiable for the state to pay for face masks for workers from low income households when their employers should be the one responsible for providing them a safe working environment. In the context of the workplace, new regulations or enforcement of work safety regulations could be the better solution as they do not incur opportunity costs arising from the use of state funds for free face masks.

Also, it is not necessary to provide free masks for all as the rich would have the ability to afford the masks themselves.

Evaluation: However, given the urgency of the haze problem and its temporal nature, it might be more fast-acting to provide free face masks to all rather than spend

time hankering out details of subsidy scheme and new regulations to protect low-income workers. The temporal nature of the haze also reduces the amount of costs required to fund free face masks for all.

CONCLUSION

(For –ve ext + income inequality)

While there are economic grounds for government intervention in the market for face masks during a haze, the solution of free masks needs to be examined carefully with regard to the scale of its distribution and if there are better alternative solutions to address the market failure. Given the job nature of the majority of Singaporeans and that the low levels of absolute poverty in Singapore, it might not be justifiable to distribute free masks to all households. However, for low-income households, there can be grounds for such provision under the economic grounds of income inequality.

Marking Scheme

LEVELS	DESCRIPTION	MARKS
3	<ul style="list-style-type: none"> • Discusses at least 2 of out the 3 grounds for government intervention. • Clear analytical framework used to discuss the arguments for and against the provision of free masks by the government. • Analysis adequately addresses the context of Singapore, haze and “free” masks. 	8-11
2	<ul style="list-style-type: none"> • Lack scope in that only 1 of the 3 grounds for government intervention was covered. • Lack scope in that the arguments raised were overly one-sided with scant consideration of the anti-thesis. • Analysis does not adequately address the given context, in particular the issue of “free” – i.e. discussion is more for a discussion of government to (partially) subsidise masks rather than to give out “free masks” • May have some minor conceptual errors in some of the key concepts in the question or is very theoretical with minimal contextualised arguments. • An answer that digresses excessively into alternative solutions. 	5-7
1	<ul style="list-style-type: none"> • Major conceptual errors with little coherent explanations • No examples at all or examples are irrelevant or inappropriate • Missing link to key concepts in the question 	1-4
E2	<ul style="list-style-type: none"> • Answer has a stand on whether the government should give out free masks, justified with economic analysis • Answer has a well-explained evaluative comment within the body of the essay. 	3-4
E1	<ul style="list-style-type: none"> • Answer lacks a well-justified stand • Answer lacks any evaluative comment within the body of the essay or contains generic evaluative comments. 	1-2

Q2

The government collects revenue from sale of Certificate of Entitlement (COE). There have been large increases in the COE prices for cars in Singapore over the past few years.

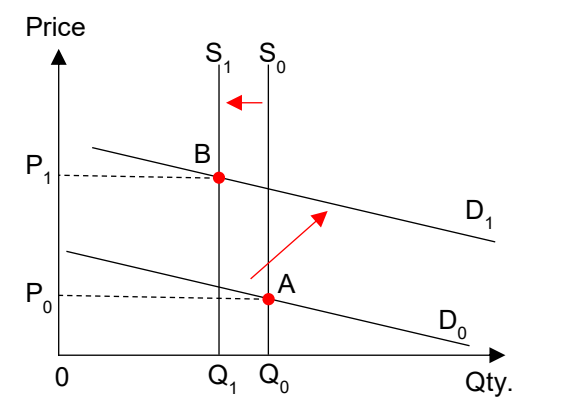
Discuss the likely effects of higher COE prices on government revenue and expenditure by consumers on different types of cars. [25]

INTRODUCTION		
<p>The effects of the large rise in COE prices can be analysed using the demand-and-supply framework. Demand refers to the quantities of a good that consumers are willing and able to purchase at each possible price during a period of time, ceteris paribus, while supply refers to the quantities of a good that producers are willing and able to offer for sale at a given set of prices during a period of time, ceteris paribus. Consumer expenditure is the value that consumers spent on a particular good or service and is measured by equilibrium price multiplied by equilibrium quantity in the market.</p>		
BODY		
Impact on Govt. Revenue		
<p>PES = 0</p>	<p><u>COE Supply</u> COE supply is a quota decided by the govt. independently of prices. Hence it is has perfectly price inelastic supply.</p>	
<p>PED > or < 1</p>	<p><u>COE Demand (PED > 1)</u> (preferred)</p> <p>COE prices in recent years are typically more than 50K and are a high proportion of the average income in Singapore. Hence the demand for COEs is likely to be price elastic.</p>	<p>OR <u>COE Demand (PED < 1)</u> (own figure rule)</p> <p>Purchasing a COE is a regulatory requirement for those who wish to purchase a car. Given this is a necessity, the demand for COEs is likely to be price inelastic.</p>
<p>Large ↑ in COE prices due to SS ↓</p>	<p>Thus if the ↑ in COE prices is due to a ↓ in COE supply, there will be a more than proportionate ↓ in quantity demanded for COEs, leading to a ↓ in COE revenue of the govt.</p> <p>The ↓ in COE supply could be due to relatively low vehicle deregistrations & a lower vehicle growth rate to curb congestion.</p>	<p>Thus if the ↑ in COE prices is due to a ↓ in COE supply, there will be a less than proportionate ↓ in quantity demanded for COEs, leading to an ↑ in COE revenue of the govt.</p>
<p>Large ↑ in COE prices due to DD ↑</p>	<p>If the ↑ in COE prices is due to an ↑ in COE demand, the market equilibrium quantity will ↑ too. Hence there will be an ↑ in COE revenue of the govt.</p> <p>The ↑ in COE demand is largely due to an ↑ in incomes & an ↑ in population in Singapore. COEs are normal goods, hence an ↑ in income would lead to an ↑ in the demand for COEs. An ↑ in population will cause the number of consumers to ↑ in the market for COEs, causing an ↑ in the total COE demand.</p>	<p>If the ↑ in COE prices is due to an ↑ in COE demand, the market equilibrium quantity will ↑ too. Hence there will be an ↑ in COE revenue of the govt.</p>
<p>Combined Effect</p>	<p>Hence the effect of an ↑ in COE prices on govt. COE revenue depends on if it was a demand or supply factor causing it. However it is more likely that the ↑ in COE prices is due to both factors but given their opposing effect on govt. COE revenue, the net impact is arguably indeterminate.</p> <p><i>*Note: possible for candidates to raise other</i></p>	<p>Thus regardless of the reason behind the ↑ in COE prices, an ↑ in COE prices will ↑ the COE revenue of the govt.</p> <p><i>*Note: possible for candidates to raise other combinations of DD & SS shifts that result in an ↑ in COE prices, as long as it is accompanied by sound economic analysis.</i></p>

combinations of DD & SS shifts that result in an \uparrow in COE prices, as long as it is accompanied by sound economic analysis. E.g. it is possible for students to account for the large \uparrow in COE prices with an \uparrow in DD $>$ \uparrow in COE supply.

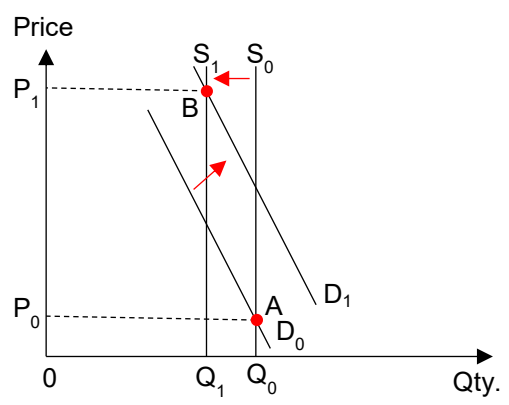
Evaluation (or could be part of analysis above)

However, given the strong economic growth in Singapore & the steady \uparrow in population due to her open labour immigration policies, it is more likely that the \uparrow in DD outweighed any \downarrow in COE supply.



As seen in the figure above, the large \uparrow in COE demand compared to the \downarrow in COE supply \uparrow es the govt. COE revenue from area $0Q_0AP_0$ to $0Q_1BP_1$.

The extent of \uparrow in govt. COE revenue is likely to be large given the price inelastic demand and supply of COEs.



As seen in the figure above, the large \uparrow in COE prices due to an \uparrow in price inelastic demand & a \downarrow in perfectly price inelastic supply results in a large \uparrow in govt. COE revenue from area $0Q_0AP_0$ to $0Q_1BP_1$.

Impact on Expenditure on Different Types of Cars

Link between COE prices & new cars

In Singapore, COEs are often bundled together with the sale of a new car. Hence COEs form a part of the cost of supplying a new car. Hence an \uparrow in COE prices will lead to a \downarrow in the supply of a new car.

Diff. Types of Cars

New Cars with PED < 1

New Cars with PED > 1

Impact of \uparrow in COE price on expenditure

In Singapore, cars below 1600cc are typically mass market cars (such as the Toyota Corolla) with relatively more affordable prices. Those who purchase such cars typically have a greater necessity for such cars due to reasons such as being physically challenged or due to a frequent need to travel on the job, such as for those in sales related jobs. Given the necessity of a car to them, their demand for new cars may be price inelastic.

Hence when supply of such new cars \downarrow , there will only be a less than proportionate \downarrow in quantity demanded for them, resulting in an \uparrow in expenditure on such cars.

In Singapore, cars above 1600cc are typically luxury cars (such as BMWs & Mercedes) with relatively less affordable prices. Such luxurious models are typically not a necessity and given the relatively high proportion of income their prices command, the demand for such new cars is likely to be price elastic.

Hence when supply of such new cars \downarrow , there will be a more than proportionate \downarrow in quantity demanded for them, resulting in an \downarrow in expenditure on such cars.

** Note: Candidates need not discuss in terms of cc. Can be simply brands of cars with diff. PED.*

Evaluation

Given the sharp \uparrow in COE prices, the extent of \downarrow in supply of new cars is likely to be significant, resulting in a significant \uparrow in expd on non-luxury cars but a significant \downarrow in expd. on luxury cars.

** Any other reasonable analysis or evaluation is acceptable too.
* A diag. is not required given the relative simplicity of the analysis and assuming a sufficiently clear analysis of the impact on expd.*

Impact on Expenditure on Different Types of Cars (Another Possible Alternative Analysis)

Diff. Types of Cars

New Cars

Used/Resale Cars

Impact of \uparrow in

In Singapore, COEs are often bundled together

Used cars are a substitute for new cars. Hence the

<p>COE price on expenditure</p>	<p>with the sale of a new car. Hence COEs prices form part of the cost of supplying a new car. Hence an ↑ in COE prices will lead to a ↓ in the supply of a new car & hence an ↑ in the prices of new cars.</p> <p>Given the high COE prices, cars in Singapore typically cost above 100K even for the non-luxurious models. Hence their prices are a significant proportion of income. Furthermore, they are typically not a necessity due to the well-developed public transport system in Singapore. Thus the demand for new cars is price elastic.</p> <p>Hence when price of new cars ↑, there will be a more than proportionate ↓ in quantity demanded for them, resulting in a ↓ in expenditure on new cars.</p>	<p>↑ in price of new cars will lead an ↑ in demand for used cars. Ceteris paribus, this will lead to an ↑ in both the equilibrium price & quantity for used cars. Hence expenditure on used cars will ↑.</p> <p><i>(Not suitable for exam conditions. FYI only)</i> <i>Furthermore, as prices of new cars climb, existing car owners would want to hold on to their cars longer and not sell their cars, leading to a ↓ in the supply of resale cars. Ceteris paribus, this will cause an increase in the price of resale cars but a ↓ in the quantity demanded. If the resale car models are price elastic (inelastic) in demand, there will be a fall (rise) in expenditure due to the more(less) than proportionate fall in quantity.</i></p> <p><i>Hence the net impact for resale cars with a price inelastic demand will be a rise in expenditures, while the net impact is indeterminate for those models that have a price elastic demand.</i></p>
<p>Evaluation</p>	<p>However in recent years, there has been a considerable ↑ in the income levels of those who purchase new cars due to the relatively strong economic growth Singapore has been enjoying and the significant number of high net worth individuals she has been able to attract. Thus the demand for new cars may have become less price elastic over time and hence the ↓ in expenditure on new cars is expected to be smaller.</p>	<p>Used cars in Singapore are typically less than 10 years old & are hence comparable to the new car models in both features and quality. Given that they are close substitutes for new cars, the cross elasticity of demand between new and old cars is expected to be high. Hence the large ↑ in COE prices and hence the ↑ in prices of new cars, is expected to result in a more than proportionate ↑ in the demand for used cars. Thus a significant ↑ in expenditure on used cars is likely.</p>

CONCLUSION

In recent years, years of healthy economic growth and rising incomes have caused the demand factors to be a stronger reason behind the large increase in COE prices. Given the demand-side nature of the increase, govt. COE revenues have been rising. As analysed above, the increase in COE prices doesn't bode well for sellers of new cars, especially for the more luxurious models while sparking a boom in the resale car market. However, the boom in the resale car market might be short-lived as high COE prices would cause car owners to hold back on buying new cars and hence reducing the supply of used cars in the resale car market, reducing the extent of increase in expenditures on used cars or even causing their expenditures to fall if the fall in used car supply overpowers the rise in demand for used cars.

OR (for the more in-depth analysis of the resale car mkt – not suitable for exam conditions. FYI only)

In recent years, years of healthy economic growth and rising incomes have caused demand factors to be a stronger reason behind the large increase in COE prices. Given the demand-side nature of the increase, govt. COE revenues have been rising. As analysed above, the increase in COE prices doesn't bode well for sellers of new cars, especially for the more luxurious models. For the resale car market, the net impact depends on the price elasticity of demand of the resale cars in concern. It can be argued that those who are put off by the high prices of new cars but still find a car a necessity would end up having a larger expenditure on cars as resale car prices climb due to their price inelastic demand. Those who have relatively lower incomes are who resale cars as their entry point into the market for private transportation would find that the rising resale car prices take up a large proportion of their income and end up spending less on resale cars due to their price elastic demand for them.

Marking Scheme

High L3 (18-21)	<ul style="list-style-type: none"> Provides sufficient rigour/analysis to explain the likely combined impact of a fall in COE supply and rise in COE demand on government revenue. A well-illustrated and explained diagram when explaining the impact on government revenue. (Diag. not required when explaining impact on different types of cars) Provides sufficient rigour/analysis to explain the likely effect of higher COE prices on different types (min. two) of cars. Analysis is strongly applied to the context of Singapore.
Low L3 (15-17)	
High L2 (12-14)	<ul style="list-style-type: none"> May only consider the effect of higher COE prices on govt. revenue due to higher demand OR higher supply OR considers both demand and supply factors but lack rigour in analysis. Lacking in or having a poor graphical analysis of the impact on government revenue. Provides insufficient rigour/analysis to explain the likely effect of higher COE prices on different types (min. two) of cars. Analysis is weakly applied to the context of Singapore (i.e. largely generic arguments). Arguments may lack clarity and/or coherence With some minor conceptual errors Or considers only impact on government revenue OR consumer expenditure. (max. 11)
Low L2 (10-11)	
High L1 (6-9)	<ul style="list-style-type: none"> Lacks the use of a demand-supply framework to explain the impact on government revenue and consumer expenditure. Or has major conceptual errors in most parts Or lacks the use of PED in the analysis. Or only explains changes in demand and supply and the market but little coherent explanation of impact on PxQ
Low L1 (1-5)	
E2 (3-4)	<ul style="list-style-type: none"> For an evaluative judgement based on economic analysis on the net impact on government revenue or the most likely effects on the expenditure on different types of cars.
E1 (1-2)	<ul style="list-style-type: none"> For a summary of the impact on government revenue &/or expenditure on different type of cars with minimal judgment or one that is not supported by analysis.

Q3

In recent years, natural calamities such as floods and earthquakes have caused the cost of raw materials to rise.

(a) Distinguish between variable costs and fixed costs and explain whether a rise in these costs will affect a firm's pricing decision differently. [10]

INTRODUCTION

Fixed and variable costs are two different types of costs in the short-run production period of a firm. The impact of a rise in these costs on a firm's pricing decision can be analysed using the cost-revenue framework.

BODY

Distinguish between fixed & variable costs

Distinguish well with definitions and examples:

Remember to use words like, 'on the other hand' to distinguish the two concepts clearly.

Variable Cost	Fixed Cost
Variable cost refers to cost that varies with output.	while fixed cost is cost that does not change with level of output
Variable cost is only incurred when production starts.	On the other hand, fixed cost is already incurred when production is zero.
<i>Note: The 2nd point is often left out.</i>	
Examples: Cost of energy, raw materials & daily rated workers will change with output.	Examples: The initial capital outlay even before production of a single unit. It is a lump sum that needs to be spent on tools and equipment, to buy land, building & infrastructure by business unit before production process can take place.
Exemplification details: When a car manufacturer increases the production of cars, they need to buy more raw material like steel and paint, pay more wages for overtime and there will be a rise in utility bills as machines are used more intensely. Thus variable costs increase with more output. And when there is no production, these costs will not be incurred.	Exemplification details: When the same car manufacturer increases the production of cars, there will not be changes in the size of the factory or equipment that already exist or purchased when the manufacturing plant was first set up; the costs are already incurred even when production is zero and will not change with more output.

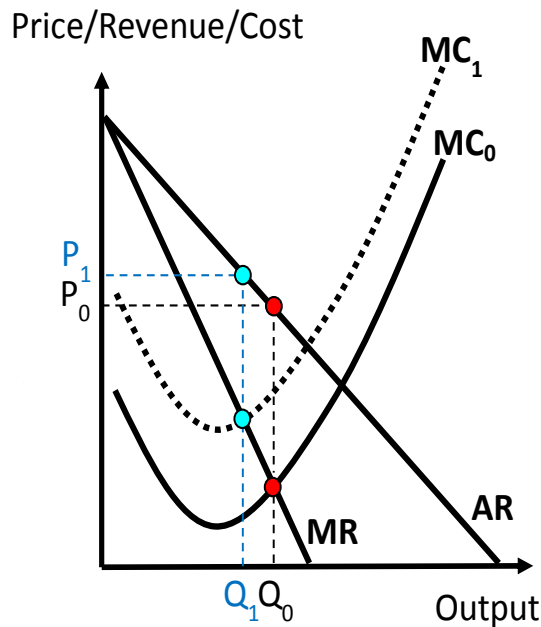
Explain how a firm makes its pricing decision

Assuming that the firm aims to maximise profits, it will produce an output where its marginal costs (MC) equals its marginal revenue (MR) and set its price on the corresponding point on its average revenue (AR).

Price will change when MR or/and MC change. So whether a change in VC or FC will change a firm's pricing decision will depend whether it changes MC.

Explain how an ↑ in VC & FC can affect a firm's pricing decision differently.

- An increase in variable costs (VC) will lead to an increase in MC as it is the additional cost arising from an additional output. ($MC = \Delta TC / \Delta Q$ or $MC = \Delta TVC / \Delta Q$).
- For example, rising oil prices can lead to an increase in the costs of jet fuel for an airline. Jet fuel is a variable cost as it varies with the number of flights conducted by the airline. If there are no flights, jet fuel cost will be zero.



As seen in the figure above, an increase in variable costs will cause the MC to increase from MC_0 to MC_1 , causing the firm to reduce its profit maximizing output from Q_0 to Q_1 where $MC_1 = MR$. Hence the firm will increase its price from P_0 to P_1 .

Note: It is fine to draw a full diagram with changes in both AC and MC but the focus is not on changes in profit but pricing when MC changes. So to simplify the process, shifting MC will do.

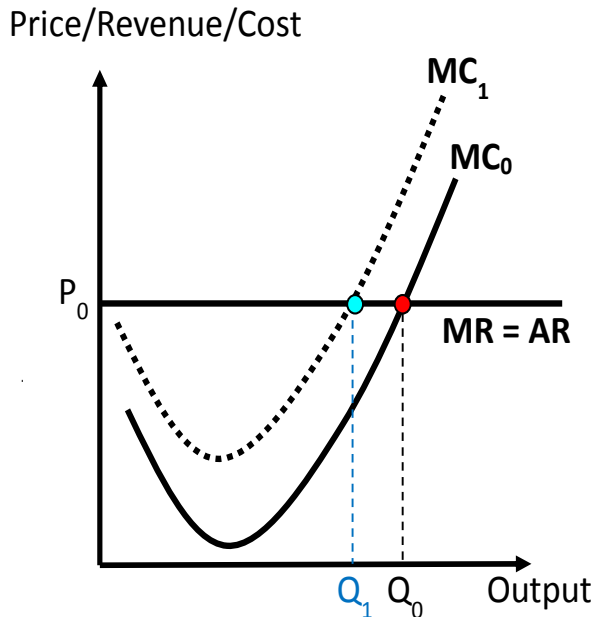
An increase in FC such as the cost of advertising on television will not affect the MC of a firm since a change in $\Delta TFC = 0$ and have no impact on ΔTVC . The cost of advertising is fixed as it does not vary with the number of products or services sold by the firm. If the firm does not produce or sell any output, it will still have had incurred the advertising cost. Hence an increase in fixed does not affect the MC of a firm as it does not vary with output. Therefore the profit maximizing output of the firm where $MC = MR$ remains unchanged and the corresponding price is unchanged too.

Note: There is no need for a diagram here to score well. Most importantly is the analysis.

Hence for firms who are price-setters and face a downward sloping AR and MR, a change in VC and FC affect their pricing decision differently.

Explain how an \uparrow in VC & FC does not affect a firm's pricing decision differently.

However for a firm in perfect competition, the increase in such costs does not affect their pricing decision differently.



As seen in the diagram above, while the increase in MC from MC_0 to MC_1 causes the profit maximising output of a PC firm to fall from Q_0 to Q_1 , its price remains as P_0 due to the horizontal AR it faces as a price taker.

Similarly as firms in imperfect competition, a change in fixed costs does not affect the MC of a PC firm either and hence its pricing decision remains unchanged.

Hence for a PC firm, as it is a price-taker facing a horizontal MR and AR, a change in either variable or fixed costs does not affect their pricing decision.

Note: There is no need for a diagram for the analysis here. Just the idea of a price-taker in PC firm, will not change price when there's a change in VC and FC.

Note that technically speaking, if the increase in MC is widespread, the market supply curve ($=\sum MC$) will fall the market price will increase, leading to an increase in the price of a firm via a change in AR/MR. But this is not within the A Level syllabus.

CONCLUSION

In conclusion, for a firm facing imperfect competition, an increase in VC will lead to it increasing its price while an increase in FC will not affect its pricing decision. For a PC firm, an increase in either costs will not affect their pricing decision. However given that a PC rarely exists and most firms face some degree of imperfect completion, the former is more likely to be observed.

Marking Scheme

LEVELS	DESCRIPTION	MARKS
3	<p><u>L3 (10)</u></p> <ul style="list-style-type: none"> Ability to recognise and explain clearly that the pricing decision is also affected by the type of firm (last mark) <p><u>L3 (7 to 9)</u></p> <ul style="list-style-type: none"> Ability to recognise and explain clearly that a change in variable costs affects the pricing decision while a change in fixed costs does not. Well-illustrated and explained diagrams. Distinguishes clearly the difference between fixed and variable costs. Shows good understanding of the difference between fixed and variable costs with the use of appropriate examples. 	7-10
2	<ul style="list-style-type: none"> Ability to recognise and explain clearly that a change in variable costs affects the pricing decision while a change in fixed costs does not. A diagram was drawn but contains minor errors or adequately explained. Distinguishes clearly the difference between fixed and variable costs but only one contrast was being made. Lack or poor choice of examples of variable and fixed costs. 	5-6
1	<ul style="list-style-type: none"> Major conceptual errors with little coherent explanations 	1-4

(b) Discuss the extent to which a rise in cost of raw materials will result in an oligopolistic firm changing its price in reality. [15]

INTRODUCTION

The cost of raw materials such as crude oil to an oligopolistic firm such as Esso is a variable cost as it increases as Esso increases the amount of petrol it sells and is not incurred if Esso does not produce any petrol. An oligopolistic firm faces imperfect competition and hence has a downward sloping demand curve. The earlier analysis in 3a) predicts a positive relationship between variable costs and an oligopolistic firm's pricing. However that may not happen in reality due to a variety of factors.

BODY

(1) Kinked Demand Curve/Competitive Behaviour of Rivals

Scenario 1: A rising in variable cost will not lead to a rise in price.

- In a competitive oligopoly and selling homogeneous product, it is assumed that rival firms will match any price decrease initiated by any one firm among them, but will not match any price increases.
- If firm X raises the price of its product above the current ruling price because there is a rise in variable cost, rival firms are not likely to follow suit because then they can gain more customers from the higher-priced firm. This means the original firm X which raises its price would experience a substantial or more than proportionate fall in quantity demanded and reduce revenue. Thus, the firm would be reluctant to raise its price. The demand curve will be price elastic above the ruling price.

Evaluation:

- But if the rise in raw material costs is substantial across the entire industry, the price will change.
- Kinked demand curve theory assumes homogeneous product but in reality goods are differentiated: reduce PED and CED – the ability to raise price to have little impact on output.

(Not required for this question but to have a complete picture of the kinked demand curve for price rigidity or stickiness: If firm X were to lower its price, rival firms would also lower their prices so as to preserve market share. Firm X would experience only an insignificant increase in sales, i.e. less than proportionate increase in quantity demanded and total revenue will be less than before. Thus, it would be reluctant to lower its price. The demand curve will be price inelastic below the current ruling price. This theory helps to explain the phenomenon of price stickiness or price rigidity under oligopolistic market structures. This is the behaviour in which prices in the oligopolistic industry tend to change very little over time.)

Scenario 2: A rising in variable cost will lead to a rise in price via collusion – explicit and/or tacit

- Collusion takes place within an industry when rival companies cooperate for their mutual benefit. Collusion most often takes place within the market form of oligopoly, where the decision of a few firms to collude can significantly impact the market as a whole. Cartels are a special case of explicit collusion. Collusion is tacit where the behaviour of each firm is the result of an unwritten rather than formal agreement.
- Firms within an oligopolistic industry might decide to collude to raise price when there is an increase in costs of raw materials.
- They could do this tacitly by following the pricing policy of a recognised leader. The leader could either be the dominant firm [market leader] or just any firm that is adept at reading market conditions [so-called barometric price leader]. Price will only change if a rise in costs affects the profit margin. The principle is the same: each firm will act in the same way in the interests of the group as a whole.
- ComfortDelgro- the dominant taxi company in Singapore of almost 60% market share is always the one that initiates a fare hike while the rest will follow suit. Another example is pricing of petrol retailers in Singapore tend to be highly responsive to the increases in the cost of crude oil.

Evaluation: Collusion especially in the form of cartel is illegal in most countries, so the government might intervene and restrict the extent of the rise in price.

(2) Ceteris Paribus Condition Does Not Hold

A Simultaneous ↓ in DD

The ↑ in costs might be accompanied by a ↓ in demand. E.g. due to competition by other firms, economic recession, etc. Hence pricing by the oligopolistic firm might not ↑ if the ↓ in DD (AR & MR) completely or more than offsets the ↑ in MC.

Evaluation: However, the ↑ in costs and ↓ in demand may not happen simultaneously. Hence prices may still ↑ at least in the short-run, before it is adjusted downward later when faced with the ↓ in DD. Hence this depend on the time horizon taken to observe the impact of higher cost of raw materials on a firm's pricing.

A Simultaneous ↓ in other Costs

The ↑ in cost of raw materials might be offset by a ↓ in other variable costs. E.g. ↑ in labour productivity/tech. that requires a smaller cabin crew per flight may offset the fuel costs of an airline.

Evaluation: However, the cost of raw materials tend to form a major component of a firm's costs. Unless the simultaneous ↓ in costs is in other major costs such as labour costs, MC is still more likely to ↑ overall.

(3) Government Intervention for Essential Products and Services

Oligopolists have large market shares and may abuse their monopoly power with the claim of a rise in VC. And if the industry is of an essential product/service, government may intervene with price-control.

E.g. Increment in bus fare in Singapore is insignificant like 3 cents when there is a rise in fuel and labour costs.

(4) Alternative Theories of the Firm

Revenue Maximisation

If a firm chooses to maximize its revenue (produce where $MR = 0$), ↑ in its costs are irrelevant to its output & hence pricing decision.

Evaluation: However in most sectors, managers are rewarded based on profitability of the company rather than earn revenue-based commissions. Hence this is less likely.

Unable or Unwilling to Maximise Profit

An oligopolistic firm earning healthy profits and suffering from the principal-agent problem might engage in profit satisficing behaviour and hence not change its price (esp. to avoid all the additional work involved with changing prices).

Evaluation: However this is an unlikely reason for an oligopolistic firm facing thin profit margins, especially in light of weak global economic conditions in recent years.

CONCLUSION

In conclusion, there are various plausible reasons why a rise in the cost of raw materials may not be met with an increase in the pricing of an oligopolistic firm. However in reality, these factors are unlikely to happen or are not strong enough to counteract the expected increase in pricing. As observed in reality, more often than not, an increase in a major cost such as that of raw materials is followed by higher prices unless there is some form of regulated pricing by the government.

* Any other reasonable stand is accepted as long as it is justified and aligned with the points raised in the body of the essay.

Marking Scheme

LEVELS	DESCRIPTION	MARKS
3	<ul style="list-style-type: none"> Clear and rigorous analysis of 2-3 factors (MUST INCLUDE POINT 1) that may not result in an oligopolistic firm increasing its price in reality. Able to make use of appropriate examples &/or well explained diagrams. Examines the extent to which these factors happen in reality. 	9-11
2	<ul style="list-style-type: none"> Analysis of point 1 is thorough (both kinked demand curve theory and tacit collusion) OR <ul style="list-style-type: none"> 2 to 3 factors that may not result in an oligopolistic firm increasing its price in reality but analysis is somewhat lacking. Choice of examples could be better Does not or vaguely considers the extent to which the factors raised happen in reality. 	6-8
1	<ul style="list-style-type: none"> Lack application to the given context of oligopolistic firms and variable cost changes. Points raised were poorly explained and lack the required analysis. No consideration to the extent to which the factors raised happen in reality. 	1-5
E2	A conclusion justified with economic analysis	3-4
E1	An unjustified conclusion	1-2

Standardisation Outcome (16 Sep 2015)

Scripts	Part (a)	Part (b)
A 8 + 10 = 18	L3(L): 8 Able to distinguish VC and FC well and addressed the question with correct concepts. Not L3(U) <ul style="list-style-type: none"> Left out part of definition of VC and FC Did not analyse well why rise in VC will increase both MC and AC while rise in FC will increase AC only Did not include PC pricing 	L2(U): 8 + E1: 2 Thorough explanation of point 1 but no other factors. Not an E2 as the conclusion did not make good sense and there is no consideration of other factors. But within the essay, there's good attempt to evaluate like large rise in VC, product differentiation.
B 5 + 8 = 13	L2(L): 5 Able to distinguish VC and FC rather well but left out part of definition of VC and FC Did not address the question how a rise in VC and FC will affect pricing decision differently – combined the analysis of the rise in both costs. Side-track to other factors which are for part (b). Not L1 as concepts are there.	L2(L): 6 + E1: 2 Coverage of point 1 is there but explanation can be more contextualised + no other factors Not an E2 even though the conclusion is better than script A as there is also no consideration of other factors and within the essay, there's little attempt to evaluate.
C 5 + 5 = 10	L2(L): 5 Though understood what are VC and FC, unable to distinguish them well and left out part of definition. Addressed the question how a rise in VC and FC will affect pricing decision differently – but explanation if muffled with profit motive and not linking to changes in MC – lacked good understanding.	L1(LU): 4 + E1: 1 Demonstrated knowledge and some attempt to answer the question. But from the inclusion of firms reducing price, candidate has not understood the question. E1 as there is a 'however' so attempt to discuss.

4a. Explain what might cause a current account deficit in the balance of payment. [10]

4b. When faced with a deteriorating trade balance, some countries turn to protectionism. However, countries like Singapore do not engage in protectionism. Discuss why governments use different policies to achieve healthy trade balance. [15]

Outline

a) The Balance of Payments (BOP) for a country is a summary statement of the money value of all economic transactions between the residents of the country with the rest of the world during a specified period of time, usually one year. The Current Account in the BOP shows the flow of goods and services, plus incomes flowing into and out of the country, plus net transfer of money into and out of the country. A deficit in the current account is mainly due to $M > X$.

Explain causes of $X < M$ (any 3 but must include mixture of explanations on X & M , candidates may also give other reasons not stated here)

- **↓X - Loss of comparative advantage** due to competition from emerging economies or depletion of resources

The law of comparative advantage states that countries should specialize in the production of goods for which it has a lower opportunity cost.

Many developed countries have lost their comparative advantage in the production of low-end manufacturing goods with the emergence of low-cost economies like China. Her abundance in cheap labour, vast land and other resources, resulted in a lower opportunity cost than the developed countries when it comes to production of such goods.

This results in a loss in export competitiveness of the developed countries as the Chinese products are preferred due to their lower price. When price of China's export is cheaper, importers will import from China and their demand for the developed economies' exports will fall assuming a high degree of substitutability between these exports.

- **↓X ↑M - Higher relative inflation rate**

A rise in a country's inflation rate will cause her exports to be more expensive and imports to be cheaper. Assume demand for exports is price-elastic due to the availability of substitutes, a rise in price of exports will cause quantity demanded to fall more than proportionate and the export revenue will fall.

And if the rise in inflation rate is higher than other trading partners, the demand for exports will fall and so will revenue.

Assume domestic goods and imports are substitutes that deemed by consumers to be alternatives to satisfy similar wants. Thus with a higher inflation rate, a rise in price of domestic goods will cause demand for imports to rise, leading to a higher import expenditure.

As a result, a fall in export revenue together with a rise in import expenditure will worsen the balance of trade.

- **↓X - Unfair trade practices** by trading partners e.g. undervaluation of currency, protectionism
Countries like US have accused its trading partners, particularly China of keeping Yuan undervalued. For example, by lowering the value of the Yuan, US citizens find Chinese goods cheaper in terms of the US dollar, while the Chinese will find that the US goods are more expensive in terms of Yuan as long as the

Marshall-Lerner condition holds, where the sum of price elasticity of demand for imports and exports is greater than one, net exports for US will fall, leading to a worsening of the trade balance.

To protect the home industry, the government levies a specific tariff on imports, raising the price of imports. As a result, the locals may switch back to the domestic goods.

↑M - Affluence leading to High Imports for Consumption + Industrialisation leading to Higher Imports for Machines and Raw Material

Higher growth rate and together with an increasing consumerism will result in a larger import expenditure on consumer goods. Emerging economies like China and India have been enjoying high growth rates and resulted in a growing middle class for goods such as cars and air-conditioner units. These countries which are undergoing the industrialization phase have a huge appetite for imports especially in capital goods and raw materials to support production.

Assuming most of the imports they purchase are positive income elastic, the demand will increase more than proportionate when income increases. This higher demand for imports will worsen the trade balance, ceteris paribus.

Note: net income flow and net current transfers are not required

L3	Ability to give excellent explanation of the causes with some attempt at exemplification 2 causes with good explanation, covered both X & M and with exemplification – low L3	7-10
L2	Ability to elaborate on the causes	5-6
L1	Major conceptual errors Listing of causes	1-4

4b) When faced with a deteriorating trade balance, some countries turn to protectionism. However, countries like Singapore do not engage in protectionism. Discuss why governments use different policies to achieve healthy trade balance. [15]

Why countries use protectionism with worsening BOT	Why countries like SG do not use protectionism
Explain how protectionism helps countries when BOT is deteriorating using tariff diagram - <ul style="list-style-type: none"> Assume D_d represents the domestic demand for steel and S_d represents the domestic supply of steel. In the absence of trade, the domestic equilibrium price and quantity of steel are P_E 	Characteristic – small, lack resource, hence dependency on trade Need export market as engine of growth, engaging in protectionism might invite retaliation and affect X Need import for necessities and raw materials, engaging in protectionism will only cause inflation

<p>and Q_E respectively.</p> <ul style="list-style-type: none"> • When the country is open to foreign trade, it faces a perfectly price elastic world supply for steel S_W. That is, the country can import as many steel as she wants at the prevailing world price P_W. • With free trade and at the price P_W, domestic consumers will demand $0Q_2$ of steel, of which $0Q_1$ is supplied by domestic producers and the remainder Q_1Q_2 imported from other countries. Free trade thus lowers the domestic price of steel from P_E to P_W. • To protect the home industry, the government levies a specific tariff on steel imports, thus raising the supply curve from S_W to $(S_W + \text{tariff})$. The price now increases from P_W to P_2. • At P_2, domestic production increases from $0Q_1$ to $0Q_3$; domestic buyers are buying less steel – from $0Q_2$ to $0Q_4$. The tariff has caused a fall in the amount of imports from Q_1Q_2 to Q_3Q_4. <p>Hence with protectionism, it helps to reduce M and improves BOT</p> <p>Limitations</p> <p>Such protectionist measures will undoubtedly harm the trade position of her major trading partners as their exports will fall. It is deemed to be a ‘beggar-thy-neighbour’ measure. Hence, if these trading partners retaliate with their own set of protectionist measures, the country that initiated the tariff, will also experience a fall in exports and this might offset any prior improvement in her trade deficit.</p> <p>By resorting to protectionism, the deficit country forgoes the benefits that come with free trade, i.e. a higher standard of living, cheaper and greater variety of imports.</p>	
<p>Reasons to practice protectionism at least in the SR given the limitations</p>	<p>Ways to ensure BOT is healthy (candidates may use other measures):</p>
<p>1. May be necessary at least in the SR if the cause of deterioration of BOT is industries losing CA (sunset industry) and new industries are not able to build CA given the intense competition (infant industry). Temporary protectionism gives time for</p>	<p>1. Use supply side policies instead to constantly build new areas of CA to ensure the country stays ahead of competitors. Price and non-price competitiveness of exports are enhanced to ensure BOT is healthy</p>

<p>industries to restructure and develop CA. Protectionism can then be removed when restructuring has been completed.</p>	<p>Examples of SSP - government spending on R&D or training of workers to increase their productivity will reduce the unit cost of production and improve export competitiveness. R&D will also result in the production of a wider range of high quality goods and in turn help to further improve export competitiveness and expand the export market share. This will help to reverse the decline in their export performance and increase export revenues, reducing the trade deficit.</p> <p>Besides, a more productive workforce will also attract more inflow of FDIs of high capital intensive manufacturing and high value added services and even improves the financial account.</p> <p>Limitation</p> <p>However supply-side policies take a long time to bear fruit and their success is relatively less certain. For example, the retraining of structurally unemployed workers to redeploy them in industries in which they have a comparative advantage in, requires a change in mindset. If these workers remain resistant to the idea of switching from an industry that they can be used to for many years and refuse to pick up the training in hope of getting back their previous job, it will reduce the effectiveness of such supply-side measures.</p>
<p>2. May be necessary if the deterioration of BOT is a result of unfair trade practices by trading partners.</p> <p>One example is the practice of dumping. Dumping refers to the selling of the same good to a foreign country at a lower price than that charged to the domestic buyers and often below the marginal cost of production.</p> <ul style="list-style-type: none"> • The objective is to drive out rival producers in the importing country and eventually monopolize the market. Import-substituting industries in the receiving market may not be able to compete against such foreign exporters and hence may not be able to develop. • Also, production is often subsidized by the government, this leads to unfair competition with producers in the importing countries. • Hence, domestic producers of particular products often argue that they are unfairly 	<p>2. Establishing Free Trade agreements with major trade partners so as to guarantee the country will not be a victim of unfair trade practices.</p> <p>An FTA is an agreement whereby member countries agree to remove tariff and non-tariff barriers among themselves but each can retain whatever restrictions she wants for non-member countries. Usually, it also includes better terms for investment in foreign countries.</p> <p>As legally binding arrangements between willing member countries, FTAs enhances trade and investment flows by providing lower tariffs for exports of goods, hassle-free custom procedures, improved market access for various commercial and professional services, easier entry for businessmen into other countries, better terms for investment in foreign countries etc. FTAs will set a framework for a small country like Singapore to export more easily and hence maintaining a</p>

<p>victimized by competing foreign imports that are “dumped” in domestic markets.</p> <ul style="list-style-type: none"> • In the long run, the consequence may be the destruction of local producers, which produces a competing product. The biggest concern is that, after the competitors are destroyed, the monopolist will now charge a higher price to its overseas consumers, making consumers worse off. • Protectionism such as tariffs is thus often used to reduce imports and increase domestic production. 	<p>healthy BOT.</p> <p>Limitation and evaluation Although signing an FTA may lead to trade diversion, Singapore has established a varied network of FTAs. This minimizes the negative consequences of trade diversion.</p>
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L3	Excellent ability to explain relevant reasons for protectionism and ability to explain why some countries do not turn to protectionism	9-11
L2	Ability to explain relevant reasons for protectionism and some ability to recognize why some countries do not turn to protectionism Or Rehearsed arguments for and against protectionism	6-8
L1	Listing of reasons for protectionism Major errors	1-5
E2	Substantiated judgement	3-4
E1	Unsubstantiated judgement	1-2

To achieve L3, candidates must cover 3 aspects:

- a) Why & how protectionism helps improve X-M
- b) Why some countries don't use protectionism
- c) What alternative solutions are used to improve X-M

If candidates only cover 1 aspect – L1

If candidates only cover 2 aspect – L2

Examiner's comments

Common errors / missing analysis / AFIs	Explanation

5a) Using the concepts of scarcity and opportunity cost, explain why governments are often concerned with high levels of unemployment. [10]

5b) High youth unemployment rates are increasingly a problem in many parts of the world. Weak economy, too many graduates and the lack of suitable jobs created are often cited as the culprits. Assess the relative importance of the various reasons for youth unemployment in different countries. [15]

Outline

a) Using the concepts of scarcity and opportunity cost, explain why governments are often concerned with high levels of unemployment. [10]

1. Concept of scarcity	<p>Explain the concept - Scarcity refers to the situation where the limited resources available are unable to satisfy the unlimited human wants.</p> <p>Resources are means of production and they are finite in amount at any point in time. Hence, the quantity of output produced will also be limited.</p> <p>Unlimited wants refer to the desire for ever higher levels of consumption. These desires increase over time. As soon as old wants are satisfied, new wants are created.</p> <p>The wants are satisfied through the consumption of goods and services.</p>
	<p>Explain unemployment is situation where resources are not fully utilized leading to wastage of resources and/or that unemployment may cause economic to slow down -</p> <p>With unemployment, the economy's actual output may be significantly less than its potential output.</p> <p>In the event of prolonged unemployment it may cause a person to lose touch of the skills and knowledge he once possessed, causing a lowering of the economy's potential growth.</p> <p>High unemployment has impact on non-material standard of living as well. Unemployment appears to be linked to a greater incidence of crime, violence on streets, drug abuse, alcoholism and vandalism, which in turn affects the investors' confidence in the economy. This may lead to fall in investment in the economy and affects economic growth.</p>
	<p>Insufficient goods & services are produced to satisfy wants</p>
	<p>Hence unemployment worsens the problem of scarcity</p>
2. Concept of opportunity cost	<p>Explain the concept - Opportunity costs measure the cost of making a choice, in terms of the next best alternative foregone.</p>

	With unemployment, more goods & services could have been produced.
	The government loses tax revenues due to the loss in income since the unemployed can no longer pay income tax. They are also more prudent in their spending, so there will be less collection of GST. The fall in tax revenue would mean that the government would have fewer funds available for infrastructural development which would hinder economic growth. Moreover, the government needs to spend on welfare payments sacrificing on other important projects like developing infrastructure or raising quality of education & healthcare.

Note: PPC diagram is not required to obtain L3

L3	Ability to use both concepts in explaining the costs of unemployment well	7-10
L2	Ability to use the 2 concepts in explaining the costs of unemployment Or Only able to use 1 of the concepts in explaining the costs of unemployment well	5-6
L1	Major conceptual errors Brief attempts at explanation of the 2 concepts or costs of unemployment	1-4

5b) High youth unemployment is increasingly a problem in many parts of the world. Weak economy, too many graduates and the lack of suitable jobs created are often cited as the culprits. Assess the relative importance of the various reasons for youth unemployment in different countries. [15]

Unemployment refers to the situation where people in the labour force (of legal working age) who are willing and able to work but are unable to find employment.

Main reasons for unemployment: demand deficient unemployment, structural unemployment and frictional unemployment.

Explaining each cause of youth unemployment	Assessing the importance in different countries
<p>1. Weak economy</p> <p>Demand-deficient unemployment – Cyclical unemployment is related to the business cycle. During the downswing (recession or depression), aggregate demand decreases and firms find they cannot sell all their current output, and stocks pile up. Firms will then adjust to the deficiency of demand by cutting back on production and hire fewer workers, leading to an increase in cyclical unemployment.</p>	<p>This is especially true in the case of countries in Europe like Spain and Greece where the economy is badly affected by the global financial crisis.</p> <p>As firms started to retrench workers, youths would be the ones who get cut first as they usually do not qualify for retrenchment benefits. Even if there are firms which want to hire they will choose workers with more experience over youths given the larger number of applicants available during the weak economic situation.</p>

<p>Illustrate with AD/AS or Y=AE</p>	
<p>2. Too many graduates</p> <p>Frictional unemployment – Frictional unemployment arises because of imperfect information in the labour market as it takes time for workers to be matched with suitable jobs. It is also known as search unemployment. The unending flow of people into and out of the labour force and the process of job creation and job destruction create the need for people to search for jobs and for firms to find suitable employees. Since both employers and employees spend time searching for what they believe to be the best match available, frictional unemployment arises.</p> <p>Frictional unemployment could arise when workers leave declining industry for expanding ones. It could also arise when the recurring stream of students passing out from schools and institutions of higher learning start to look for jobs but have not found them yet. During this lag time, these people would be registered in the labour survey as unemployed.</p> <p>Therefore, the main cause for the problem is imperfect information. Employers are not fully informed about what labour is available; employees are not fully informed about what jobs are available and what they entail.</p>	<p>In Singapore school leavers typically take on average 3 to 6 months to get into a job. Big countries like China, however, suffer more from frictional unemployment. Every year, there are millions of fresh graduates entering the labour market in China, most of whom will vie for the limited job positions in the finance and commerce industries. Employers will take a longer time to interview and select the best candidates for their firms and hence time taken for these graduates to find a job will lengthen. Some taking more than a year to find a suitable job.</p> <p>And with the added inertia amongst youth to land a job quickly due to the ability to depend on their parents, this may be a bigger problem in China.</p>
<p>3. Lack of suitable jobs created</p> <p>Structural unemployment – A reason why job vacancies and unemployment coexist is that unemployed workers often do not have the skills demanded by employers. Structural unemployment arises when changes in technology or international competition change the skills needed to perform jobs or change the location of jobs. People made redundant in one sector of the economy cannot immediately find jobs elsewhere because they either do not have the necessary skills or are unwilling to move to another area/region where prospects are better (occupational and geographical immobility of</p>	<p>Countries which are still developing may still require more blue collar workers but more youths are getting highly educated which does not match the skills requirement of jobs created.</p> <p>In China for example, graduates obtained degrees in Arts and Social Sciences but jobs created are not in these areas. Some graduates took more than a year to land a job.</p>

labour respectively).	
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L3	Excellent ability in explaining the causes of unemployment and assessing the situation in different countries (yellow highlighted portions are not required to obtain L3)	9-11
L2	Ability to link the causes stated to the different types of unemployment and some attempt to apply to different countries	6-8
L1	Listing of causes of unemployment Major errors present	1-5
E2	Substantiated judgement (show knowledge of youth unemployment)	3-4
E1	Unsubstantiated judgement	1-2

6. Discuss the extent to which economic growth of countries depend more on government policies than the amount of natural resources they possess. [25]

Outline

Introduction

Economic growth is defined as the expansion or increase in an economy's level of output or GDP over time. The pace or rate of growth is usually expressed as a % change in real output or GDP over time. When we talk about economic growth, we can look at actual and potential growth.

Actual economic growth is the annual percentage increase in national output, i.e. the rate of growth in output which the economy produces.

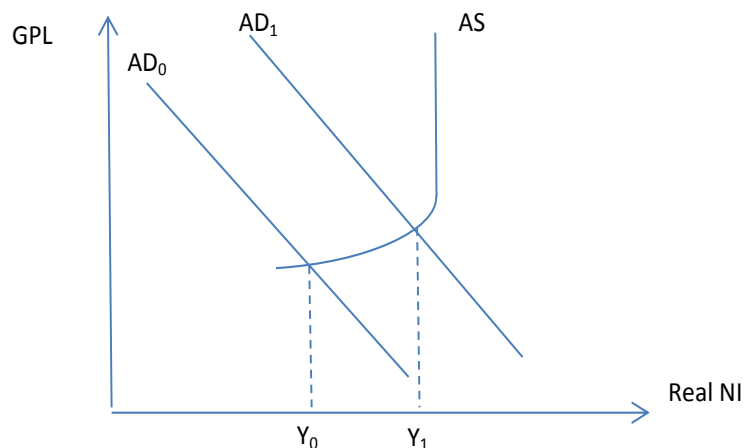
Potential economic growth is the annual percentage increase in the economy's capacity, i.e. the speed at which the economy could grow. It refers to the rate of growth of potential output.

This essay will explore whether government's policies or endowment of resources play a more important role in achieving EG.

1. Having vast amounts of resources helps economic growth

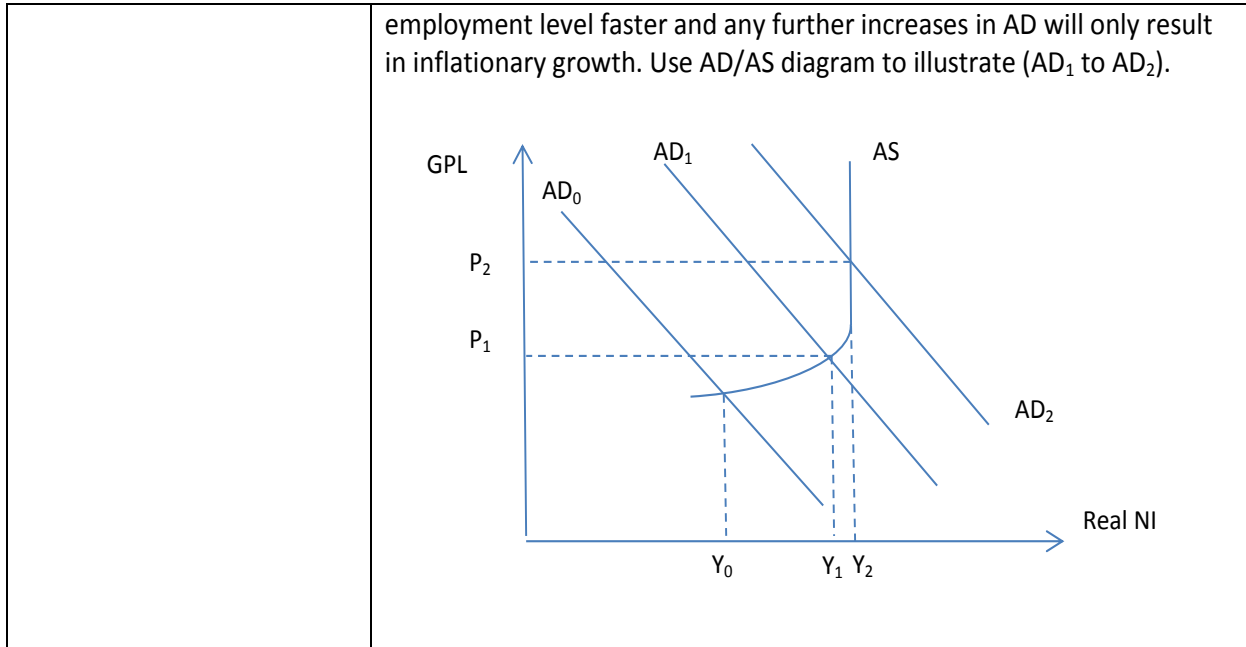
- Having large amount of resources can help the country to achieve actual growth.

Due to the abundance of resources, the country may have the comparative advantage in the production of goods which requires such resources eg. countries endowed with large population will be able to produce goods which are labour intensive and export these goods. This will help to increase export revenue and hence achieve growth. Use AD/AS diagram to illustrate (AD_0 to AD_1).



- Quantity of FOP in country determines how much the country can produce

The natural endowment of the country determines the maximum capacity of the country. Countries endowed with huge amounts of FOP will imply that AD can increase and there is still excess capacity for growth. Countries lacking in FOP will see AD increases reaching the full



Exemplify using case of China.
 The large population size allowed China to produce goods at a very low cost. China became the manufacturer of the world and were able to achieve double digits economic growth due to strong growth in export revenue.
 The large population also gives her huge potential to grow and also contributes to growth through C. China was able to achieve high rates of EG.

2. Having vast amounts of resources may not help achieve high EG

However, natural endowment may not ensure export competitiveness. There are other factors which affects export eg. quality of exports. In addition, actual growth is also determined by other components such as Investment expenditure, government expenditure, consumption expenditure and import expenditure, which in turn may be influenced by a myriad of factors. Hence, countries will not be able to ensure high economic growth simply by possessing vast amounts of resources.

Even if AD continues to increase, countries may not be able to continue achieving high EG. Once full employment level is reached any further increases in EG needs an accompanying increase in the productive capacity.

Hence, quantity of resources only helps with determining the maximum productive capacity but does not guarantee a continuous growth in the capacity.

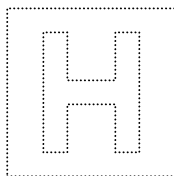
Without the constant increase in capacity even if large countries achieve high EG now, it cannot be sustained (as illustrated previously inflationary growth).

	<p>Therefore, government policies to help raise AD and also to improve the quality and quantity of resources are necessary to continue to raise the productive capacity.</p>
<p>3. Achieve high economic growth with government's policies</p>	<p>Government policies can target actual growth</p> <p>Demand management policies - Expansionary FP/MP</p> <p>Fiscal policy is defined as the use of government spending and / or taxation to influence the level of economic activity through the aggregate demand.</p> <p>Or</p> <p>Monetary policy is the deliberate attempt by the Central Bank to regulate the money supply or manipulate the interest rate to influence the level of economic activity so as to achieve economic objective such as maintaining full employment, curbing inflation, attaining economic growth and a satisfactory balance of payments position.</p> <p>Demand management policy will help increase C/I/G or all 3 components leading to increase in AD and hence achieve EG.</p> <p>Government policies can target potential growth</p> <p>Eg. SSP which increases quality of resources</p> <p>Policies to improve human capital: Human capital refers to the accumulated skill and knowledge of workers. It is regarded as the most fundamental source of economic growth. It can be acquired through education, training and work experiences. If knowledge is lacking, other resources may not be used efficiently. For example, a country may be endowed with fertile land, but farmers may lack the knowledge of irrigation and fertilization techniques.</p> <p>In the case of Singapore, the 2-year (2008 – 2010) Skills Programme for Upgrading and Resilience (SPUR) was set up to scale up training efforts in order to build up stronger capabilities. The government also spends on improving the quality education in Singapore in order to ensure a workforce that is equipped with knowledge and skills and is constantly able to upgrade and re-skill to adapt to the demands in the future.</p> <p>Policies to improve technology: Technology plays an increasingly crucial role in bringing about potential growth in an economy. Technological improvements have made tremendous contributions to our increased productivity. Such improvements have assisted in finding new ways of getting more out of our resources. The productivity of the country's resources increases</p>

	<p>when technology improves. It is now possible to obtain more output from the same amount of inputs than before.</p> <p>There are 2 ways to achieve improvements in technology:</p> <ol style="list-style-type: none"> 1. Importing technology – adopting technology developed by others. This is commonly used in many less developed or developing economies. 2. Research and development (R&D) – encourage R&D efforts domestically. For example, Singapore aims to increase the R&D spending to 3.5% of its GDP by 2015. To achieve this, a Productivity and Innovation Credit scheme is introduced to encourage R&D efforts of the private sector by giving generous tax deductions on R&D expenditures. <hr/> <p>Eg. SSP which increases quantity of resources</p> <p>Policies to increase capital goods: Investment in new capital increases the amount of capital each worker can work with, hence contributing to increases in productivity.</p> <ol style="list-style-type: none"> 1. This implies that the level of output would have the potential to increase, leading to economic growth. The funds needed for capital formation can be obtained from savings and foreign direct investment (FDI). In the case of Singapore, FDI was encouraged by granting foreign firms tax holidays for the initial period of about 10 to 15 years after they set up operations. 2. There is also a shift in dependence on direct tax to indirect tax. In 1994, Singapore first introduced the Goods & Services Tax at 3% and has increased to its current 7%. Corporate tax on the other hand decreased to its current 17% from 40%. Similarly, income tax rates were also reduced. The shift in tax regime helps to encourage investment and work efforts enabling potential growth in the economy. <p>Policies which target the increase in workforce include:</p> <ol style="list-style-type: none"> 1. Relaxing immigration law to increase the population size. This policy will result in a larger population which means an increase in potential workforce. 2. Relaxing foreign worker policy to increase the size of the workforce. This is a policy which increases the pool of workers immediately. 3. Increasing the retirement age. 4. Encourage greater female participation in workforce by giving tax rebates for working mothers, ensuring quality childcare facilities are accessible and affordable, and allowing more flexible working arrangements e.g. working from home.
4. Government policies may	Government policies may worsen EG

hinder economic growth	Eg. Overly restrictive policies which hinders investments or trade
	<p>Eg. Time lags</p> <p>There is often a serious time lag between the identification of the problem to be dealt with and the time when the fiscal measures begin to take effect. This may mean that fiscal policy takes effect at the wrong time. Hence fiscal policy could even be destabilising when such time lags are considerable. Expansionary FP taking effect only after economy recovers causing inflation instead</p>
<p>Synthesis and conclusion</p> <p>Possessing large amounts of resources definitely helps countries grow more easily with resources easily and cheaply available. However, no matter how well a country is endowed with resources, it will reach its maximum productive capacity and the country will only face inflationary growth. Hence government policies are important to ensure growth of the productive capacity. It is also evident in the case of Singapore where natural resources are clearly lacking but with sound policies, she was able to achieve high economic growth.</p>	

L3	Excellent ability in explaining the 2 context given with exemplifications	19-21
	Good attempt in explaining the 2 context given	16-18
	Note: there is no need to include all policies to achieve L3.	
L2	Some attempt to answer the question with some attempt to use economic analysis	13-15
	Some attempt to answer the question but points are not adequately developed	10-12
L1	Listing of points and doesn't demonstrate grasp of question's requirement	6-9
	Mere listing of points or major conceptual errors present	1-5
E2	Substantiated judgement	3-4
E1	Unsubstantiated judgement	1-2



INNOVA JUNIOR COLLEGE
JC 2 PRELIMINARY EXAMINATION 2
in preparation for General Certificate of Education Advanced Level
Higher 1

ECONOMICS

8819/01

Paper 1

14 September 2015

3 hours

Additional Materials: Writing Paper and Cover Page

READ THESE INSTRUCTIONS FIRST

Write your name and class on all the work you hand in.
Write in dark blue or black pen on both sides of the paper.
You may use a soft pencil for any diagrams, graphs or rough working.
Do not use staples, paper clips, highlighters, glue or correction fluid/tape.

Section A: Case Study

Answer **all** questions.

Section B: Case Study

Answer **all** questions.

Section C: Essays

Answer **one out of two** questions.

Please begin each question on a **fresh sheet of paper**.

At the end of the examination, **submit Sections A, B and C separately**.

Attach a **cover sheet** to Section A and C only.

At the end of the examination, fasten all your work securely together.
The number of marks is given in brackets [] at the end of each question or part question.

You are advised to spend several minutes reading through the data before you begin writing your answers.

You are reminded of the need for good English and clear presentation in your answers.

This document consists of **8** printed pages.



Section A

Answer **all** questions in this section.

Question 1

Continued Education and Productivity

Table 1: Singapore Productivity Growth

	2010	2011	2012	2013
Multifactor Productivity Growth (%)	9.7	1.5	-1.5	-0.3
Labour Productivity Growth (%)	11.6	2.3	-0.5	0.3

Table 2: UK Productivity Growth

	2010	2011	2012	2013
Multifactor Productivity Growth (%)	1.08	0.76	-1.36	-0.23
Labour Productivity Growth (%)	1.5	1.16	-1.3	-0.12

Source: *World Bank*

Extract 1: Global Productivity Woes

A productivity crisis is stalking the global economy with most countries failing last year to improve their overall efficiency for the first time in decades. Globally, it was found that labour productivity growth declined to 1.7 per cent in 2013 while multifactor productivity dipped 0.1 per cent. The failure of overall efficiency – known to economists as multifactor productivity – to grow in 2013 results from slower economic growth in emerging economies alongside continued rapid increases in capital used and labour inputs. Labour productivity growth also slowed for the third consecutive year.

Bart van Ark, chief economist of the Conference Board, said it was not clear whether the decline in productivity growth was the result of weak demand reducing the output of economies, or that there is an over-emphasis on the product innovation rather than production innovation. Concerns about the usefulness of modern technology in improving productive efficiency have been raised.

For the US, labour productivity growth stabilised at 0.9 per cent in 2013. The US trends were, however, better than those in Europe, which has seen extremely weak productivity growth alongside relatively muted unemployment in most large economies with the exception of Spain, where joblessness soared.

Mr van Ark said Europe's problem in achieving more efficiency from its labour force stemmed from structural rigidities. "We really see the need for more people to move quickly from one company to another and where innovative firms do not see huge risks in taking on these people."

Source: Adapted from *Financial Times*, 14 Jan 2014

Extract 2: Challenges of Higher Education

The higher-education model of lecturing, cramming and examination has barely changed for centuries. Now, a technological revolution is challenging higher education's business model. Universities face a new competitor in the form of massive open online courses, or MOOCs. These digitally-delivered courses, which teach students via the web or tablet apps, have big advantages over their established rivals. With low startup costs and powerful economies of scale, it has created an explosion in online learning.

Around the world demand for continuing education is soaring among workers of all ages. Globalisation and improvements in machine intelligence are enabling automation to creep into new sectors of the economy, from book-keeping to retail, have shrunk the number of jobs requiring a middling level of education. Those workers with the means to do so have sought higher education, in an attempt to stay ahead of the labour-demand curve. Analysts reckon that perhaps 47% of occupations could be automated in the next few decades. They find that the odds of displacement drop sharply as educational attainment rises.

Source: Adapted from *The Economist*, 28 June 2014

Extract 3: Axing the redundant skill programmes

The UK government is to cut funding to 5,000 adult vocational courses to "simplify and streamline" the adult skills system in England. Amongst the courses to go are self-tanning, balloon artistry and instructing pole fitness. Nearly £200m of the Department for Business, Innovation and Skills budget for adult skills will now be redirected towards the "most relevant" qualifications that is valuable to employers and makes a real contribution to long-term economic recovery.

Mr Hancock said there are currently 15,400 regulated qualifications, and even with the restrictions in place, 11,000 of them are eligible for government funding. Hence the savings plan aims to make courses respond more closely to employers' needs and give learners a clear route either to employment or further training.

Source: Adapted from *BBC.com*, 5 Mar 2014

Extract 4: Ramping up the financial support for skill upgrading programme

Training providers in Singapore are planning to ramp up capacity to cope with a likely rise in demand after new moves were introduced to encourage lifelong learning. The expected boost to the training industry comes after a range of SkillsFuture initiatives were announced to help workers deepen their skills. Over \$1 billion in the form of new grants and higher subsidies have been introduced to encourage workers to take on training to sharpen their skills.

However, human resource consultants warned that quality could suffer amid the expansion in supply and said that workers should be discerning about how they spend their money. The Employment and Employability Institute, which funded more than 50,000 workers for training last year, will work with job-seekers and workers to provide career coaching advice and help them understand industry needs, said its chief executive Gilbert Tan.

It may take a while for demand to heat up, cautioned Singapore Human Resources Institute president Erman Tan. "We still lack the culture of lifelong learning, that's one of the weak points of us as a workforce," he said.

Source: Adapted from *The Straits Times*, 28 Feb 2015

Extract 5: Risk to Singapore Economic Growth

In its annual review of Singapore's economic and financial policies, the IMF noted that the "slowing inflow of foreign workers, as part of the ongoing economic restructuring towards productivity growth, could moderate potential economic growth and lower competitiveness".

The IMF noted that as Singapore continues with its restructuring policies, tighter labour supply due to the slowing inflow of foreign workers and an ageing population will boost wages. Singapore's ambitious restructuring efforts could "set the stage for a new era of sustainable growth". But it cautioned that productivity improvements might take some time to materialise and may not fully offset the effects of declining labour force growth.

It was also noted that the country's dependence on trade flows has left it particularly vulnerable to a slowdown in the growth of trading partners with concerns mounted over the United States economy, which seems to be losing steam, while recent euro zone data has been weak. The moderating of growth in China is also another concern

The IMF recommend Singapore to further her efforts to promote external rebalancing, which is to move from a reliance on exports to one on domestic demand, and reducing inequality.

Source: Adapted from *The Straits Times*, 19 Oct 2014

Questions

- (a) (i) Compare the trend of multifactor productivity growth between Singapore and UK for the period of 2010 to 2013. [2]
- (ii) How far does labour productivity explain for the trend above? [4]
- (b) From extract 2, what can you infer about the change in the price elasticity of demand of higher education that is based on the "model of lecturing, cramming and examination"? [2]
- (c) Explain how various technological advancements mentioned in Extract 2 may affect the price of higher education. [4]
- (d) Explain the case for government intervention in the market for vocational training. [4]
- (e) Evaluate the effectiveness of subsidising vocational training in improving labour productivity. [6]
- (f) With reference to the data and your own knowledge, discuss if productivity growth is the key to sustain economic growth in Singapore. [8]

[Total: 30m]

Section B

Answer **all** questions in this section.

Question 2

Globalisation and Economic Growth

Table 3: GDP Growth Rates (%)

Country/Year	2010	2011	2012	2013
Brazil	7.6	3.9	1.8	2.7
India	10.3	6.6	5.1	6.9
South Africa	3.0	3.2	2.2	2.2

Table 4: Current Account Balances (US\$ in millions)

Country/Year	2010	2011	2012	2013
Brazil	-47,273	-52,480	-54,246	-81,108
India	-54,515	-62,518	-91,471	-49,226
South Africa	-5,492	-9,073	-19,678	-21,194

Table 5: Inflation Rates (%)

Country/Year	2010	2011	2012	2013
Brazil	5.0%	6.6%	5.4%	6.2%
India	12.0%	8.9%	9.3%	10.9%
South Africa	4.3%	5.0%	5.7%	5.4%

Source: World Bank

Extract 6: Falling BRICS

By the standards of the developed world, the BRICS economics – comprising Brazil, Russia, India, China and South America are still surging. But their growth rates are a fraction of what it once was – thanks to stagnation on the developed world, in particular the Eurozone.

India's economy will grow by the lowest in a decade this year. Reforms undertaken by Finance Minister Palaniappan Chidambaram, including reduced fuel subsidies, faster privatisation, curbing the budget and current account deficits, and easing of restrictions on foreign investment in retail and airlines will take time to bear fruit. Meanwhile, corporate chiefs grumble privately about the difficulties of doing businesses.

South Africa's economic growth has been badly hit by strikes in the mining sector last year. 50 lives were lost, and it cost the industry massively. Unsurprisingly, the current account deficit worsened and the currency depreciated. South Africa's growth had already been sluggish since the 2008 global economic crisis. With a third of manufactured exports shipped to Europe, it is exposed to the current Eurozone crisis. It is also adversely affected by infrastructure constraints and poor investor sentiment.

Among the BRICS economies, Brazil is most affected by the Eurozone crisis. But some of its problems are self-inflicted. A softening of commodity prices, global risk aversion coupled with a crackdown by Brazil on capital inflows, contributed to an appreciation of its currency against the US dollar, making local industries uncompetitive. At the same time, a consumer credit boom was losing steam and investors were becoming more cautious about a perceived increase in government intervention in the economy. Industries struggled due to of high costs, rising wages and weak productivity gains.

Source: Adapted from *Financial Times*, 25 March 2013

Extract 7: Threats to Growth in Developed Economies

Among the advanced economies, two patterns seem to emerge: the United States, Canada, and Japan are expected to grow at a gentle pace, while the prospects for the euro zone are more uncertain, especially as tight credit conditions limits domestic demand.

The potential consequences of a withdrawal of fiscal stimulus and eventual halt of quantitative easing in the United States, the aggressive yet still incomplete financial and structural measures adopted in Japan, and the persistent unemployment and economic recovery challenges in Europe are factors that could put future economic performance at risk. In emerging markets, it is uncertain how protests in Brazil and Turkey, the credit crunch in China, and the potentially volatile capital flows to emerging and developing markets will affect growth in these economies.

Policymakers everywhere need to ensure that public finances are sustainable in the longer term. Globally, unemployment or the threat of it remains one of the main challenges to long-term social sustainability, which is a key to longer-term competitiveness, and thus to sustainable growth.

Educational reforms and the right set of investments to enhance competitiveness will be crucial for the economic transformations that can lead to sustained higher growth over the longer term. It is imperative that competitiveness features high on the economic reform agenda of both advanced and emerging and developing economies.

Source: Adapted from *Global Competitiveness Report*, 2013-2014

Extract 8: Confronting the Challenges of Globalisation

Economic and financial crises are recurring features of our globalised economy. Singapore's best defence is to build and maintain strong fundamentals. We were able to make a quick recovery from the Asian Financial Crisis and Global Financial Crisis because of fiscal prudence in the past and an appropriate monetary policy stance. The important lesson is that structural changes need to be undertaken ahead of time, before major weaknesses manifest themselves. With a faster pace of globalisation and technological change, new patterns of specialisation are emerging more quickly, and any competitive advantage an economy may enjoy is short-lived. Hence, we must create and seize opportunities to grow, and to restructure our economy early.

China's shift to a more consumer oriented economy, and its growing middle class will open up many opportunities for economies in the Asian region. Robust domestic demand within ASEAN will continue to drive its growth, especially with rising urbanisation. Ongoing regional integration efforts within ASEAN, which Singapore strongly supports, will boost intra-regional trade and investment. Singapore's linkages with India have also grown since the signing of our trade agreement. We can further expand services exports, particularly in sophisticated financial and business services. Our growing investment in research and development (R&D), higher education and continuing education will enable us to move into more innovation-driven, higher value-added activities.

Our biggest domestic challenge in the coming years is our ageing population and the tightening labour market as we reduce foreign labour inflow. We must restructure towards productivity-driven growth, and it would be less painful for us to do this now, when we have some policy and fiscal headroom to manage the pace, rather than later. We need to provide time for firms, especially the Small and Medium Sized Enterprises, to adjust; and ensure transitional support for households.

Source: Adapted from *Speech by Heng Swee Keat, Minister for Education, at the Annual Dinner of the Economic Society of Singapore (ESS), 6 August 2013*

Questions

- (a) With reference to Table 3, compare India's economic slowdown with that of South Africa between the periods 2010 and 2013. [2]
- (b) (i) Explain how inflation rates may affect a country's balance of payments. [2]
- (ii) To what extent does the data in Table 4 and 5 supports the above explanation? [2]
- (c) Comment on the view that economic stagnation in the developed world was responsible for the slowdown in economic growth in Brazil, India and South Africa. [6]
- (d) Explain how "tight credit conditions limit domestic demand" in Eurozone economies. [4]
- (e) Analyse how China's "growing middle class will open up many opportunities" to Singapore. [6]
- (f) Assess the importance of "fiscal prudence in the past and an appropriate monetary policy stance" in helping Singapore to overcome economic crises. [8]

[Total: 30m]

Section C

Answer **one** question from this section.

- 3 In 2009 UK government supported the production of renewable energy through subsidies, to reduce the reliance on non-renewable energy.
- (a) Using demand and supply analysis, explain the effects of subsidies on the different energy markets. [10]
- (b) Discuss whether taxation is the best way to deal with the misallocation of resources in the market for non-renewable energy. [15]
- 4 (a) Explain how countries measure their economic performance. [10]
- (b) Discuss if strong economic performance necessarily lead to higher standard of living. [15]

-END OF PAPER-

Questions: H1 Prelim 2 2015 Case Study 1

(a)	(i)	<p>Compare the trend of multifactor productivity growth between Singapore and UK for the period of 2010 – 2013.</p> <p>1 mark – Both countries faces a decreasing trend in their productivity growth</p> <p>1 mark – Singapore’s productivity growth falls greater/more than UK’s.</p>	[2]
	(ii)	<p>How far does labour productivity explain for the trend seen in a(i)</p> <p>Labour productivity does explain for the falling trend</p> <p>- as labour productivity falls in both UK and Singapore, the multifactor productivity growth falls (as seen in table 1)</p> <p>- Explanation:</p> <p>a) Labour productivity falling due to structural rigidity as the economy undergo structural change, workers from the sunset industries are lacking the skills to move over to the sunrise industries/industries in demand. Hence increasing workers who are working in less suited industries → fall in the multifactor productivity growth</p> <p>b) Labour productivity fall due to lower demand → hence lower production → under-utilise the workers.</p> <p>However, fall in labour productivity growth does not fully explain for the trend</p> <p>- in 2013, Singapore experience an increase in the labour productivity but multifactor productivity has decrease. In additional, there was more than proportionate fall in the multifactor productivity for both UK and Singapore as compared to their labour productivity. This could be due to the change in other factor productivity such as capital goods/technology</p> <p>- Other Reasons: 1) falling in the efficient use of capital goods and less adoption technology hence lowering productivity level.</p>	[4]
(b)		<p>From extract 2, what can you infer about the change in the price elasticity of demand of higher education that is based on the “model of lecturing, cramming and examination”.</p> <p>Price elasticity of demand for higher education that is based on the model of lecturing, is <u>becoming less price inelastic</u> as there is an increase in the no. of substitute due to more online higher education providers</p>	[2]
(c)		<p>Explain how “technological advancement” will affect the price of higher education market.</p> <p>Demand increase → due to Technology advancement in production replace</p>	[4]

	<p>workers for lower skill task → job available require higher skill workers --> rise in demand for higher education</p> <p>Supply increase → due to develop of MOOC → lower cost of production</p> <p>Supply increase < demand increase because online platform provision of education is not is significant contribution to the overall cost of production → price will increase</p>							
(d)	<p>Account for why government intervene in the market for vocational training</p> <p>Positive externalities → rise the level of skill of workers and increase labour productivity → lower cost of production and increase attraction of FDI</p> <p>Explain how positive externality lead to market failure (3marks)</p>	[4]						
(e)	<p>Evaluate the effectiveness of subsidy for vocational training in improving productivity.</p> <p>Effective: Explain how it increase consumption of vocational training (3) (with digram)</p> <p>With subsidy → lower the cost of production → increase SS → lower price of course and more affordable → increase consumption of vocational training → increase the skill labour force → higher efficiency, hence with same amount of labour input, more output can be produced → higher productivity.</p> <p>Ineffective:</p> <ul style="list-style-type: none"> - lack of information → under-provision of subsidy and unable to sufficiently lower the cost of production to incentivise higher production and lower price for workers → limit the increase in consumption of vocation training - lack of information → unaware of the relevant skills required of the current industries → courses subsidised are irrelevant that does not meet industrial needs → unable the increase productivity as the mismatch of skills still exist - lack proper or strict monitoring and regulation system to ensure the quality of the course provided → training providers may be lack incentive to ensure the quality of the course provided. As govt has artificially lower the cost of production for training providers → removing the incentive to ensure the quality of trainers and design of course → trainees will not effectively master/learn the skills → hinder productivity growth - Singapore lack culture of lifelong learning (extract 4) → workers may not be willing to take on the courses despite having subsidy → no improvement in productivity. 	[6]						
	<table border="1"> <thead> <tr> <th></th> <th>Description</th> <th>Marks</th> </tr> </thead> <tbody> <tr> <td>L2</td> <td>For an answer which a well-developed and balanced analysis on the effectiveness of subsidy including a stand on the effectiveness of the policy</td> <td>4-6</td> </tr> </tbody> </table>		Description	Marks	L2	For an answer which a well-developed and balanced analysis on the effectiveness of subsidy including a stand on the effectiveness of the policy	4-6	
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	<p>No stand – max 5</p> <p>Max 4m for a well-developed and balanced analysis of 1 policy including evaluation of policy.</p>																	
	L1	For an answer which is one-sided i.e. missing either effectiveness or limitations of subsidy; or for an under-developed answer	1-3															
(f)	<p>With reference to the data and your own knowledge, discuss if productivity growth is the key to sustain economic growth in Singapore.</p> <p>Thesis: Productivity growth is key to sustain economic growth in Singapore</p> <p>With productivity growth => more efficient workforce → with same amt of input lead to more output → increase production capacity → LRAS → increase potential economic growth</p> <p>In addition, the more efficient and skilled workforce → attraction to investment → increase in AD → increase Real National income → higher economic growth</p> <p>Anti-thesis:</p> <p>Weak external demand due to falling growth in emerging countries & unstable growth in US and Europe → fall in export demand & investment inflow despite having a productivity growth → AD falls → fall in EG</p> <p>In order to increase achieve productivity growth → tightening of labour force → increase in wages → increase COP → SRAS fall → slower economic growth resulting in GPL. Hence in the near future, Singapore will lose out in price competitiveness of our export → fall in export demand → AD might continue to fall.</p> <p>In addition, the increase in labour cost → higher investment cost → deter investor if the productivity growth does not increase more than the labour cost → fall in I → hinder economic growth</p>		[8]															
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H1 Prelim 2 2015 Case Study Q2

- (a) With reference to Table 3, compare India's economic slowdown with that of South Africa between the periods 2010 and 2013. [2]

- While both economies slowed, they still experienced growth throughout (1m)
- India's economy slowed down at a faster rate. (1m)

- (b) (i) Explain how inflation rates may affect a country's balance of payments. [2]

- Export revenue will increase; import expenditure decrease (1m)
- Assuming $PED_x > 1$, BOT worsens, BOP worsens (1m)

Note to markers: Award max 1m if answer is vague in reference to export volume, or value; or if no mention is made of PED_x ; or if wrongly uses M-L condition instead of PED_x .

- (ii) To what extent does the data in Table 4 and 5 supports the above explanation? [2]

Is generally observed, hence to a large extent (1m)
Only exceptions in specific time periods, for e.g. in India between 2010 and 2011 (1m)

Note to markers: Award max 1m for a vague conclusion, for example 'to some extent' – use of the term 'generally observed' is acceptable.

- (c) Comment on the view that economic stagnation in the developed world was responsible for the slowdown in economic growth in Brazil, India and South Africa. [6]

Thesis:

- Developed economy's economic slowdown, real NY falls, demand less goods including imports (Cite evidence of reliance of some BRICS economies)

Anti-Thesis:

- Explain how domestic factors in BRICS economies lead to their own economic slowdown. (Cite explanations from extracts on at least 2 economies)

L1 (1-3)	Answer is one-sided and/or contains little or no economic analysis
L2 (4-5)	Answer is relevant, presents both sides of the argument
L2 (6)	Answer is relevant, presents both sides of argument; as and a substantiated judgement

- (d) Explain how "tight credit conditions limit domestic demand" in Eurozone economies. [4]

- Explain that 'tight credit conditions' refer to high cost of borrowing OR inability to get loans (1m)
- Household consumption of certain items falls (1/2m)
- Firms investment falls (1/2m)

- (e) Analyse how China's "growing middle class will open up many opportunities" to Singapore. [6]

- Explain how growing middle class will lead to rising income levels and demand for exports (2m)
- Explain that Singapore's exports of higher value added goods and services will increase (2m)

- Explain how this brings benefits to Singapore – economic growth, job creation (2m)

Note to markers: Award 2m for each of point above is sufficiently well explained.

- (f) Assess the importance of “fiscal prudence in the past and an appropriate monetary policy stance” in helping Singapore to overcome economic crises. [8]

L1 (1-3)	Answer is one-sided and/or contains little or no economic analysis and/or is not relevant to the case study.
L2 (4-6)	Answer is relevant to the case study, presents both sides of the argument, and contains economic analysis.
E (1-2)	Judgement is explained.

Thesis: Explaining how fiscal prudence and monetary policy can help Singapore overcome economic crises.

Anti-thesis: Limitations of policy

Synthesis: Other policies (must be linked to limitation and well substantiated to get E2)

3. In 2009 UK government supported the production of renewable energy through subsidies, to reduce the reliance on non-renewable energy.

(a) Explain, with the aid of diagrams, the effects of subsidies on the different energy markets. [10]

(b) Discuss whether taxation is the best way to deal with the misallocation of resources in the market for non-renewable energy. [15]

Question Approach:

This question requires students to explain the effects of subsidy on different energy markets using demand and supply analysis (with the aid of a diagram). The preamble has hinted the two possible types of energy markets to be addressed. To gain access to the full range of marks, students need to analyse the impacts on the various economic agents in the market using elasticity concepts.

Introduction:

Briefly describe the impacts of a subsidy on the renewable energy market.

A direct subsidy given to producers of renewable energy may affect the supply of renewable energy and in turn, other related energy markets. Since the interaction between demand and supply determines the equilibrium price and quantity of any market exchanges, a change in the supply is likely to have effects on the market participants via the equilibrium price and quantity exchanged. However, the final effects can be examined with the use of elasticity concepts.

Body:

Explain the effect of a direct subsidy to producers in the market for renewable energy.

- A direct subsidy reduces the unit cost of production of renewable energy.
- Producers are more willing and able to supply renewable energy at every price level → supply hence increases.
- Demand for renewable energy, like energy in general, is likely to be price inelastic ($PED < 1$) as energy is needed in a lot of daily activities as well as industrial production processes. Furthermore, there is only one other substitute for renewable energy. This implies that a change in price will lead to a less than proportionate change in quantity demanded.

Explain the extent of change in equilibrium price and quantity using PED concepts with the aid of a diagram.

With reference to fig. 1,

- An increase in supply shifts the supply curve from SS_0 to SS_1 along a relatively steep demand curve. At the initial price P_0 , the quantity supplied is greater than the quantity demanded. The surplus hence put a downward pressure on prices as producers lower prices to get rid of excess inventory while passing on the cost savings to consumers. As price adjusts downwards, quantity demanded increases according to the law of demand, while quantity supplied decreases as producers have less incentive to supply renewable energy according to the law of supply.
- The process continues until a new equilibrium is established where quantity demanded is equal to quantity supplied.
- At the new equilibrium, e_1 , the increase in supply has resulted in a greater fall in equilibrium price than the increase in equilibrium quantity, ceteris paribus.

JC2 Economics 2015
H1 Prelim II – Suggested Answers

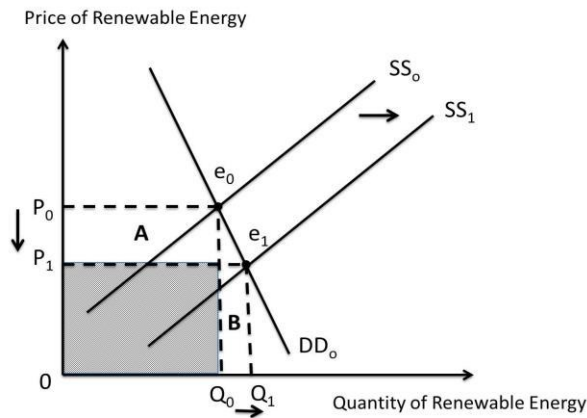


Figure 1: An increase in Supply of Renewable Energy

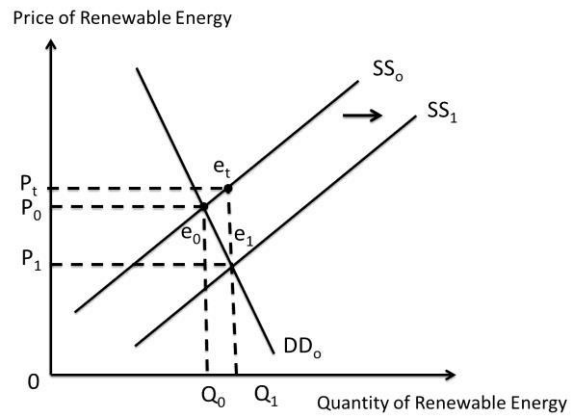


Figure 2: Effect of Subsidy on Producers

Examine the impact on producers and consumers of renewable energy.

As a result, the consumer expenditure on energy is likely to fall. In turn, the amount of revenue producers received from the market has decreased, as shown by the change in area from A to B in figure 1. The total amount of payments received by producers however has increased with the government's subsidy as shown in fig. 2 from $P_0e_0Q_0$ to $P_t e_t Q_1$.

Explain the effects of the change on non-renewable energy with the aid of a diagram.

With a fall in the price of renewable energy, more consumers would be incentivised to switch from consuming non-renewable to consuming renewable energy instead. As a result, there would be a fall in the demand for non-renewable energy.

The fall in demand for non-renewable energy shifts the demand curve from DD_0 to DD_1 in figure 3, which would result in a fall in both the equilibrium price and quantity, ceteris paribus.

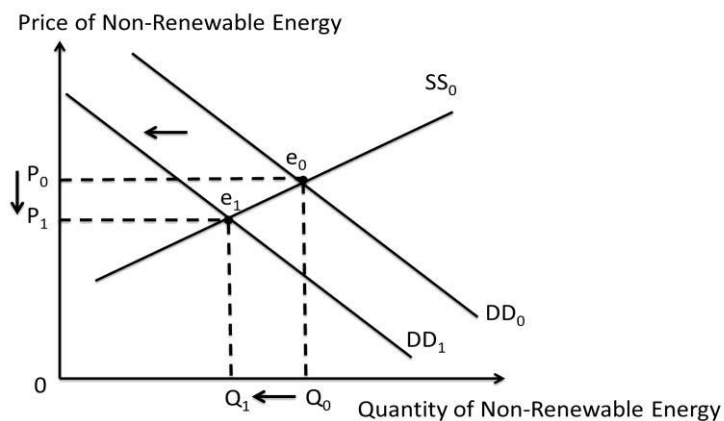


Figure 3: A Decrease in Demand for Non-Renewable Energy

Conclusion:

In the long run, producers of non-renewable may also find producing renewable energy more profitable and switch to producing renewable energy instead, reducing the production and consumption of non-renewable energy. Government's use of subsidy to reduce the reliance on non-renewable energy may hence be effective.

Level	Knowledge, Application, Understanding and Analysis	Marks
L3	For a well-developed answer examining the effects of a subsidy on producers and consumers in different energy markets using elasticity concepts. If no mention of impacts on producers/consumers – Max 8m	7 - 10
L2	For an undeveloped answer explaining the effects of subsidy on producers and consumers in different energy markets. If only one market is addressed – Max 6m	5 - 6
L1	For a largely descriptive and irrelevant answer about the effects of a subsidy on the energy markets. Answer may consist of conceptual errors.	1 - 4

Examiner Comment:

A large number of students approach the question incorrectly, choosing to explain the causes of market failure instead of directly looking at the effects of a subsidy on different energy markets using demand and supply analysis. There were hardly any student who clearly explained the price adjustment process given the changes in the demand and supply forces, although a large number of students attempted to bring in elasticity concepts. Not many students applied the concepts of elasticity well however.

(b) Discuss whether taxation is the best way to deal with the misallocation of [15] resources in the market for non-renewable energy.

Question Approach:

The second part of the question requires students to consider taxation as the best way to deal with the misallocation of resources in the market for non-renewable energy. It hence requires students to analyse the use of taxation amongst other possible policies to correct for the allocative inefficiency in the market, before evaluating on their use in allocating resources efficiently.

Introduction:

Identify and briefly explain the allocative inefficiency in the market for non-renewable energy.

The market for non-renewable energy faces a **problem of over-allocation of resources in the production of non-renewable energy**. The production of energy via non-renewable resources generates **negative externalities which are spillover negative effects** on third parties not involved in the transaction. For example, the excessive use of non-renewable energy sources to generate power causes air pollution, as harmful pollutants are released into the atmosphere. In turn, the society incurs extra costs related to healthcare treatment and restoration of damaged buildings from acid rain. As a result, the marginal private cost (MPC) of producers diverges from the marginal social cost (MSC) by the marginal external cost (MEC).

As producers are self-interested and only consider their marginal private cost and benefit (MPB), the equilibrium output level when left to the free market deviates from the socially optimum output level where $MSC=MSB$. The market hence fails to allocate the optimum amount of resources to the production of energy using non-renewable energy sources resulting in a deadweight loss of area e_0e_1A , as shown in figure 1.

Taxation can correct for the misallocation of resources in the market for non-renewable energy by reducing the production and consumption of non-renewable energy and hence the resultant deadweight loss to the society. However, taxation has its limitations and other measures should be explored and jointly evaluated against taxation to determine the best way to deal with the misallocation of resources.

Body:

Explain how taxation can correct for the market failure due to negative externality

The government can levy an indirect tax on utility firms generating power with the use of non-renewable sources of energy like coal and fossil fuel. An indirect tax increases the unit cost of production of these producers. Hence, for every price level, the producers are less willing and able to produce since their profit margin has fallen, *ceteris paribus*.

With reference to figure 1, the tax equivalent to the marginal external cost shifts the MPC to the left, reducing the equilibrium quantity of non-renewable energy to the socially optimum quantity. Less resources are channeled to the production of non-renewable energy, reducing the production and hence eliminating the deadweight loss to the society. Hence, the tax can help to achieve allocative efficiency in the market for non-renewable energy.

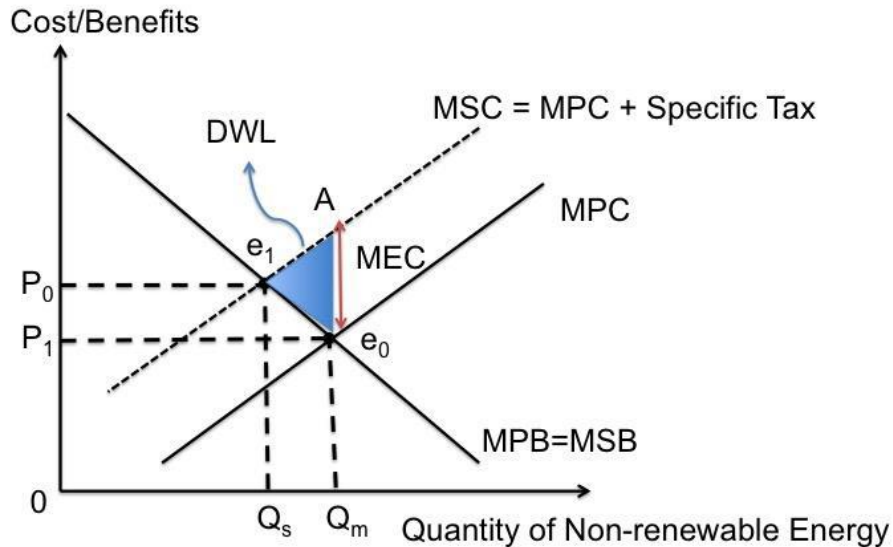


Figure 1: Indirect Tax on Non-renewable Energy

Evaluate on Taxation (Strength and limitations)

Strengths:

- 1) Taxation is a market-oriented measure which is easy to implement and transparent. With good enforcement, taxation can force firms to internalise the external cost and effectively reducing the reliance on non-renewable source of energy.
- 2) Tax revenue collected can be channeled to subsidise the production of renewable energy encouraging producers of energy to switch to using renewable energy sources, reducing the reliance for non-renewable energy. This is as explained in part (a).

Limitations:

- 1) It is difficult to impose the optimum amount of tax as it is difficult to calculate the actual amount of external cost on the society due to imperfect information (of MB & MC). A situation of over/under taxation will not eliminate the deadweight loss and may even worsen the problem. (Explain with reference to figure 2)
- 2) Frequent changes in the tax rate in order to arrive at the optimum amount of tax would create uncertainty to the producers which would affect output decisions.
- 3) Effectiveness of taxation is dependent on the price elasticity of demand (PED) for non-renewable energy. Energy is a necessity in many production processes \rightarrow $PED < 1$. The increase in price due to tax \rightarrow less than proportionate fall in the Qd for non-renewable energy. A larger amount of tax is required for it to be effective which may not be acceptable to utility firms.

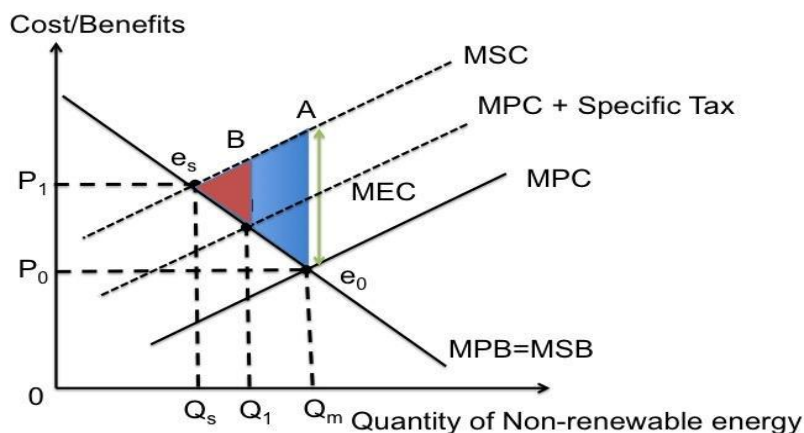


Figure 2: Under Taxation on Non-renewable energy

Explain how regulations can correct for the market failure

In the case of over-production, the government can place a legal maximum on the amount of non-renewable energy that the firm can produce so that output is restricted to the socially optimal level. In addition, government can also set guidelines for energy conservation. Firms will have to incur additional cost to remove pollutants generated in the production process (fitting filters for example), hence internalising the external cost to the society.

Evaluate on regulations

Strength:

1) Effective as it directly controls the level of output preventing overproduction. Beyond the permissible level of non-renewable energy output level, firms will be forced to switch to alternative sources of energy.

Limitations:

- 1) It imposes high monitoring costs on the government as it is difficult and costly to ensure compliance.
- 2) There is no incentive for firms to reduce production level beyond the legally required limit which may not reduce pollution levels to the socially optimum level.

Explain how persuasion and education can correct for the market failure

Government can also raise awareness of the negative impacts of over reliance on non-renewable energy and encourage producers to switch to using alternate green energies. This is to instill social responsibility towards the community and environment. For example, firms assume Corporate Social Responsibility (CSR) by contributing to educational and social programs; reduce waste and pollution process and earning adequate returns on the employed resources. This also includes educating the public about the harmful effects of pollution on the environment so as to influence consumers' preference and their consumption of non-renewable energy. (Fall in MPB → fall in equilibrium quantity → closer to socially optimal quantity, ceteris paribus).

Strength: Successful persuasion and education effects an intrinsic motivation in firms and consumers to reduce production and consumption of non-renewable energy which is effective in the long run.

Limitations: Positive impacts of successfully educating the public to effect behavioural change takes a long time to materialise. In addition, firms may not have incentive to assume the responsibility. Besides, even with the knowledge that extraction and burning of non-renewable energy resources such as fossil fuel contribute significantly to environmental problems and external cost, there is still a rapid rise in the consumption and production of non-renewable energy.

Other acceptable answers:

- Subsidy on green technology to reduce cost of producing green energies

Overall Evaluation

Whether taxation is the best policy depends on whether the tool can **effectively** address the problem of misallocation of resources in the market for non-renewable energy while having the **minimum negative impact** on the society **when compared to other tools**.

As compared to moral suasion and public education, both taxation and regulation can result in a more immediate change in consumption and production decision by economic agents. In

fact, if the UK government reckons that the problem is severe and there is a need to tackle the problem immediately, implementing a regulation will ensure that production and hence pollution level is actually reduced, instead of a market-based incentive like tax, which has greater uncertainty.

Yet, taxation is a more efficient method of intervention as compared to regulation, as taxes are not levied on the firms per se but on per unit of emission. In reality, firms have different cost structures and a “one size fits all” method like that of a regulation does not take that into account and treats all firm equally. Hence, even if it is costly to reduce pollution by a bit, a firm will have to comply and may end up closing down.

Conclusion:

Taxation may be a plausible measure, but to solve the problem of misallocation of resources in the market for non-renewable energy requires more than just taxation. Ultimately, the rapid consumption of energy in the name of industrialisation and economic development implies that firms are more likely to rely on cheaper and more readily available sources of energy to meet production demands and while taxation and education to reduce the reliance of non-renewable energy is employed, more needs to be done to develop alternate green energies and encourage the use of green technology even if it brings about higher short term costs.

(To control emissions, today's coal-fired power plants are equipped with scrubbers, filters, collectors, electrostatic precipitators, and other devices. emissions.)

Level	Knowledge, Application, Understanding and Analysis	Marks
L3	For a well-developed and balanced answer examining the strengths and limitations of taxation as well as other possible measures to achieve efficient allocation of resources in the market for non-renewable energy. Fail to consider limitations or strengths of policy – Max 9m	9 - 11
L2	For an undeveloped answer which attempts to examine the strengths and limitations of taxation as well as other possible measures to achieve efficient allocation of resources in the market for non-renewable energy. Only considers policy of taxation (well-developed) – Max 6m	6 - 8
L1	For a largely descriptive and irrelevant answer about taxation without addressing the question. Answer may consist of conceptual errors.	1 - 5
Max 4m given to Evaluation		
E2	Value judgements supported by economic reasoning.	3 - 4
E1	Value judgements unsupported by economic reasoning	1 - 2

Examiner Comment:

Suggested Answer

- 4 (a) Explain how countries measure their economic performance. [10]
- (b) Discuss if strong economic performance necessarily lead to higher standard of living. [15]

(a) In order to access the full 10 marks, students should mention at least three indicators with economic growth rate as a compulsory indicator. What students should focus is not just on the explanation of the economic indicators but to explain how they are link to economic performance. In the conclusion, students should be aware that overall economic performance requires these indicators to show a more complete picture and that any individual indicator alone is insufficient to indicate economic performance.

Explanation of the economic indicator	Explanation of how each economic indicator measure economic performance
<p>Economic growth rate (GDP or GNP % growth)</p> <ul style="list-style-type: none"> - define GDP or GNP - explain what a positive or negative value means in terms of national output 	<ul style="list-style-type: none"> - Explain how the values of GDP/GNP growth rate indicate the economic performance of an economy. - Recognise that economic growth rate is usually the most important indicator to measure economic performance.
<p>BOP status (deficit or surplus, extent and duration of it)</p> <ul style="list-style-type: none"> - define BOP - briefly explain what makes up the BOP - explain what it meant when a country has a BOP surplus or a deficit 	<ul style="list-style-type: none"> - Explain how a BOP surplus or deficit can indicate economic performance, showing awareness that the extent and duration of the deficit and surplus matter more in terms of measuring economic performance. - Recognise that BOP measure external performance of a country and is particular important for small and open economies like Singapore and Hong Kong.
<p>Unemployment rate (%)</p> <ul style="list-style-type: none"> - define unemployment rate - briefly explain that cyclical and structural unemployment are the more concerned sources of unemployment - explain what a high or low unemployment rate meant and its impact 	<ul style="list-style-type: none"> - Explain how unemployment rate (high or low %) can be used to measure economic performance. - Recognise that the source of unemployment rate may also affect economic performance (generally long term unemployment is more of a concern than short term unemployment such as frictional unemployment)
<p>Inflation rate (%)</p> <ul style="list-style-type: none"> - define inflation - explain how inflation is measured - briefly explain that inflation can be demand pull or cost push - explain what a high or low inflation meant and it impact 	<ul style="list-style-type: none"> - Explain how low or high inflation rate can be used to measure economic performance

<p>Gini-coefficient (value between 0 and 1)</p> <ul style="list-style-type: none"> - define income inequality - briefly explain how the value of the Gini coefficient indicate income inequality (the higher the value, the higher the income inequality), - explain what high or low income inequality meant and its impact 	<p>- Explain how the value of Gini-coefficient can be used to measure economic performance.</p>
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Comprehension, Knowledge, Application, Analysis		
<p>L3</p>	<p>Well-developed explanation of the economic indicators and how they measure economic performance.</p> <p><i>Max 8m – if only two indicators are explained (with economic growth rate being one of them)</i></p>	<p>7-10</p>
<p>L2</p>	<p>Undeveloped explanation on the economic indicators to measure economic performance.</p> <p><i>Max 5m – if answer is purely on economic objectives with some incidental mentioning of economic indicators.</i></p> <p><i>Max 6m – if only two or more indicators are explained (without economic growth rate)</i></p>	<p>5-6</p>
<p>L1</p>	<p>Mere listing of the indicators, largely irrelevant answer such as talking about how economic performance affects SOL.</p> <p><i>Max 4m – if answer is purely on economic objectives without any indicators being mentioned.</i></p> <p><i>Max 4m – if answer is purely on the definition/description of the indicators without any link to how they indicate or measure economic performance</i></p>	<p>1-4</p>

(b) Discuss if strong economic performance necessarily lead to higher standard of living. [15]

This questions requires students to recognize that while strong economic performance can potentially and often lead to higher standard of living in both material and non-material aspects, it may not always be true. This is because SOL depends on many factors in which a strong economic performance may not have an impact on. Sometimes, strong economic performance may even come at the expense of certain aspects of SOL such as longer working hours or environmental degradation. In addition, students should recognize that not everyone may experience higher SOL due to stronger economic performance.

Introduction:

- explain what SOL is and recognize that it includes both material and non-material aspects (There is no need to explain in details what is strong economic performance since it is covered in part (a) already).

Body:

Thesis: Explain how strong economic performance can lead to higher SOL in terms of both material and non-material aspects

Explain how stronger economic performance in terms of high real economic growth rate and low unemployment rate can lead to higher material SOL (quantitative aspect of SOL)

- high real EG (real GDP growth) → may translate to higher **real GDP per capita** assuming slower population growth rate → higher real household income → higher purchasing power → able to purchase more gds/svs → improve material well being
- lower unemployment rate → more household enjoying higher income → more people are able to purchase more gds/svs → higher material well-being

Explain how stronger economic performance in terms of high real economic growth rate can lead to higher non-material SOL (qualitative aspect of SOL)

- high real EG imply better business conditions → firms earn more profits and household earn higher wages → assuming constant corporate and personal income tax rates → govt collect higher tax revenue → more spending on infrastructure e.g. improve transport network, merit goods e.g. education and healthcare, public goods such as defense, police force → improve non-material well-being in terms of higher life expectancy and higher literacy rates.

Anti-thesis: Explain how stronger economic performance may come at the expense of certain aspects of SOL

Explain how stronger economic performance may leads to lower non-material well-being.

- strong economic performance may be contributed by longer working hours → less leisure time and time to spend with family and friends, higher level of stress from work → more cases of stress related illness → lower non-material well being
- higher economic growth may come at the expense of rapid industrialisation → rapid environmental degradation, increased level of air pollution and water pollution from industrial waste → these negative externalities can lower the quality of life of the residents living in those areas.

Evaluation: In countries like China where there is severe air pollution in cities like Beijing, the SOL may not have improve much even with the two decades of strong economic growth. However, in countries like Japan where there is strong government intervention to ensure quality of the environment, they may enjoy better non-material SOL even though the economy has not grown much over the last 2 decades.

Explain how stronger economic performance may not lead to higher material and non-material well-being for some groups of people

- if the higher economic growth comes at the expense of worsening income inequality → some groups of people (typically the low income group) does not experience an improvement in their SOL. High income inequality may result in the poor being deprived of services such as healthcare and higher education. It may also leads to social unrest or higher crime rates among lower income group as they are not benefitting from the economic performance of the country.

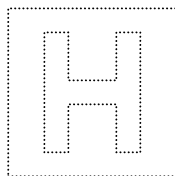
- high income inequality also leads to lower AD in the future as the rich generally save more as a proportion of their income as compared to the poor. Hence if the benefits from stronger economic performance are mainly concentrated in the rich, the expansionary effect from higher economic growth through consumption will be less compared to all benefitting from higher economic growth.

Evaluation: The issue on income inequality can be mitigated by income distribution policies by government. Higher income tax rates for higher income earners followed by transfer payments to the lower income group can lower the extent of income inequality and reduce the magnitude of the problem caused as mentioned earlier.

Synthesis/Conclusion

While strong economic performance tend to improve SOL, government need to note that some people may not benefit from it and hence need to design policies to help these groups of people and make economic growth more inclusive. At the same time, policies should be imposed to tackle negative externalities that may arise from economic activity. In doing so, government can help to ensure that their economy can reap the most benefits from strong economic performance or high economic growth.

Comprehension, Knowledge, Application, Analysis		
L3	Well-developed explanation of how stronger economic performance can benefit SOL quantitatively and qualitatively and yet may have certain adverse impact. <i>Max 9m – if a balanced answer only shows how stronger economic performance benefits SOL quantitative and not qualitatively.</i>	9-11
L2	Undeveloped explanation on how stronger economic performance affects SOL. <i>Max 6m – for a one-sided answer that is developed.</i>	6-8
L1	Mainly descriptive answer or largely irrelevant answer.	1-5
Evaluation		
E2	Judgment given based on economic analysis.	3-4
E1	Judgment not based on analysis.	1-2



INNOVA JUNIOR COLLEGE
JC 2 PRELIMINARY EXAMINATION 2
in preparation for General Certificate of Education Advanced Level
Higher 2

ECONOMICS

9732/01

Paper 1: Case Study

14 September 2015

2 hours 15 minutes

Additional Materials: Writing Paper and Cover page

READ THESE INSTRUCTIONS FIRST

Write your name and class on all the work you hand in.
Write in dark blue or black pen on both sides of the paper.
You may use a soft pencil for any diagrams, graphs or rough working.
Do not use staples, paper clips, highlighters, glue or correction fluid/tape.

Answer **all** questions.

Section A: Case Study

Answer **all** questions.

Section B: Case Study

Answer **all** questions.

Please begin each question on a **fresh sheet of paper**.

At the end of the examination, **submit Sections A and B separately**.
Attach a **cover sheet** to Section A only.

The number of marks is given in brackets [] at the end of each question or part question.

You are advised to spend several minutes reading through the data before you begin writing your answers.

You are reminded of the need for good English and clear presentation in your answers.

This document consists of 7 printed pages and 1 blank page.



Section A

Answer **all** questions

Question 1

Unfair flights: Competition between American and Gulf Air Carriers**Table 1: Passenger traffic growth of major airlines in 2014**

Airline	2-year change (%)
Etihad (Gulf)	43.4
Emirates (Gulf)	34.2
Qatar (Gulf)	27.3
British Airways	11.9
Lufthansa	8.7
Singapore	8.2
Air France	2.6
American (US)	1.5
Delta (US)	1.1
Southwest (US)	0.6
United (US)	-1.8

Source: *Airline Business World Airline Rankings, The Wall Street Journal***Extract 1: The rapid growth of Gulf carriers**

In the last five years, Gulf carriers Etihad, Emirates and Qatar Airways have flooded the market, with some 252 direct flights a week from their respective hubs to 10 U.S. cities alone, from Seattle to Chicago to New York. Their rise has coincided with the emergence of a new global middle class and a surge in global air travel. Unsurprisingly, the fastest-growing market in air travel comes from emerging economies — places that the Gulf carriers serve well. The three hubs of Dubai, Abu Dhabi, and Doha are blessed with fortunate commercial geography: They are a four-hour flight to one-third of the world's population and an eight-hour flight to two-thirds. Foresighted Middle Eastern governments built air hubs and national airlines to exploit their comparative geographic advantage.

Delta, United, and American Airlines — the three largest U.S. carriers — are displeased with the rise of the Gulf airlines. The Gulf airlines, after all, are cutting into the U.S. long-haul business, the most lucrative in aviation. It is not surprising to see Americans flying domestic flights within the US, but switching to the more attractive gulf carriers to reach global destinations.

Now, Delta, United, and American are engaged in an orchestrated campaign to demand that Washington curtail those carriers' direct flights into the United States. The message of Americans for Fair Skies is simple: The Gulf carriers are operating on an uneven playing field, deriving tremendous benefits from their state ownership, including a slew of alleged subsidies of some \$40 billion from Gulf governments over the past decade.

The Gulf carriers generally retort that consumers enjoy their award-winning premium service and benefit from their global connectivity all across Asia, Africa, and the Middle East. "What Emirates is doing is competing in the marketplace — we don't 'take' or 'steal' customers. We offer a great product at a competitive price, which appeals to the consumers who choose to fly with us." Besides, a good number of flight routes of the Gulf carriers do not directly overlap with those of the U.S. carriers.

A broad network of American businesses — from Boeing to JetBlue (a budget domestic carrier) to a constellation of airport councils and travel services companies — are crying foul against the American

carriers' actions. It is obvious why Boeing is uncomfortable with the U.S. carriers' effort to limit the Middle Eastern airlines. After all, the Gulf carriers are among the biggest foreign buyers of its aircraft. At the 2013 Dubai Airshow, Emirates and Etihad dazzled the aviation world with some \$100 billion in orders for Boeing aircraft. A few months later, Qatar Airways ordered another 50 Boeing aircraft, at a list price of \$37.7 billion. If you're keeping tabs, that's nearly \$140 billion of aircraft orders in less than six months. And between now and 2027, the Gulf carriers will add another 534 new wide-body aircraft to their fleets, according to Credit Suisse. That's a lot of Boeing and Airbus planes — and lots of American and European manufacturing jobs.

Since 2005, U.S. airlines have also been consolidating at a rapid rate: America West with U.S. Airways, Northwest with Delta, Continental with United, AirTran with Southwest, and then, most recently, U.S. Airways with American. The U.S. Airways-American merger prompted a Justice Department antitrust lawsuit. "In recent years, major airlines have, in tandem, raised fares, imposed new and higher fees and reduced service," the Justice Department noted. Then Attorney General Eric Holder said in an August 2013 statement that "This transaction would result in consumers paying the price — in higher airfares, higher fees and fewer choices." Ultimately, the merger was approved. Today, as a result of these consolidations, only four carriers handle 80 percent of U.S. airline seat capacity.

Source: Adapted from *Foreign Policy*, May 2014

Extract 2: Continued consolidation of the airline industry

Globally, International Air Transport Association (IATA) forecasts \$3 billion profits this year for the entire industry, on revenues of more than \$600 billion. Even those razor-thin margins are down to a handful of major carriers that continue to boom in China and the Asia-Pacific countries. IATA's chairman said, "The number of airlines in the industry is too many. It's too fragmented, and consolidation is a good thing."

Consolidation, most agree, will continue and accelerate. The International Airlines Group (IAG) chief executive agrees that there are too many carriers. "Many will disappear. And you won't see new airlines appear. The barriers to entry are much higher now." The future, he says, will be waiting for the weakest "to go bankrupt – it's the cheapest form of consolidation". Walsh points to the US, where the consolidation of major airlines has left a "stronger, more rational industry over time".

Source: Adapted from *The Guardian*, June 2012

Extract 3: A step towards a new global standard for emissions

The US Environmental Protection Agency (EPA) has said that greenhouse gases from aircraft endanger human health, taking the first step toward regulating emissions from the domestic aviation industry. The EPA's finding kicks off a process to regulate greenhouse gas emissions from the aviation industry. Aviation accounted for 11% of energy-related carbon dioxide emissions from the transportation sector in 2010 in the United States, according to the International Council on Clean Transportation.

The airline industry has favoured a global standard over individual national standards since airlines operate all over the world and want to avoid a patchwork of rules and measures, such as taxes, charges and emissions trading programs. But some environmental groups are concerned that the standard being discussed will do little to change the status quo since it would only apply to new and newly designed aircraft that will not be in operation for several years. They instead argued for a harsh carbon tax which would cost airlines more.

Source: *The Guardian*, June 2015

Questions

- (a) Compare the passenger traffic growth of Gulf carriers and other major airlines for the period 2012-2014. [1]
- (b) Comment on the value of the cross-elasticity of demand between flights by American Airlines and Emirates. [3]
- (c) Explain, with a relevant example, why a "broad network of American businesses... are crying foul against" the American carriers trying to limit the expansion of the Gulf carriers in extract 3. [3]
- (d) Extracts 1 and 2 mention the consolidation of the airline industry either through the disappearance of firms or mergers.
- (i) Explain how the weaker airlines will eventually 'disappear'. [3]
- (ii) Assess the impact of the US Airways-American merger on consumers and producers. [8]
- (e) (i) Explain how negative externalities could arise in the airline industry. [2]
- (ii) In light of the data provided, discuss whether you would recommend the U.S. government to intervene in the airline industry for a more efficient outcome. [10]

[Total 30 marks]

Section BAnswer **all** questions**Question 2****Globalisation and Economic Growth****Extract 4: BRICS economies face challenges over growth**

By the standards of the developed world, the BRICS economies – comprising Brazil, Russia, India, China and South America are still surging. But their growth rates are a fraction of what it once was – thanks to stagnation on the developed world, in particular the Eurozone.

India's economy will grow by the lowest in a decade this year. Reforms undertaken by Finance Minister Palaniappan Chidambaram, including reduced fuel subsidies, faster privatisation, curbing the budget and current account deficits, and easing of restrictions on foreign investment in retail and airlines will take time to bear fruit. Meanwhile, corporate chiefs grumble privately about the difficulties of doing businesses. A reluctance to make sweeping reforms to labour and land laws deters entrepreneurs from undertaking investments.

South Africa's economic growth has been badly hit by strikes in the mining sector last year. 50 lives were lost, and it cost the industry massively. Unsurprisingly, the current account deficit worsened and the currency depreciated. South Africa's growth had already been sluggish since the 2008 global economic crisis. With a third of manufactured exports shipped to Europe, it is exposed to the current Eurozone crisis. It is also adversely affected by infrastructure constraints and poor investor sentiment.

The BRICS economy, worst affected by the Eurozone crisis, is Brazil. But some of its problems are self-inflicted. A softening of commodity prices and global risk aversion coincided with a crackdown by Brazil on capital inflows, which it feared contributed to an appreciation of its currency against the dollar and was making local industry uncompetitive. At the same time, a consumer credit boom was losing steam and investors were becoming more cautious about a perceived increase in government intervention in the economy. Industries struggled because of high costs, rising wages and weak productivity gains.

Source: Adapted from *Financial Times*, March 2013

Extract 5: Wine and shine

China is investigating European wine exports on anti-dumping grounds and because of suspicion of unfair subsidies to winemakers. This comes a day after the EU imposed tariffs on Chinese solar panels, and has sparked fears of a trade war. France which exported 71% of the €763m of wine sold to China last year was the biggest backer of the solar tariffs.

China is by far the world's leading producer of the panels, dominating 80% of the global market. European business lobbies argue that Chinese producers receive state subsidies and cheap loans. The EU bought €21bn of Chinese solar panels in recent years. The European Commission accused China of undercutting European rivals by selling panels below-cost and threatening 25,000 jobs in the European solar industry. It described the tariffs as "an emergency measure to give life-saving oxygen to a business sector in Europe that is suffering badly from this dumping." This is the largest anti-dumping case undertaken by the commission.

While tariffs have been imposed, the EU is still negotiating with China before a final decision on duties is made in December. Observers note that it remains unclear how a final settlement will look like, because Europe's interests are divided since only a few countries produce solar panels but there are many jobs associated with the installation of the panels.

Source: Adapted from *The Guardian*, June 2013

Extract 6: The many hidden faces of protectionism

While countries are reducing import tariffs and imposing fewer quotas on their trading partners, protectionism has crept back in other guises. In contrast the World Trade Organisation (WTO), which focuses on measures designed to explicitly keep exports out, the London-based Centre for Economic Policy Research which runs Global Trade Alert (GTA) defines protectionism more broadly. Anything that hurts another country's commercial such as government bailouts of domestic firms, wage subsidies, export and tax rebates and preferential financing from state-owned banks, including France's loan guarantee to carmaker PSA Peugeot Citroën, counts as protectionism.

Industrial policy, used to build up a country's capability in specific manufacturing sectors, is another such measure. Last year, the Brazilian government increased sales tax under its Inovar-Auto programme designed to provide vehicle technology innovation. But foreign manufacturers who increase spending on local R&D, meet new fuel-efficiency standards and increase the number of domestic production processes, will get tax credits. Brazilian Biotech companies receive low-interest loans and equity capital injections from BNDES, the state-owned bank. Supporters point out that Australia, Britain and America subsidise basic biotech research.

With their state-capitalist model, the line between industrial policy and export subsidy is blurred in the BRICS economies. China has long used compulsory joint ventures, technology transfer and access to cheap land and loans from state-owned banks to boost companies in strategic sectors. This was how Chinese firms came to dominate the domestic and increasingly global market for wind-power turbines and solar panels. The EU's trade commissioner, Karel De Gucht, alleges that to discover which industries are dumping, "you read China's last five-year plan." This may be true, but it is difficult to punish protectionism in industries where industrial policy is the rule, not the exception.

But many such policies are riddled with problems. Brazil's Petrobras ability to exploit new deep-sea oil deposits is hampered by the country's limited oilfield equipment producing capability. While industrial policy may boost specific industries, the increased role of state which comes with it stifles private enterprise and cause under-investment in human and physical capital. Brazil and India have been held back because state resources have gone to preferred sectors and constituencies instead of boosting their productive capacities.

In a globalised economy, countries can better attain economic prosperity with lesser protectionism

Source: Adapted from *The Economist*, Oct 2013

Table 2: GDP Growth Rates (%)

Country/Year	2010	2011	2012	2013
Brazil	7.6	3.9	1.8	2.7
China	10.6	9.5	7.8	7.7
India	10.3	6.6	5.1	6.9
South Africa	3.0	3.2	2.2	2.2

Table 3: External balance on goods and services (% of GDP)

Country/Year	2010	2011	2012	2013
Brazil	-1.0	-0.8	-1.4	-2.3
China	3.0	2.1	2.7	2.7
India	-4.4	-6.5	-6.7	-3.0
South Africa	1.2	0.9	-1.3	-2.3

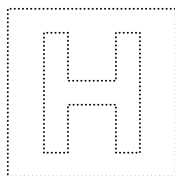
Source: World Bank

Questions

- (a) Compare the change in India's external balance on goods and services as a percentage of GDP with that of South Africa between 2010 and 2013. [2]
- (b) Explain how might the change in external balance on goods and services in Table 3 affect the GDP growth of India. [3]
- (c) With the aid of a diagram, explain why the imposition of tariffs benefits some parties but not others. [4]
- (d) Explain the case for considering China's industrial policy as a form of protectionism. [3]
- (e) To what extent can the slowdown of the BRIC economies be attributed to economic conditions in developed countries? [8]
- (f) Discuss the view expressed in Extract 6 that "in a globalised economy, countries can better attain economic prosperity with lesser protectionism". [10]

[Total 30 marks]

-END OF PAPER-



INNOVA JUNIOR COLLEGE
JC 2 PRELIMINARY EXAMINATION 2
in preparation for General Certificate of Education Advanced Level
Higher 2

ECONOMICS

9732/02

Paper 2: Essay Questions

17 September 2015

2 hours 15 minutes

Additional Materials: Writing Paper and Cover Page

READ THESE INSTRUCTIONS FIRST

Write your name and class on all the work you hand in.
Write in dark blue or black pen on both sides of the paper.
You may use a soft pencil for any diagrams, graphs or rough working.
Do not use staples, paper clips, highlighters, glue or correction fluid/tape.

Answer **three** questions in total, of which **one** must be from Section A, **one** from Section B and **one** from either Section A or Section B.

Please begin each question on a **fresh sheet of paper**.

At the end of the examination, **submit Sections A and B separately**.

The number of marks is given in brackets [] at the end of each question or part question.

You are advised to spend several minutes reading through the data before you begin writing your answers.

You are reminded of the need for good English and clear presentation in your answers.

This document consists of **3** printed pages and **1** blank page.



Answer **three** questions in total.

Section A

One or two of your three chosen questions must be from this section.

- 1 India is having bumper wheat harvests aided by government subsidies. Wheat is used by millers to produce flour, an important ingredient in many food items, such as bread, baked goods, pasta and noodles. At the same time, increasing affluence in the country has led to a growing middle class.

Using economic analysis, discuss the likely impact of these events on producers and consumers in India. [25]

- 2 (a) Explain the factors affecting the price and output decisions of firms in monopolistic competition and oligopoly. [10]

(b) Discuss the extent to which the behaviour of the firms in these market structures is dependent on the actions of other firms. [15]

- 3 (a) Explain why merit goods and immobility of factors of production may lead to market failure. [10]

(b) Evaluate policies that can be used by the Singapore government to correct these market failures. [15]

Section B

One or two of your three chosen questions must be from this section.

- 4 (a) Explain why high unemployment and high inflation are concerns to governments. [10]
- (b) Discuss the extent in which increase in labour productivity can help to address these problems. [15]
- 5 The achievement of macroeconomic objectives by an economy is dependent on other economies. Discuss. [25]
- 6 (a) Explain how an economy is affected by globalisation. [10]
- (b) Assess whether protectionism is the best approach to minimise the adverse impact of globalisation. [15]

-END OF PAPER-

H2 Prelim 2 2015 Paper 1 Q1

Suggested Answers

- (a) Compare the passenger traffic growth of Gulf carriers and other major airlines for the period 2012-2014. [1]

The Gulf carriers experienced much more rapid passenger growth rates compared to other major airlines over the period 2012-2014.

1m for difference, no marks for similarities

- (b) Comment on the value of the cross-elasticity of demand between flights by American Airlines and Emirates. [3]

Substitutes, XED is positive, however flights compete on different routes, not highly positive, or could even be seen as complement (take Gulf carrier to main US airport hub and then take domestic American Airways flight to the smaller airports).

1m for giving a likely value of XED for flights by AA and Emirates (positive)

1m for an acceptable reason (substitutes)

1m for a reasonable comment on the value (how big the value is, or whether it might be negative for some)

- (c) Explain, with a relevant example, why a “broad network of American businesses... are crying foul against” the American carriers trying to limit the expansion of the Gulf carriers in extract 3. [3]

1m to explain relationship between gulf carriers and other American businesses - Derived demand.

2m to explain how limiting the expansion of the Gulf carriers causes a fall in derived demand for other American businesses → fall in P & Q → fall in total revenue & profits, ceteris paribus.

Possible examples are Boeing, JetBlue.

Max 2m if explanation is not contextualised to a suitable example from extract

- (d) Extracts 1 and 2 mention the consolidation of the airline industry either through the disappearance of firms or mergers.

- (i) Explain how the weaker airlines will eventually ‘disappear’. [3]

Weaker airlines are either face subnormal profit, minimise loss by shutting down & exiting industry in the long run

1m to explain ‘weaker’ – ie, insufficient demand, or higher than normal costs.

2m to link to firm earning subnormal profits, long run total revenue fails to cover total cost (or price lower than average cost) → exit industry and ‘disappear’

Candidate should make explicit reference to ‘weaker’ and ‘disappear’, and the long run shutdown condition.

(d) (ii) Assess the impact of the US Airways-American merger on consumers and producers. [8]

	Producers	Consumers
Positive	<p>To American Airways and US Airways</p> <ul style="list-style-type: none"> • Larger market share, market power, greater price setting ability, more price inelastic demand, able to charge higher prices and restrict quantity, higher total revenue • Cost savings accrued from EOS due to larger scale of production from the merger (likely to be high due to the complicated processes and high fixed costs in the airline industry) • Able to compete better and survive against foreign competition. 	<ul style="list-style-type: none"> • Consumers benefit from lower prices if EOS results in cost savings which are passed down to consumers • Less efficient firms leaving could leave a more rational and efficient industry for consumers → better quality airlines, lower prices
Negative	<p>American Airways and US Airways</p> <ul style="list-style-type: none"> • Possible diseconomies of scale that could result from larger operations <p>Other airlines</p> <ul style="list-style-type: none"> • Face greater and larger competition from the newly merged American-US Airways. Might face a fall in market share and revenue. • Less efficient/weaker firms might shutdown and leave the industry 	<ul style="list-style-type: none"> • If the American-US airways merger brings about higher market power and thus an abuse of monopoly power to charge higher prices and restrict quantity, then consumers are worse off in terms of lower consumer surplus. • Consumers also have less choice

L2 (4-6m): answers in this level will provide clear accurate explanation of the positive and negative consequences of the merger on various economic agents in the airline industry.

L1 (1-3m): Answers in this level will be descriptive or will contain errors in the explanation of the merger on various economic agents in the airline industry.

Evaluation (1-2m): Evaluative comment may weigh and assess the positive and negative consequences.

For failure to consider both producers and consumers – max 3m

- (e) (i) Explain how negative externalities could arise in the airline industry. [2]

Any valid and developed explanation identifying the negative external cost, and the 3rd party who is affected. E.g., flights produce negative externalities in production when greenhouse gases are emitted when the planes are flown. These greenhouse gases result in global warming, health damage and other undesirable effects on third parties who are not the airlines or the airline passengers.

Underdeveloped answer that is not clear on the external cost/3rd party – 1m

- (ii) In light of the data provided, discuss whether you would recommend the U.S. government to intervene in the airline industry for a more efficient outcome. [10]

Intervention by government is necessary for a more efficient outcome:

- Explain how negative externalities will result in deadweight loss and allocative inefficiency in the airline industry (following the answer in (e)(i))
- Explain how government intervention by form of carbon taxes/cap and trade schemes/rules and regulations can help to lower DWL and overproduction and thus a results in a more efficient outcome.

Government should not intervene:

- Explain how government intervention measures each have its limitations
- Explain how government failure might occur, in cases of imperfect information, lack of compliance, difficulty in international coordination and enforcement, etc.
- Carbon taxes/regulations/taxes all have the resultant impact of increasing prices of air travel, which might be undesirable to airlines and consumers.

L2 (4-6m) Answers in this level will be well-developed and well-balanced. It will show good understanding of the analytical framework and will have a clear idea of the inefficiencies in resource allocation that result from the production of air travel through flight. The policy options explained (e.g. carbon taxes, cap and trade schemes, rules and regulations) will show the intended impact upon resource allocation. The reasons why government intervention might fail or is undesirable are also well-explained.

At least two policy options are required.

L1 (1-3m) Answers in this level will refer to policies, but the approach will be largely descriptive and will show limited understanding of the inefficiencies in resource allocation referred to in the question. The analytical framework provided by the concepts of marginal private cost, negative externalities and social costs will be absent or poorly understood.

E2 (3-4m) Marks will be awarded for highly contextualised evaluative comment that explains the advantages and disadvantages of the policy options discussed, and linking it to whether the government ultimately should intervene. For example, whether the impact of indirect taxes is to improve resource allocation depends upon the accurate match of the indirect tax with the cost of the negative externality.

E2 (3-4m) Marks will be awarded for some evaluative comment on the pros and cons of government intervention.

H2 Prelim 2 2015 Paper 1 Q2

Suggested Answers

- (a) Compare the change in India's external balance on goods and services as a percentage of GDP with that of South Africa between 2010 and 2013. [2]

South Africa's external balance as a % of GDP has steadily worsened whereas India's worsened but then improved.(1m)

South Africa's external balance as a % of GDP went from being positive to negative whereas India's was negative throughout.(1m)

South Africa's external balance as a % of GDP went was always in a better position than India's (1m)

- (b) Explain how might the change in external balance on goods and services in Table 3 affect the GDP growth of India. [3]

In general, when India's external balance as % of GDP improves, GDP growth increases (1m).

*When external balance improves, X increases and/or M decreases, (X-M) is a component of AD (1m)
AD increases, real NY increases, GDP increases. (1m)*

- (c) With the aid of a diagram, explain why the imposition of tariffs benefits some parties but not others. [4]

- Correct drawing and labelling of tariff diagram (1m)
- Domestic producers benefit as quantity supplied will increase as P increases (1m)
- Foreign producers lose as quantity demanded decreases as P increases; the difference between quantity demanded by consumers and domestically produced (i.e. what is imported) falls because domestic quantity supplied has increased and domestic quantity demanded has fallen (1m)
- Consumers lose as quantity demanded overall falls as P increases, hence consumer welfare is loss. (1m)

- (d) Explain the case for considering China's industrial policy as a form of protectionism. [3]

- Chinese government uses methods such as giving access to cheap land to domestic firms in infant/strategic industries, thereby lowering their cost of production (1m)
- This has the effect of making local products cheaper than foreign imports (or less expensive if compared to the situation of no help by government); therefore domestic consumers who would be consuming imports would now consume domestic products.(1m)
- This puts foreign firms who export to China at an unfair disadvantage. (1m)

- (e) To what extent can the slowdown of the BRICS economies be attributed to economic conditions in developed countries? [8]

Thesis:

- 1) Economic conditions in developed countries led to the slowdown of the BRICS economies.
 - Falling economic growth in developed economies would mean lower income levels of consumers and decreased purchasing power. They would demand less goods and services, including imports from BRICS economies

- Developed economy's economic slowdown, real NY falls, demand less goods including imports
(Cite evidence of reliance of some BRICS economies)

Anti-Thesis:

- Explain how domestic factors in BRICS economies lead to their own economic slowdown.
(Cite explanations from extracts on at least 2 economies)

L1 (1-3)	Answer is one-sided, i.e. explained how conditions in developed countries caused the economic slowdown in BRIC economies; or explained how domestic factors caused the slowdown in BRIC economies; OR answer contains the points but has little correct/no economic analysis.
L2 (4-6)	Answer is relevant, presents both sides of the argument
L3 (7-8)	L2 with a well-justified synthesis.

Discuss the view expressed in Extract 6 that “in a globalised economy, countries can better attain economic prosperity with lesser protectionism”. [10]

Thesis (Should try to deal with 2 points)

- 1) Protectionism prevents countries from reaping the benefits of free trade based on comparative advantage, which include higher output levels and hence GDP growth.
 - Producing goods which one has a lower opportunity cost means resources are used in a more efficient manner – an economy can then produce a lot of one good (which it has a CA in) and export them (earning export revenue) in exchange for importing a lot of another good (which it does not have a CA in) – thereby increasing other countries export revenue.
 - Both countries can hence gain economic prosperity.

- 2) Protectionism entails use of government resources which could have been used to better develop the countries in a globalised economy.
 - Evidence from **Extract 6** (“*Brazil and India have been held back because state resources have gone to preferred sectors and constituencies instead of boosting their productive capacities*”)
 - Government may need to provide massive subsidies to, for example infant industries. Often such subsidies may fail to bring about long-term benefits, because the infant industry may have failed to develop due to complacency as a result of lack of exposure to foreign competition)
 - Such subsidies could have instead gone to upgrade the infrastructure of the economy or increasing the education budget, which would increase the productive capacity of the economy and make it more attractive to attract FDIs to develop more rapidly (increase AD and LRAS, which is possible in a globalised economy.
 - Evaluation: Protectionist measures if implemented well, may not be a significant drain on government resources – for e.g. if doesn't rely heavily on subsidies, or subsidies are well-utilised.

- 3) Protectionism entails too much intervention by government, which deters FDI from flowing into the economy to bring about faster as well as sustained economic growth.
 - Evidence from Extract 6 (“*the increased role of state which comes with it stifles private enterprise and cause under-investment in human and physical capital*”)
 - Firms, in particular foreign MNCs, would prefer an environment where there is less government intervention, as a government which is too interventionist could suddenly implement policies which are less business-friendly and impose additional cost of the firms which results in less profits.
 - Lower FDI would mean fall in AD, and lack of access to latest foreign technology would prevent productive capacity from expanding as much as it should.

Anti- Thesis

- 1) Protectionism could help an economy develop its infant industries, as China had done with solar power and wind turbine industry (Extract 6)
 - o A country may want to develop industries which could be of a higher-value added nature – if produced domestically it would add significantly to GDP (and reduce import expenditure) – to do so it would want to have protectionist measures to prevent foreign firms from exporting its more price competitive (and better) products and preventing the growth of the domestic industry.
 - o A country could view certain industries as “strategic” as such an industry could be of rising importance globally (such as green energy sources)
 - o If successful, it could also dominate the global market, i.e. as China has apparently managed to do (Evaluation: It remains unclear whether China’s industries are still reliant on government support; or is competitive now and thereby presents a successful case of infant industry support)

L1 (1-3)	Answer is one-sided and/or contains little or no economic analysis and/or is not relevant to the case study, i.e. explains the case for and against protectionism based on arguments not explained in the extracts.
L2 (4-6)	Answer is puts forward arguments for and against protectionism. Some of the arguments are explicitly mentioned in the extracts, and contains economic analysis.
E1 (1-2)	For evaluative comments/judgement and/or synthesis, but is not sufficiently well-explained.
E2 (3-4)	

[Total 30 marks]

- 1 India is having bumper wheat harvests aided by government subsidies. Wheat is used by millers to produce flour, an important ingredient in many food items, such as bread, baked goods, pasta and noodles. At the same time, increasing affluence in the country has led to a growing middle class.

Using economic analysis, discuss the likely impact of these events on producers and consumers in India. [25]

Suggested Answer

Introduction

Subsidies to wheat farmers → lowers cost of production for wheat and subsequently flour and food items which uses wheat → rise in supply of these goods

Rising affluence → increase in demand for food and hence flour and wheat (derived demand)

Impact of above events on producers and consumers in India depends on relative extent of increase in demand and supply and elasticities of demand of various goods, wheat, flour and food items

Market for wheat

- Increase in supply

Government subsidies to farmers (producers of wheat) → lowers cost of production → more incentive to produce wheat → increase in supply of wheat → price of wheat falls, quantity of wheat increases

Demand for wheat inelastic – main input in the production of flour

Fall in price of wheat → Qd increase less than proportionately → Fall in TR for wheat farmers / TE for flour millers

- Increase in demand

Rise in demand for food → rise in demand for wheat → price of wheat and quantity of wheat increases

Supply of wheat inelastic – agricultural product, gestation period

Increase in quantity of wheat less than proportionate to the increase in price

- Overall impact depends on extent of increase in supply versus increase in demand and PED and PES

Possible scenario: increase in supply (bumper harvests) > increase in demand, with demand and supply being inelastic → fall in price might outweigh the effect of an increase in quantity → fall in TR for farmers

Market for intermediate good (e.g. flour)

- Increase in supply

Flour millers (using wheat as an important input in production process) → receives a lower price of wheat → cost of producing flour falls → supply of flour increases → fall in price of flour, increase in quantity of flour

Impact of TR of flour miller depends on PED

Demand for flour likely to be inelastic (Importance of flour as an ingredient in the production process of a number of food items) → fall in TR

- Increase in demand

Rise in demand for food → rise in demand for flour → price of flour and quantity of flour

increases

- Overall impact depends on extent of increase in supply versus increase in demand and PED and PES

Compare impact on relative price and quantity of flour to discuss outcome on TR

Market for food items

- Increase in supply

Flour is an important ingredient in the production of food items such as bread and baked goods → cost of production of such items likely to fall significantly → greater incentive for producers, e.g. bread manufacturers and bakeries, to increase supply → fall in price of bread and baked goods, quantity of bread and baked goods increases

Impact on TR of food manufacturers / TE of consumers depends on PED

Demand for food items that are basic necessities more inelastic → fall in TR/TE

Demand for food items that are luxury goods more elastic → rise in TR/TE

- Increase in demand

Rising affluence → increase in income → demand for normal goods e.g. food, increases both extent depends on YED (based on nature of good)

(i) Market for luxury goods (high end food products, e.g. pasta)

Demand for luxury goods (high-end food items) appeals to those in middle-income which has acquired finer tastes in food, $YED > 1$ → increase in demand more than proportionate to increase in income

Overall impact: might see greater increase in demand as compared to increase in supply → rise in price and quantity → rise in TR / TE

(ii) Market for basic necessities (e.g. bread)

Demand for basic necessities, $YED < 1$ → increase in demand less than proportionate to increase in income

Might see smaller increase in demand as compared to increase in supply → fall in price and increase in quantity results

Overall impact on TR/TE: depends on whether fall in price outweighs increase in quantity

(iii) Market for inferior goods (low-end food products)

Demand for inferior goods, $YED < 0$ → fall in demand as income rises

With fall in demand and increase in supply → fall in price and but direction of change in quantity depends on extent of fall in demand versus increase in supply

Overall impact on TR/TE: if fall in demand greater than increase in supply → fall in TR/TE

Marking Scheme

Level	Knowledge, Application, Analysis	Marks
L3	For an answer that uses appropriate economic analysis (with changes in demand and supply <u>and</u> application to elasticities) to support arguments about the likely impact of government subsidies and increasing affluence on <u>both</u> economic agents (producers and consumers)	16-21
L2	For an answer that gives a descriptive explanation of about the likely impact of government subsidies and growing affluence on both economic agents (producers and consumers) OR For an answer that uses economic analysis (with changes in demand and supply only) to support arguments about the likely impact of government subsidies and growing affluence on both economic agents (producers and consumers) OR For an answer that uses economic analysis to support arguments about the likely impact of government subsidies and growing affluence on one of the economic agents (producers or consumers) OR For an answer that uses economic analysis (but with either changes in demand or supply only) to support arguments about the likely impact of government subsidies and growing affluence on both economic agents (producers and consumers)	10-15
L1	For an answer that shows some basic but largely unexplained knowledge of likely impact of government subsidies and growing affluence on market(s)	1-9
Evaluation		
E2	For an answer that uses economic analysis to support evaluative comments about impact on both economic agents	3-4
E1	For an answer that gives unsupported evaluative comment(s) or supported evaluative on one of the economic agents (producers or consumers)	1-2

- 2 (a) Explain the factors affecting the price and output decisions of firms in monopolistic competition and oligopoly. [10]
- (b) Discuss the extent to which the behaviour of the firms in these market structures is dependent on the actions of other firms. [15]

Suggested Answer for part (a)

Introduction

The price and output decisions (Conduct) of the two market structures are affected by the characteristics (Structure) and/or Performance (Profits) of the two market structures.

Degree of Barriers to Entry, Mutual Interdependence and Short Run Equilibrium

Barriers to entry (BTE) - obstacles that protect a firm from potential competitors, e.g. high initial start-up capital or licenses granted by the government

Monopolistic Competition

Very weak BTE → large number of firms, each controlling an insignificant amount of market share

Actions of one firm are unlikely to affect its rivals to any great extent → when each firm makes its decisions it does not worry how its rivals will react

Firms act independently

Assume that all firms aim to profit maximise and produce at the output level where its MC (additional cost incurred for producing one more unit of output) equals its MR (additional revenue earned for selling one more unit of output) → short run equilibrium of the monopolistic competitive firm as seen in Figure 1(a) where $MR = MC_1$ → output Q_A and price P_A

Oligopoly

Substantial BTE → large number of firms, each controlling an insignificant amount of market share

Each firm's behaviour will affect their rivals significantly

Firms are mutually interdependent

Possible for firms to either compete or collude

A **competitive** oligopolistic firm faces a kinked demand curve as seen in Figure 1(b) due to the mutual interdependence

When an oligopolistic firm cuts its price, its rival will follow suit to prevent losing customers to it and if it raises price, however, its rivals will not follow suit since, by keeping their prices the same, they will gain its customers → oligopolists would prefer not to change price unless costs changes substantially

As long as cost changes within the gap as seen from MC_1 to MC_2 → oligopolist will keep its output at Q_1 and price at P_1

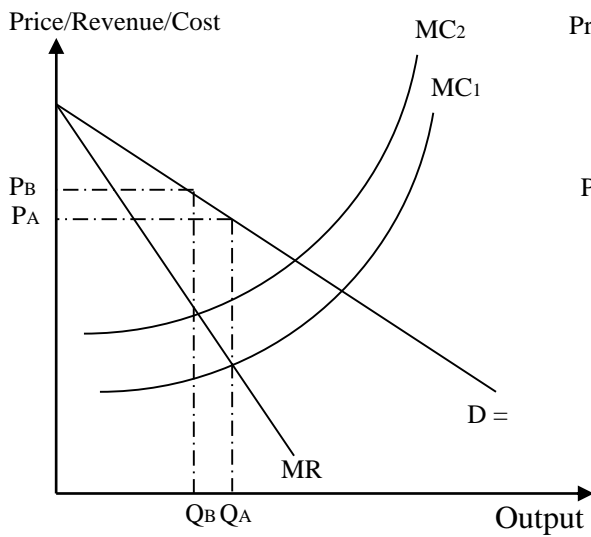


Figure 1(a)
Short run equilibrium of a monopolistic competitive firm

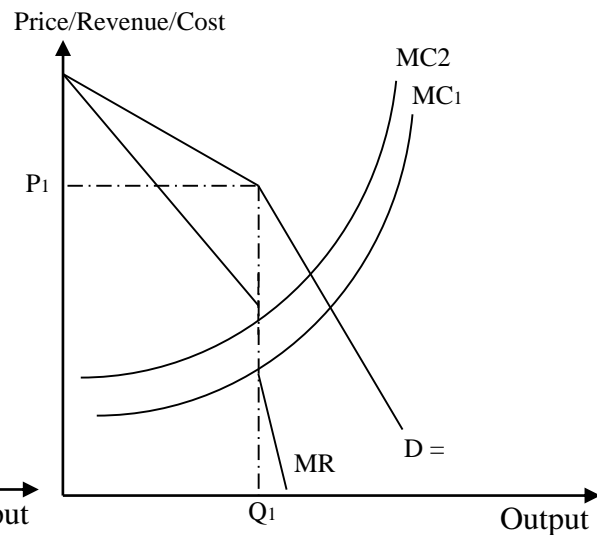


Figure 1(b)
Short run equilibrium of an oligopolistic firm

Degree of Barriers to Entry and Long Run Equilibrium

Degree of BTE linked to ability of firms to prevent the entry of new competitors in the long run → level of long run profit would be affected

Monopolistic Competition

Using Figure 2a:

Weak barriers to entry → firms can enter easily to compete away the supernormal profit → market share of the existing firm will be reduced represented by a fall in their demand and thus average revenue curve → until all the supernormal profits have been competed away, when demand for the firm falls from D1 to D2 with lower price at PE and quantity at QE and earning only normal profits where PE = AC

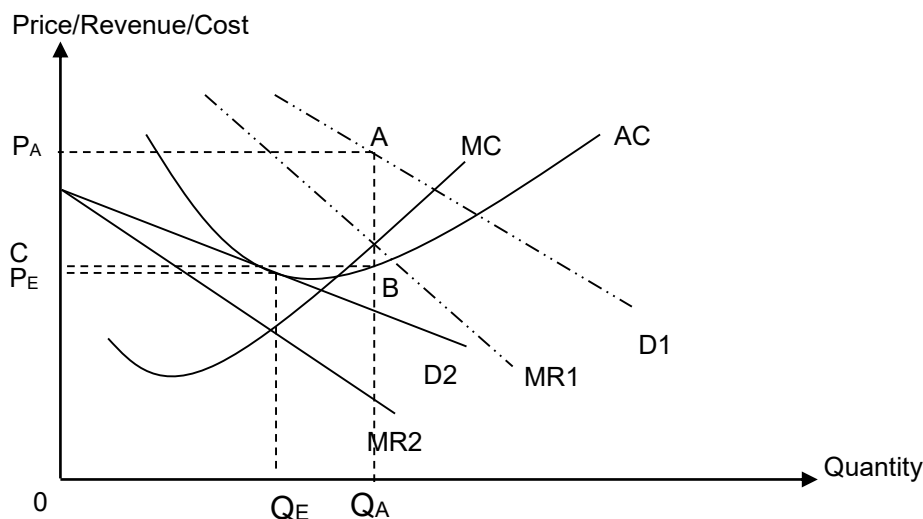


Figure 2a: MC firm earning only normal profits in the long run

Oligopoly

Using Figure 2b:

Strong barriers to entry → existing firm which earns supernormal profits in the short run may continue to earn high supernormal profits into the long run as potential competitors find it extremely difficult to enter the market → an oligopolistic firm retains its market share and produce Q_1 at price P_1 will continue to reap profits indicated by area P_1DEF

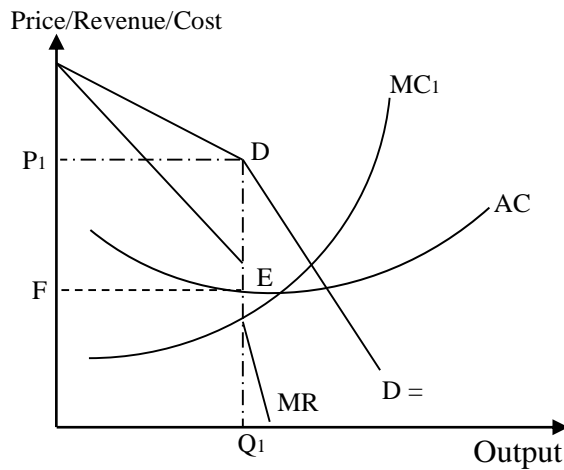


Figure 2(b) Long-run equilibrium of an oligopolistic firm

Note:

Also possible to look at the impact of collusion on price and output decisions of oligopolistic firms

Marking Scheme

Level	Knowledge, Application, Analysis	Marks
L3	For an answer that uses appropriate economic analysis to explain the factors affecting price <u>and</u> output decisions of firms in monopolistic competition <u>and</u> oligopoly.	7-10
L2	For an answer that gives a descriptive explanation of the factors affecting the price and output decisions of firms in monopolistic competition and oligopoly. OR For an answer that uses economic analysis to explain the factors affecting either price or output decisions of firms in monopolistic competition and oligopoly. OR For an answer that uses economic analysis to explain the factors affecting the price and output decisions of firms in either monopolistic competition or oligopoly.	5-6
L1	For an answer that shows some basic but largely unexplained knowledge of factor affecting price and/or output decisions of firms in monopolistic competition and/or oligopoly	1-4

Suggested Answer for part (b)

Introduction

Firms in oligopolistic market are likely to be more dependent on the actions of competitors as compared to the firms in monopolistic competition due to the characteristics of their firms in the two markets. In reality, there could be other factors that the firms take into account as well.

Firms in an oligopolistic market are more dependent on the actions of competitors

- Due to the presence of a few large dominant firms with each having significant market share and power
- Oligopolistic firms are easily affected by the actions of rival firms and thus would respond to competitors' actions
- Mutual interdependence → avoidance of price war as seen by the kinked demand curve → tends to focus on non-price strategies
- With the higher amount of supernormal profits earned, the oligopolistic firm has the availability of funds to spearhead research and development to create higher degree of product differentiation → resulting in a more price inelastic demand → it would be able to set price higher than its rivals
- In reality, the degree of mutual interdependence of oligopolistic firms largely depends on the degree of product differentiation
- Or mutual interdependency → tendency to collude if conditions are favourable

Firms in monopolistic competition are much less dependent on the actions of competitors

- MC firms could act more independently as competitors have insignificant market power and with differentiated products
- Using Figure 2a above, firm will make its pricing decision independently e.g. when its cost increases from MC1 to MC2, its corresponding equilibrium level of output and price will adjust accordingly to QB and PB

MC firms might be dependent on the actions of competitors due to:

(i) Lack of real product differentiation

- Similar range of products results in price elastic demand curve, leading to possible price wars

(ii) Proximity to rivals in the markets

- If firms are in close proximity, e.g. they are located in the same shopping mall or neighborhood → may follow the pricing and promotional strategies of each other

Other factors (besides actions of other firms) can also affect the behavior of firms in these market structures

- Government policies, e.g. pricing regulation
- Contestability of markets
- Economic conditions

Marking Scheme

Level	Knowledge, Application, Analysis	Marks
L3	For a <u>balanced</u> answer that uses appropriate economic analysis to discuss the extent to which the behaviour of the firms in monopolistic competition <u>and</u> oligopoly is dependent on the actions of other firms	9-11
L2	For an answer that gives a descriptive explanation of the extent to which the behaviour of the firms in monopolistic competition and oligopoly is dependent on the actions of other firms OR For an answer that uses economic analysis to discuss the extent to which the behaviour of the firms in monopolistic competition or oligopoly is dependent on the actions of other firms	6-8
L1	For an answer that shows some basic but largely unexplained knowledge of the behaviour of the firms in monopolistic competition and oligopoly and dependence on actions of other firms	1-5
Evaluation		
E2	For an answer that uses economic analysis to support evaluative comments about the extent to which the behaviour of the firms in monopolistic competition and oligopoly is dependent on the actions of other firms	3-4
E1	For an answer that gives unsupported evaluative comment(s) or supported evaluative on the extent to which the behaviour of the firms in monopolistic competition or oligopoly is dependent on the actions of other firms	1-2

3	(a)	Explain why merit goods and immobility of factors of production may lead to market failure.	[10]
	(b)	Evaluate policies that can be used by the Singapore government to correct these market failures.	[15]

Question Approach:

The first part of this question requires students to explain the inefficient allocation of resources in the market for merit goods as well as in the case of immobility of factors of production. Students are encouraged to clearly explain the causal links with suitable economic tool of analysis and whenever possible, support their explanations with examples.

Introduction:

- Define market failure
 - Refers to a situation where the free market (without government intervention) fails to allocate resources efficiently to produce goods and services which maximises the welfare of the society.

Body:

Define merit goods and explain how market fails in the market for merit goods

- Define Merit good
 - Merit good is a good which is deemed to be socially desirable by the society/government, and usually generates positive externality.
- Positive externalities in consumption are external benefits generated through the consumption process received by others in society who are not directly involved in the production or consumption of good/service.
 - In the case of education, consumption of education results in a more educated workforce that enhances the productivity of the labour force and support faster economic growth of a country.
- The free market fails to allocate resources efficiently in the market for merit goods such as education and healthcare vaccination, due to the positive externality generated in the consumption process as well as imperfect information.
- As a result, the marginal private benefit (MPB) such as knowledge and skills acquired from education which enhance their own employability is lower than the marginal social benefit (MSB) by the marginal external benefit (MEB). This is depicted in figure 1 where there is a divergent between the MSB and MPB curves at every quantity of education in the market.

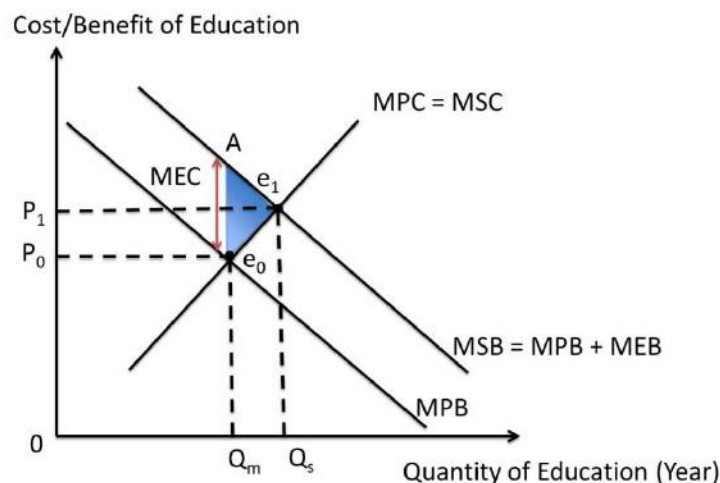


Figure 1: Positive Externality in Consumption

- Since there is no positive externality in production, marginal social cost is the same as marginal private cost, which is the supply curve. In the free market, self-interested consumers and producers only consider their private costs and benefits. So the free market equilibrium is at e_0 where MPC intersects with MPB ($DD = SS$). The socially optimal equilibrium (Q_s) is however at e_1 where MSC intersects with MS. This is where the benefit derived from the consumption of an additional quantity of education is equal to the additional cost incurred by the society. Since $Q_m < Q_s$ where MSB is greater than MSC, there is an under-consumption which results in deadweight loss to the society as indicated by the triangle Ae_0e_1 .
- In addition, consumers also under-value their private benefits from the consumption of merit goods due to imperfect information. Consumers may lack information about the costs and benefits relating to the consumption of a good.
- In the case of merit good such as education, they might have a lower perceived benefit about the consumption of education which leads to under-consumption.

Explain how immobility of factors of production leads to market failure

- Define Factor immobility
 - Factors of Production (FOP) such as labour and capital cannot move freely from one market to another.
- Briefly explain the implication
 - Immobility of FOP → Firms cannot respond to incentives to produce goods & services or disincentives to cut production → Resources are not optimally employed/utilised.
- For example,
 - In the case of **occupational immobility** of FOP, workers may not have the necessary skills or education qualifications required to be employed in certain industries → Mismatch of skills → idle labour resources are not able to switch between different industries even though there are vacancies.
 - As a result, the inefficient allocation of resources results in a sub-optimal social outcome.

Note: Students can also choose to explain the market failure with geographical immobility or other forms of immobility of FOP.

Conclusion:

In both cases, the market when left on its own, fails to allocate resources efficiently to achieve an optimum social outcome that maximises the welfare of the society. There is hence a need for government to intervene and correct the market failure.

Level	Knowledge, Application, Understanding and Analysis	Marks
L3	For a well-developed answer which clearly explains how both merit goods and immobility of factors of production causes market failure.	7 - 10
L2	For an undeveloped answer which attempts to explain how market failure arises in the market for merit good and from immobility of factors of production. If only merit good or immobility of FOP is well-explained – Max 6m	5 - 6
L1	For a largely descriptive and irrelevant answer about the causes of market failure for merit goods and from immobility of FOP. Answer may consist of conceptual errors.	1 - 4

Examiner Comments:

Students on the whole gave good answer which put most of them in the L2 range of marks. Generally, student's answer for merit good is much better than factor immobility.

For merit good, quite a number of responses showed that students are not exactly aware of the difference between the external benefits of a merit good and the imperfect information on the long terms benefits to oneself. Many answers confused the two and thought that consumers are not aware of the external benefits which are incorrect. The basic assumption of economic agent is that consumers are self-interested and hence they are not concerned with whether they know about the external benefits or not!

For factor immobility, most students are able to describe the types but not exactly explain how it leads to market failure. Simply saying that resources are not used productively does not justify market failure.

	(b) Evaluate policies that can be used by the Singapore government to correct these market failures.	[15]
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Question Approach:

The second part of the question is much broader and requires students to have good understanding of the causes of market failures in Singapore, specifically in the cases of merit goods and immobility of factors of production. Students are then required to critically examine the strength and limitations of the policies to address the market failures highlighted in the context of Singapore.

Introduction:

The market failures as highlighted in part (a) results in inefficient outcomes which fail to maximize society's welfare. There is hence a need for the government to intervene and correct for the market failure. Singapore government can use a mixture of policies to address the market failure in the market for merit goods as well as in the case of factor immobility. Government has relied on policy measures such as subsidies and skills upgrading schemes among others, to encourage the consumption and production of merit goods while improving the mobility of factors of production such as labour.

Body 1:

Explain how subsidies by government can correct for the market failure in the case of merit goods.

Following the market failure problem presented in (a), a per unit subsidy of the same size as the MEC can be given to consumers to increase their demand (MPB) for education. Primary education in Singapore is fully subsidised while secondary education and pre-university education are heavily subsidised. Students are only required to pay a nominal sum of money as miscellaneous fees. The Singapore government allocates about 20% to education spending in their budget every year because of the significant positive externality that the government deem as beneficial to the society.

The increase in their MPB shifts the MPB curve to coincide with the MSB as depicted in figure 2. As a result, the equilibrium quantity of education increases to the socially optimum quantity, eliminating the deadweight loss to the society and hence maximising the society's welfare.

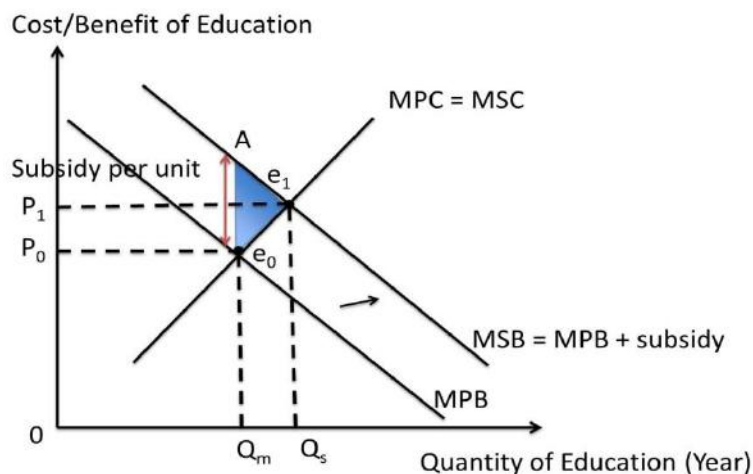


Figure 1: Positive Externality in Consumption

Evaluate on the use of subsidy

However, providing subsidies has its limitations.

To ensure that the market output is efficient, government needs to know the exact amount of subsidy to provide which is equivalent to the amount of marginal external cost. This requires information to calculate the marginal external benefit, yet the marginal benefit is difficult to measure. Government may end up over-subsidising which leads to over consumption of education and hence deadweight loss to the society. The market failure will hence not be corrected. Besides, government faces opportunity cost as more funds channelled to education implies that there will be less funds available for other sectors of the economy, like defence and healthcare.

Besides, market may still fail due to income inequity in the case of education.

Lower-income family may still not have the financial ability to cope with the rising cost of education. Government attempts to tackle this by giving additional financial aid to lower-income family financial aid under the Ministry of Education's Financial Assistance Scheme (FAS).

In addition, there is also a need to reduce the imperfect information on the part of the consumers. As mentioned, consumers may undervalue their marginal private benefits when it comes to the consumption of education which results in a lower equilibrium quantity of education consumed. For example, parents who undervalued the benefits of education may get their child to stay at home instead.

Body 2:Explain how legislation can correct for the market failure in the case of merit goods

In Singapore, Compulsory Education (CE) was introduced in 2003 to give children a common core knowledge which will provide a strong foundation for further education and training. A child who is a citizen and residing in Singapore, of compulsory school age (above 6 years and below 15 years) has to attend national primary school regularly. Where a child fails to do so, the parent/guardian of the child may face penalties such as fines and jail term.

This effectively increases the consumption of basic education which shifts the MPB closer to the MSB, reducing the deadweight loss to the society with reference to figure 1.

Body 3:Explain how skills upgrading schemes can correct for market failures arising from immobility of FOP

In the case for occupational immobility of labour, Government can provide subsidies and grants for employers and employees to acquire relevant industrial skills and knowledge so as to be able to be more employable across various industries.

- Education and Training schemes such as Skills Training for Excellence Programme (STEP) co-launched by Singapore Workforce Development Agency (WDA) targets the professionals, Managers, executives and technicians, and help ensure that their skills

and expertise remain relevant and that these categories of workers remain competitive and employable.

- Workfare scheme such as Workfare Training Scheme (WTS) provides course fee funding for employers to send their workers for training courses. It also awards firms for having continuous training and structured programme to upgrade the skills of workers, particularly the old and low wage workers who are most susceptible to losing their jobs and not having the ability to switch to other industries because of the mismatch in skills.

These can help improve labour mobility allowing companies in growing industries to easily recruit workers with the necessary skills whilst improving opportunities for workers to enter these industries. As a result, market frictions are reduced and firms can respond more efficiently to changing market conditions.

Labour resources are more efficiently employed reducing the deadweight loss to the society.

Evaluate on the strength and limitations of retraining workers.

However, other than the fact that retraining requires time and hence renders the measure as long term in nature, the success of the policy is uncertain. Even if workers successfully completed relevant training courses, it does not imply that workers have acquired the necessary skills to be competent in their new jobs.

The effectiveness of the policy does depend on whether workers are receptive to the training (attitude gap), as well as their ability to pick up new skills (aptitude gap), especially workers who are lacking in basic education and literacy. Employers may also be reluctant to hire workers beyond certain age (age gap) as there is a general perception that these workers may have lower productivity.

As a result, firms still face the problem of not being able hire workers with the required skills in order to cope with the changes in market conditions (for example, an increase in the demand for their goods and services, which requires the firm to step up their production and hence hire more factors of production like labour).

This underscores the importance of making sure courses are relevant to the industrial requirements. On this note, the Singapore Workforce Skills Qualifications (WSQ), a national credentialing system, was developed. It trains, develops, assesses and recognises individuals for the key competencies that companies look for in potential employees. WSQ is based on national standards developed by WDA in collaboration with various industries which serve to professionalise the industry.

Conclusion:

The above are not the only problems of market failure that Singapore government faces. But in general, the policies implemented by the Singapore government aims to help them achieve government's micro-objectives of efficiency and equity.

Especially in the case of small economy like Singapore, labour resources are all which she has and it is imperative to ensure that the resources are efficiently and fully utilised. Policies need to be for the long term development of Singapore's workforce.

Level	Knowledge, Application, Understanding and Analysis	Marks
L3	For a well-developed answer that examines the strengths and limitations of policies to correct for market failures arising from merit goods and immobility of factors of production. Answers are relevant and appropriate in the given context of Singapore. Developed answer without reference to SG context – Max 9m	9 - 11
L2	For an undeveloped answer which attempts to examine the strengths and limitations of possible measures to correct for market failures arising from merit goods and immobility of factors of production. Fails to consider limitations <u>or</u> strengths of policy – Max 8m	6 - 8
L1	For a largely descriptive and irrelevant answer about policies in general without addressing the question. Answer may consist of conceptual errors.	1 - 5
Max 4m given to Evaluation		
E2	Value judgements supported by economic reasoning.	3 - 4
E1	Value judgements unsupported by economic reasoning	1 - 2

Examiner Comment(s):

Students generally gave rehearsed answers and hence tend to explain the limitations better, however, the limitations were not evaluated against the cause of the market failure not the context of Singapore. Many simply explained that the wrong estimation of the subsidy may result in dead weight loss without arguing on the extent in which it affect the effectiveness and appropriateness of the policies.

Policies were simply described and in cases where students are able to relate to market failure concepts and diagrams such as how indirect subsidies may affect MPC and increase consumption, consequently scored higher marks.

Evaluation was scarce as students simply gave limitations. Limitations of policies alone especially rehearsed ones does not gain any evaluation marks.

- 4 (a) Explain why high unemployment and high inflation are concerns to governments. [10]

Introduction

Definition:

Unemployment rate defined as fraction of total labour force that is unemployed, labour force includes people who are working and people who are not working (unemployed) and are actively looking for work. Forms of unemployment includes cyclical and structural unemployment, and high unemployment rate can differ for different countries, for developed countries like Singapore, usually 5-6% or higher is considered as high unemployment.

Inflation is defined as a sustained, inordinate increase in general price level of goods and services over a period of time. Inflation does not refer to price levels but to percentage changes. Causes of inflation can be demand-pull or cost-pull. While governments in general targets 2-3% per annum, 5% and above is considered high inflation.

Body:

High unemployment is a concern to the government as it has negative impact on the economy.

1. Output loss to the economy: unemployed could have produced something of value for society but they cannot → society deprived from higher output and SOL.
2. Revenue loss to the government: unemployed do not earn income → pay no income tax, unemployed spend less on goods and services → less sales tax collected. Government has lesser funds for alternative uses.
3. Social cost: high unemployment rate usually leads to higher incidence of theft, robbery, alcoholism, depression and suicides → social and political instability → deter investments → further affect employment negatively.

High inflation is a concern to the government as it has negative impact on the economy.

1. Lower purchasing power: as general price level rises → fall in internal value of money → same amount of money can buy less goods and services → lower SOL.
2. Cost push inflation → higher cost of production for firms → firms cut down production and some might even shutdown → fall in investment → dampen economic growth. With higher cost, firms also pass on higher cost to consumers as higher prices affecting purchasing power and SOL.
3. Harms export competitiveness if inflation relatively higher than other countries. Assume $PED_x > 1$ → X falls → worsens BOP.

Conclusion: With these undesirable consequences of high unemployment and high inflation, governments will be concerned about these problems.

Knowledge, Application, Understanding and Analysis		
L3	<p>Comprehension:</p> <ul style="list-style-type: none"> For a well-developed answer that explains why high unemployment and high inflation are concerns to governments <p>Application:</p> <ul style="list-style-type: none"> Explain high unemployment and high inflation as concerns of the governments in detail using real life examples. <p>Analysis</p> <ul style="list-style-type: none"> Able to explain in depth using step-by-step economic concepts. 	7 – 10
L2	<p>Comprehension:</p> <ul style="list-style-type: none"> For an undeveloped answer that explains why high unemployment and high inflation are concerns to governments. <p>Application:</p> <ul style="list-style-type: none"> Explanation of concerns with little or no real world example. <p>Max L6 if candidate only explain on either high unemployment OR high inflation.</p>	5 – 6
L1	<p>Comprehension:</p> <ul style="list-style-type: none"> For an answer which is largely irrelevant or contains inaccurate content. 	1 – 4

- (b) Discuss the extent in which increase in labour productivity can help to address these problems. [15]

Introduction:

Labour productivity refers to real output per worker. Labour productivity improves when real output per worker per worker is increasing, where quality of workers improves through retraining and skills upgrading. Labour productivity also improves when firms harness better capital machineries or more advanced technology which enhances productivity of labour. The extent to which increase in labour productivity can help to address the problems of high unemployment and high inflation depends on effectiveness of labour productivity growth and the root cause of the problems.

Thesis:

Increase in labour productivity growth through either:

1. Retraining & skills upgrading: Workers pick up relevant and up-to-date knowledge to perform their work
2. R&D on better capital machineries & advanced technology: Workers using these improved machineries and technology becomes more productive in their work

More productive workforce → economy able to produce more goods and services with the same amount of labour → LRAS increase → increase in potential growth

Able to resolve:

1. Demand pull inflation: as increase in LRAS frees up limited resources in a near full employment economy, given that firms only require lesser input to maintain the same level of output when labour productivity improves.
2. Structural unemployment: as workers become unemployed due to lack of skills, retraining helps these workers to pick up relevant skills that are in demand in the society, thus gain opportunity to be reemployed.
3. Cyclical unemployment: as productivity increases, assume wages unchanged, unit COP falls, SRAS increases, firms hire more labour given that unit COP is lower. (Can be represented by increase SRAS, movement along AD.)

Anti-thesis:

However, the extent to which it can address these problems depends on the:

1. Effectiveness of the attempts to increase labour productivity: Workers may be resistant to pick up new skills, usually the middle-aged and older workers, although it is likely that they will go for the courses if these courses would help them out of their unemployed status. More concerned on the ability of them to pick up the skills through the training where the speed of

picking up knowledge can be associated to the age of the workers. Structural unemployment thus may not be entirely resolved.

2. Time to take effect: Retraining takes time, as workers need to attend courses for months or even years to gain knowledge as it does not take place immediately. R&D also takes time as results are usually not seen in the short term, furthermore, results are not guaranteed and given that huge funds are invested into it, could potentially be a loss if R&D fails. These limit the increase in LRAS, which may not help to lower down demand-pull inflation significantly.
3. Root cause of the problems:
 - a) If high inflation is more due to cost-push inflation such as rising prices on raw materials and semi-finished products, eg Singapore experiences imported cost-push inflation when there are increase in overseas prices, even when increase in labour productivity can lower per unit cost of production, it is not targeting at the root cause of inflation and thus only mitigating inflation slightly. Appreciation of exchange can better address such problem.
 - b) If unemployment is more due to cyclical reasons, where labours are unemployed due to low demand for goods and services such that there is low demand for labour, improving labour productivity alone will not address the problem, more needs to be done to stimulate AD growth, such as expansionary fiscal policy.

Conclusion:

While increase in labour productivity can help to address the problems of high unemployment and high inflation, it usually takes long time in order for the increase in labour productivity to be realised. Also, as it also depends on the root causes of these problems, demand management policies such as fiscal policy and exchange rate policy should also be used depending on the causes of the problem.

Knowledge, Understanding, Application and Analysis		
L3	<p>Comprehension:</p> <ul style="list-style-type: none"> For a well-balanced answer that discuss the extent in which increase in labour productivity can help to address problems of high unemployment and high inflation <p>Application:</p> <ul style="list-style-type: none"> Explain the effects of the attempts/policies by the government to increase labour productivity with real life examples. <p>Analysis:</p> <p>Able to analyse:</p> <ul style="list-style-type: none"> The extent of shift in LRAS to lower inflation, SR vs LR. The different causes of high unemployment and high inflation in which increase in labour productivity can address 	9-11
L2	<p>Comprehension:</p> <ul style="list-style-type: none"> For an under-developed answer that discuss the extent in which increase in labour productivity can help to address problems of high unemployment and high inflation <p>Application:</p> <ul style="list-style-type: none"> Explain the effects of the attempts/policies by the government to increase labour productivity with some limited examples. <p>Max L2 for answers that either:</p> <ol style="list-style-type: none"> Only discussion to address on either high unemployment OR high inflation One sided answer that either explain how increase in labour productivity works OR its limitations 	6-8
L1	A largely irrelevant answer or purely descriptive answer on how increase in labour productivity can help to address problems of high unemployment and high inflation.	1-5
E2	Judgment based on analysis given	3-4
E1	Unexplained judgment.	1-2

- 5 The achievement of macroeconomic objectives by an economy is dependent on other economies. Discuss. [25]

Introduction:

4 main macroeconomic objectives:

- 1) high and sustainable economic growth
- 2) low and stable inflation
- 3) low unemployment
- 4) healthy balance of payment

Brief explanation on benefits in achieving the 4 main macroeconomic objectives:

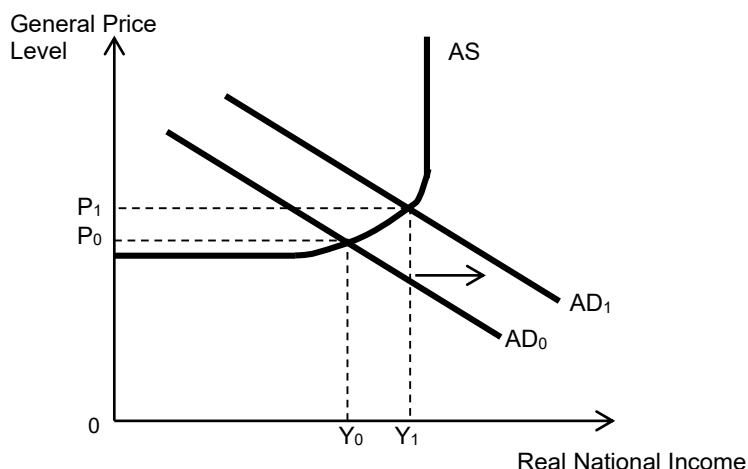
- 1) high and sustainable economic growth – higher national income → higher average income → improve material SOL
- 2) low and stable inflation – internal value of money is protected, firms are more willing to invest with more stability in cost
- 3) low unemployment → minimal wastage of resources, less need for government to provide unemployment benefits
- 4) healthy balance of payment → no excessive deficit that requires financing, surplus can be used to pay off debt or accumulate in reserve.

Thesis: The achievement of macroeconomic objectives by an economy is dependent on other economies

For small and open economies such as Singapore, whose export sector is the main driver for actual economic growth and relying on imports due to lack of natural resources, suggests that achievement of her macroeconomic objectives is more dependent on other economies. Changes to economic conditions in trading partners, supply disruptions to primary commodities are likely to have an adverse effect on the country's economic growth, inflation, employment and balance of payments position.

For example, with global economy recovers after the global economic crisis in 2009, countries generally enjoy improve in economy growth and gaining higher purchasing power for purchase of imports and Singapore registered double digit growth in real GDP in 2010.. As Singapore's exports consist of mainly normal goods such as electronics and pharmaceutical products, demand for exports increases, (assuming constant import expenditure) resulting in higher net export revenue, causing AD to increase to AD₁ as shown in Figure 1, leading to higher economic growth and improvement in BOP. Since demand for labour is a derived demand for goods and services, the increase in exports will lead to lower cyclical unemployment in the export industries in Singapore.

Figure 1: Increase in AD due to rise in net exports



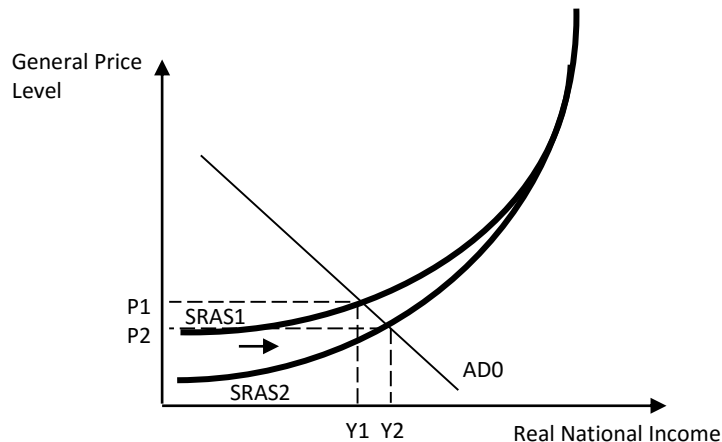
At the same time, as Singapore is a small country with about 5.5 million people and is a very small domestic market compared to those of our trading partners. Hence domestic consumption and domestic investment is not a significant contributor towards the aggregate demand in Singapore.

Due to Singapore's reliance on international export market and small domestic market, Singapore is more dependent on other economies whom Singapore trade with, which contribute more towards Singapore's achievement of her macroeconomic objectives.

Furthermore, Singapore is a small country without any natural resources and hence we have to import all key raw materials such as oil and metals. Given this backdrop, Singapore's economic performance in terms of price stability is more dependent on other economies as price of imported raw materials are likely to impact our inflation significantly. For example, if the price of oil falls globally, this lowers the cost of energy faced by firms resulting in lower cost of production, firms in the economy thus increase production, causing the short run aggregate supply to rise from SRAS1 to SRAS2. This causes the price level to fall to P2 and real national income to increase to Y2.

As Singapore's exports are largely made from imports. A fall in import price will lead to lower cost of production. Singapore firms will be able to sell her exports at more competitive prices, which likely result in increase in export revenue given that demand for Singapore's export is likely to be price elastic due to availability of substitutes, leading to improvement in BOP and higher economic growth.

Figure 2: Increase in SRAS due fall in cost of production



Anti-thesis: The achievement of macroeconomic objectives by an economy is not very dependent on other economies, but more on domestic factors.

In large and less open economies such as US is more dependent on her domestic market for the achievement of macroeconomic objectives than other economies. In US, consumption accounts for about 70% of its national income and thus plays an important role in affecting AD and actual growth in the US. For example, as US recover from the economic crisis in 2009, her people generally earns higher income and higher purchasing power, thus able to purchase more goods and services, driving an increase in domestic consumption for US. The rise in domestic consumption indicates strong demand for goods and services will also increase business confidence, leading to higher investment. These two factors led to an increase in AD and hence allowing the US government to achieve her macroeconomic aim of economic growth. The rise in AD will cause a multiplied decrease in real national income, lowers cyclical unemployment. In the long run, the increase in investment may also further increase potential growth where LRAS increases, allowing

sustained economic growth.

In terms of achieving healthy BOP, it can be dependent on domestic factors too. For example, if there is lower labour cost for per unit of output in the country due to increased productivity, leading to lower unit cost of production, resulting in lower price of exports which improves price competitiveness of exports. Assuming demand for exports is price elastic, this will increase export revenue. Concurrently, consumers may switch to domestically produced goods due to the lower prices and demand less of import. The decrease in demand for imports leads to lower import expenditure. Overall, this improves trade balance and current account in BOP. In this case, it illustrates that the achievement of improving BOP towards a healthier state is achieved due to domestic factors rather than depending on other economies.

Conclusion:

In conclusion, achievement of macroeconomic objectives can be either dependent on other economies or on own domestic factors, depending on the nature of the economy. Also, in the real world, there is no one country that completely depends on other economies or purely depends on own domestic factors for achieving her macroeconomic objectives. There tends to be a blend, such that some countries depend more on other economies while other depends more on their own domestic factors to achieve the macroeconomic objectives. With a more globalised world, there are likely to have more and more economies beginning to be more reliant on other economies for achieving their macroeconomic objectives.

Knowledge, Application, Understanding and Analysis		
L3	<p>Comprehension:</p> <ul style="list-style-type: none"> For a well-balanced answer that discussed on the achievement of macroeconomic objectives is dependent on other economies or own domestic factors. <p>Application:</p> <ul style="list-style-type: none"> Explain the achievement of macroeconomic objectives is dependent on other economies or own domestic factors with reference to economies with different nature. <p>Analysis:</p> <ul style="list-style-type: none"> Able to analyse: <ol style="list-style-type: none"> AD/AS shifts in achieving the various macroeconomic objectives Changes in components of BOP (eg trade) in achieving healthy BOP 	15 – 21
L2	<p>Comprehension:</p> <ul style="list-style-type: none"> For an undeveloped answer that discussed on the achievement of macroeconomic objectives is dependent on other economies or own domestic factors. <p>Application:</p> <ul style="list-style-type: none"> Explain the achievement of macroeconomic objectives is dependent on other economies or own domestic factors with limited reference to economies with different nature. <p>Capped at 10 for one sided answers that either explain on the dependence on other economies OR domestic factors.</p>	10 – 14
L1	<p>Comprehension:</p> <ul style="list-style-type: none"> For an answer which is largely irrelevant or contains inaccurate content. For answer which is largely descriptive. 	1 – 9
Evaluation & Judgement		
E2	<ul style="list-style-type: none"> For a judgement that is based on economic analysis 	3 – 4
E1	<ul style="list-style-type: none"> For a judgement made without evaluation or economic analysis. 	1 – 2

H2 Essay Q6

a) Explain how an economy is affected by globalisation.

[10]

Suggested answer

Introduction: Define globalisation as characterised by greater movement of goods, capital and labour.

Body:

Positive impact of globalization	Negative impact of globalization
<p><u>Improve BOP</u></p> <ul style="list-style-type: none"> Increased trade flows (both exports and imports) → assuming that the increase in export revenue outweighs the increase in import expenditure, (X- M) increases → improve BOT and BOP, ceteris paribus. (e.g. countries such as China and Singapore which have depended on trade for growth have maintained many years of BOP surplus) There is greater inflows of FDIs → improves the capital financial account and hence BOP. Building up of BOP surplus → accumulates foreign reserves → strengthen the economy 	<p><u>Worsen BOP</u></p> <ul style="list-style-type: none"> Loss of CA to foreign countries → exports lose price competitiveness → fall in (net) exports → worsen BOT and BOP, ceteris paribus (e.g. countries like the United States has lost its CA in production of labor-intensive goods to China and hence experienced many years of trade deficit) FDIs may fall with increased outsourcing of low to mid value-added manufacturing activities to emerging low-cost countries → worsen capital financial account and hence BOP
<p><u>Economic growth & Lower Unemployment</u></p> <ul style="list-style-type: none"> Increased net exports & FDI → AD increases → RNY increase → actual economic growth Transfer of more advanced technology, knowledge and skills from FDIs + inflow of high-skilled and low-skilled foreign labour → enhance productive capacity → increase LRAS → potential economic growth Greater production of goods and services → firms increase demand for factors of production i.e. labour → reduces cyclical unemployment 	<p><u>Fall in economic growth</u></p> <ul style="list-style-type: none"> Susceptible to external economic conditions → e.g. major trading partners experience economic recession → reduce external demand for (net) exports → fall in AD and RNY Loss of CA to foreign countries → exports lose price competitiveness → fall in (net) exports → fall in AD and RNY (and increase cyclical unemployment) Outflow of local talents (brain drain) → slow down potential growth <p><u>Rising domestic unemployment</u></p> <ul style="list-style-type: none"> Greater foreign competition (e.g. may suffer from dumping from foreign producers) → domestic inefficient/uncompetitive producers that cannot match the competition in terms of price or quality will be forced to shut down → rising unemployment Workers who are displaced in sunset industries may not have the necessary skillsets to shift to growing sunrise industries → structural unemployment

<u>Lower general price level</u>	<u>Higher general price level</u>
<ul style="list-style-type: none"> Free-trade → Cheaper imported raw materials and intermediate goods → reduces unit cost of production → increases SRAS → lower GPL Transfer of more advanced technology, knowledge and skills from FDIs + inflow of high-skilled and low-skilled foreign labour → enhance productive capacity → increase LRAS → reduces GPL in the long run. 	<ul style="list-style-type: none"> Global supply shocks → increase in prices of imported primary commodities → increase in unit COP → fall in SRAS → imported cost-push inflation Rapid increase in trade flows may boost AD beyond the productive capacity of the economy. If AD persistently increases more than AS, demand-pull inflation may occur in the SR

Conclusion: Countries may benefit and suffer from globalization. Some countries may benefit more than others. It is important for countries to adopt appropriate policies to maximize the benefits and minimize the costs of globalization.

Mark scheme

Level	Knowledge, Application, Understanding and Analysis	Marks
L3	For a well-developed analysis of BOTH positive and negative effects of globalization on economies, with the use of relevant real-world examples.	7-10
L2	<ul style="list-style-type: none"> For an underdeveloped analysis of both positive and negative effects of globalization on economies. For an analysis of EITHER positive OR negative effects of globalization on economies. 	5-6
L1	For a superficial analysis of the effects of globalization on economies with largely a smattering/listing of points.	1-4

- b) Assess whether protectionism is the best approach to minimise the adverse impact of globalisation. [15]

Suggested outline

Thesis: Explain how protectionism minimize (some) of the negative impacts of globalization

- Illustrate with the use of diagram how the use of import tariffs and/or quotas can be used to correct trade deficit/ achieve higher EG/ lower (cyclical) unemployment
 - Increase price of imports → reduce Q_{dd} of imports → assuming PED_m > 1 → import expenditure falls → increase net exports ceteris paribus → improve current account + increase AD and hence RNY + reduce cyclical unemployment
 - As consumers switch from imports to buy domestically-produced goods → increase domestic production and hence employment

Anti-thesis 1: Explain the limitations of protectionism

- Retaliation by trading partners might lead to a fall in export revenue of host country
- Not solving the root cause of the problem such as loss of CA and inefficiencies. Hence, inefficient firms have no incentive to restructure to improve the competitiveness of their products.

- Unable to resolve the outflow of FDI due to loss of CA as protectionist measures mainly target imports to protect domestic industries, rather than preventing the outflow of capital. Instead, protectionism will inevitably lead to inefficiencies and higher costs of production, which discourage FDI → fall in the inflow of capital/ increase in capital outflow will worsen capital account, making efforts to correct BOP deficit counterproductive.

Anti-thesis 2: Explain (any 2) of the other approaches and their limitations – depending on the negative impact of globalization that students choose to address

- 1) Fiscal Policy
- 2) Monetary policy
- 3) Supply-side policies

Conclusion:

Students are required to compare across policies to decide which policy is the best to tackle the specific problem identified

E.g. While the use of protectionist measures is effective in correcting BOT deficit/ increase domestic employment/ increase real national output in the short run, they are unable to solve the issue of the loss of CA. The use of such measures could be counterproductive in the long run as it impedes efficiencies. In this case, the use of appropriate supply-side would be a better solution albeit more time is needed for these measures to make a positive impact on the economy.

Mark scheme

Level	Knowledge, Application, Understanding and Analysis	Marks
L3	<ul style="list-style-type: none"> • Well-developed explanation of how protectionism and at least 2 other policies minimize the costs of globalisation as well as their limitations with the use of relevant real-world examples. • Max 9m for well-developed and balanced analysis of 2 policies inclusive of protectionism. 	9-11
L2	<ul style="list-style-type: none"> • Undeveloped explanation of how protectionism and other policies minimize the costs of globalisation as well as their limitations • One-sided explanation of policies (either effectiveness or limitations are discussed) • Max 6m for well-developed and balanced analysis of protectionism only 	6-8
L1	An answer that is largely irrelevant/ has conceptual errors/ mere smattering of points	1-5
Evaluation		
E2	Explained judgment well-supported by economic reasoning	3-4
E1	Unexplained judgment	1-2



**Jurong Junior College
2015 JC2 Preliminary Examination**

ECONOMICS

Higher 1

8819/01

31 August 2015

3 hours

READ THESE INSTRUCTIONS FIRST

Write your name and class on all the work you hand in.
Write in dark blue or black pen on both sides of the paper.
You may use a soft pencil for any diagrams, graphs or rough working.
Do not use staples, paper clips, highlighters, glue or correction fluid.

Section A

Answer **all** questions.

Section B

Answer **one** question.

Start each question on a new piece of paper.

Fill in the necessary information on the cover sheet.

At the end of the examination, fasten all your work securely with the **cover sheet at the top.**

The number of marks is given in brackets [] at the end of each question or part question.

Section A

Answer **all** questions in this section.

Question 1

Steel Production and Protectionism

Extract 1: Steel production in China is closely watched

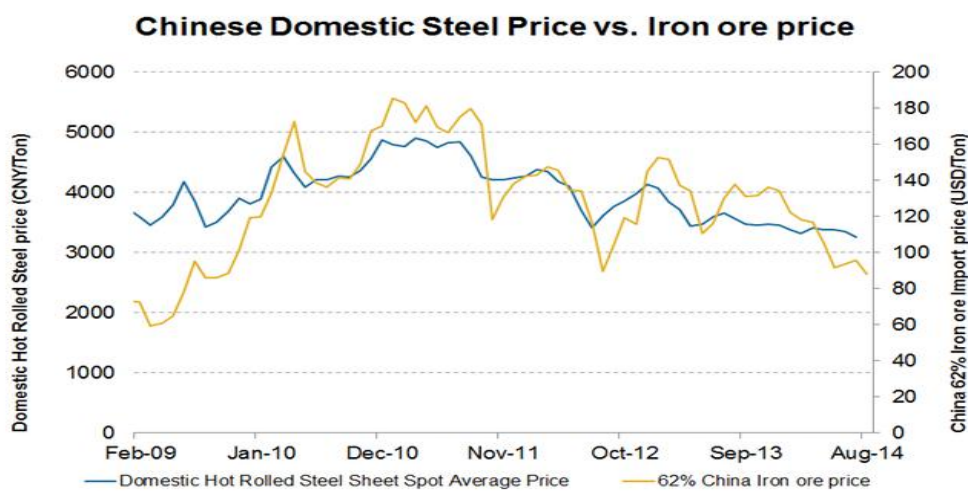
Chinese prices and production of steel are the most closely watched – the country forges almost as much steel as the rest of the world combined – and record-setting production in 2013 made up for persistent softness in the rest of the world, particularly Europe.

However, Chinese steel production growth is likely to slow in 2014 as authorities enforce stricter environment controls in production to clamp down on pollution in the industry and address overcapacity by banning new steel plants, tightening credit and withdrawing stimulus.

Chinese steel mills have been in oversupply since 2004 and efforts by the new leadership to steer the country to a consumption-based economy and away from infrastructure development led growth will also dampen growth of steel production.

Source: www.mining.com, 22 January 2014

Figure 1: Steel and Iron Ore Prices



Source: Antaike Information Development Company, The Steel Index

Extract 2: Government expenditure on infrastructure in China

China has been experiencing rapid economic growth over the past two decades. A significant proportion of this growth since the early 1990s has been due to the government increasing its spending on improving the quality of infrastructure.

The rapid development of infrastructure in China over the past few decades is reflected in the improvement in a range of social and economic indicators. Infrastructure can be classified in various ways, but a standard grouping is: municipal infrastructure, utilities, transportation and social infrastructure.

Municipal infrastructure includes water conservation, waste management and urban road maintenance. Over the past decade, this has comprised the largest share of infrastructure spending, accounting for almost 30 per cent of the total.

Utilities have been the second largest component of infrastructure spending over the past decade, comprising around one-quarter of infrastructure spending. This infrastructure is a vital input to industrial production, which requires a reliable energy supply. During the past decade, this spending on utilities infrastructure has resulted in more than 99 per cent of the population now having access to electricity. Access to reliable water sources has also reached 98 per cent of the population in urban areas.

Transportation infrastructure has comprised roughly a quarter of total infrastructure spending. This has seen China's highways and rail networks expand rapidly since 1990.

Social infrastructure has accounted for about 12 per cent of infrastructure spending and it includes cultural infrastructure as well as healthcare and education facilities.

In addition to being employed to advance the longer-term development of the Chinese economy, government expenditure on infrastructure has also been used as a countercyclical policy tool to stimulate economic activity. This was most evident during 2008–2009 in response to the global financial crisis.

However such expenditure on infrastructure is not without its risks. Some of these include the potential for misallocation of resources through inefficient spending. Over-spending on public infrastructure also contributes to the crowding out of private investment and results in excess capacity in some areas.

Infrastructure development in China has proceeded rapidly over the past few decades, contributing significantly to economic growth and improving standards of living. While its scale being undertaken in China today is not without its risks and has contributed to the fiscal deficit, these may be mitigated to some extent by reforms proposed by authorities which include greater participation by the private sector.

Source: Adapted from *Reserve Bank of Australia Report*, 14 June 2014

Extract 3: New tariffs will hurt US manufacturers

Remember when trade policy looked like a potential bright spot on the Obama Administration's economic record? Now with Trans-Pacific and Trans-Atlantic trade talks missing deadline after deadline, Washington is slapping new tariffs on steel imports. This election-year gift to US steel giants and their unions will raise prices for other US firms, handicap domestic energy production and alienate trading partners world-wide.

This week, the Commerce Department imposed duties on millions of dollars in annual trade with South Korea and eight other countries. As punishment for allegedly dumping steel into the US market at unfair low prices, South Korea's exporters will face tariffs of about 10% to 16%, while smaller players from other countries face rates up to 118%.

The US International Trade Commission said in a preliminary review that the commission already found a "reasonable indication" that US steel firms are being "injured" by foreign competitors' low prices.

Hence protectionism is called for as an antidumping enforcement. Low-priced steel from South Korea is good for American buyers but annoying for American producers like Nucor and US Steel that would rather have the market to themselves and charge higher prices. By filing

antidumping complaints, these firms lobby Washington to punish foreign businesses for the crime of charging low prices to American consumers.

US Steel CEO Mario Longhi and Steelworkers union chief Leo Gerard complain that steel imports rose 113% between 2010 and 2012, with South Korean products accounting for half the increase. They blame dumping, but low prices also aren't a surprise given the world-wide glut caused by slowing growth in China and excess mill investment in China and US.

When Washington imposes tariffs, it raises prices on the many to benefit the protected few. The injured in this case will include workers, shareholders and customers of US companies that use steel. US firms will have greater incentive to expand overseas, where the tariffs do not apply.

The US move will also encourage other countries to raise trade barriers against American goods. A reputation for beggar-thy-neighbour tactics does not help Mr Obama's goal of growing US exports. Instead protectionism would only result in a significant net loss of economic benefits to US.

Source: *The Wall Street Journal*, 16 July 2014

Questions

- (a) Compare the patterns of price changes for Chinese domestic steel prices and iron ore prices from January 2010 to August 2014. [2]
- (b) With the help of a demand and supply diagram, explain how the enforcement of stricter environmental control in steel production and the government's effort to steer away from infrastructure development affect the market for steel in China. [6]
- (c) Explain the difference in value of the price elasticity of supply of a manufactured good such as cars with that of a primary product such as iron ore. [3]
- (d) Discuss whether the expenditure on infrastructure by the Chinese government helps to improve the standard of living of the people. [8]
- (e) Using a production possibility curve, explain the opportunity cost incurred when more resources are allocated to the production of steel in a country. [3]
- (f) Assess whether you support the view that 'US's imposition of tariffs on steel imports would create a significant net loss of economic benefits to the US economy' (Extract 3). [8]

[Total 30]

Question 2

US and UK Economy

Extract 4: An economic check-up

The US economy is at a critical juncture. The Federal Reserve's very easy monetary policy during the past few years has been the root of both good and ill: reduced unemployment on the one hand and increased financial risks on the other. The danger now is that the inevitable rise in interest rates over the next few years could in turn weaken the economy and lead to another economic downturn.

With the overall unemployment rate down to 5.4% and the rate among college graduates at only 2.7%, there is little or no slack left in labour markets. As a result, labour costs are now rising at a faster rate. Rising labour costs usually lead to a higher rate of price inflation. This time inflation has temporarily been kept in check by the decline over the past year in the prices of gasoline and other forms of energy and by the rising dollar's impact on the cost of imported goods.

Although there have recently been some mixed signals about the strength of demand, the economy will remain on a solid growth path for the coming year unless it is upset by events in the financial markets. Real GDP grew at more than 4% in the second half of 2013, driven by the rise of household wealth. Bad weather weakened the economy in the first quarter of 2014, but after that consumer spending and business investment together continued to rise at an annual rate of more than 4%.

Source: *Martin Feldstein, www.time.com, 28 May 2015*

Extract 5: Strong US dollar pressures exporters

The sharp rise in the value of the US dollar is hitting American exporters and forcing layoffs at makers of everything from steel to machinery, taking the shine off stronger job creation across the broader economy.

Exports make up about an eighth of America's economic output and helped power the initial economic recovery from the 2007-2009 recession. But exporters' job losses do raise some concerns about economic growth as the Federal Reserve moves closer to its first interest rate rise since 2006. Among the top exporters, primary metals producers, which include steel making, have shed 1,800 jobs this year, US Labour Department data showed.

One risk for the US economy is that the dollar might be dragging on growth more strongly than policymakers anticipate. Economic growth stalled in the first quarter partly because of plunging exports and surging imports.

Source: *Jason Lange, www.reuters.com, 8 May 2015*

Extract 6: US trade deficit jumps to 6-year high of US\$51.4 billion

The US trade deficit in March jumped to the highest level in more than six years as a small increase in exports was swamped by a flood of imports from cars to cellphones. The deficit rose to US\$51.4 billion, the largest trade gap since October 2008 and more than 43 percent higher than the February imbalance, the Commerce Department reported Tuesday.

Exports have been hurt by an increase in the value of the dollar against other major currencies over the past year. At the same time, US consumers with more jobs and higher pay may be ramping up demand for foreign-made goods, further exacerbating the trade gap.

For the first three months of this year, the trade deficit was 5.2 percent higher than the same period a year ago. A larger trade deficit acts as a drag on growth because it means more US producers are losing sales to foreign competitors. For March, the deficit with China surged 38.7 percent to US\$31.2 billion. The US trade deficit with China is the largest for any country and is on track to set another record this year.

Manufactured goods make up the bulk of US's exports and the competition is especially strong. The manufacturing sector faces significant challenges from the effects of falling export demand and rapidly changing technology. The US Department of Commerce's Manufacturing Council has been working to recommend ways for the US government to help US manufacturers alleviate the lack of export competitiveness. For the export industry, the question is how best to maintain the quality of exports in an increasingly competitive global economy. The competitive pressure on US manufacturers has forced them to cut costs, adopt lean manufacturing techniques and implement quality control programs that guarantee zero defects in production. Innovation in products, processes and services will be a key determinant for success.

With barriers to trade falling rapidly over the past decade, President Barack Obama has been pushing the benefits of free trade in an effort to convince Congress that it can help ease the trade deficit. To do so, he needs to complete a trade agreement with 11 other nations, an agreement known as the Trans-Pacific Partnership.

Source: www.dailymail.co.uk, 5 May 2015

Extract 7: Widening UK trade deficit highlights challenge for government

Britain's trade deficit widened in the first three months of 2015, highlighting one of the biggest challenges facing the government over the next five years. The deterioration was driven by weaker exports to the EU, as oil exports to countries such as the Netherlands fell.

"The strong pound is hitting demand for UK goods in overseas markets," said Chris Williamson, chief economist at Markit. "Further export losses look likely in coming months, dealing another blow to hopes that the UK economy is rebalancing away from domestic consumption towards exports." David Kern, Chief Economist at the British Chambers of Commerce (BCC) said "It is disappointing that the trade deficit widened again. While the decline was only slight, the weaknesses in the global economy like the weak Eurozone are still a problem and the challenges facing UK exporters are being made even greater by the strengthening pound."

With the economic recovery set to be fuelled this year by strong growth in consumer spending, it remains more likely that imports will grow at a faster rate than exports.

Source: www.telegraph.co.uk, 8 May 2015

Figure 2: External Debt, Top 5 – World (US\$ Billion)



Source: <https://www.cia.gov/library/publications/the-world-factbook/>, 1 January 2014

Figure 3: UK's Balance of Trade (in billion US dollars)

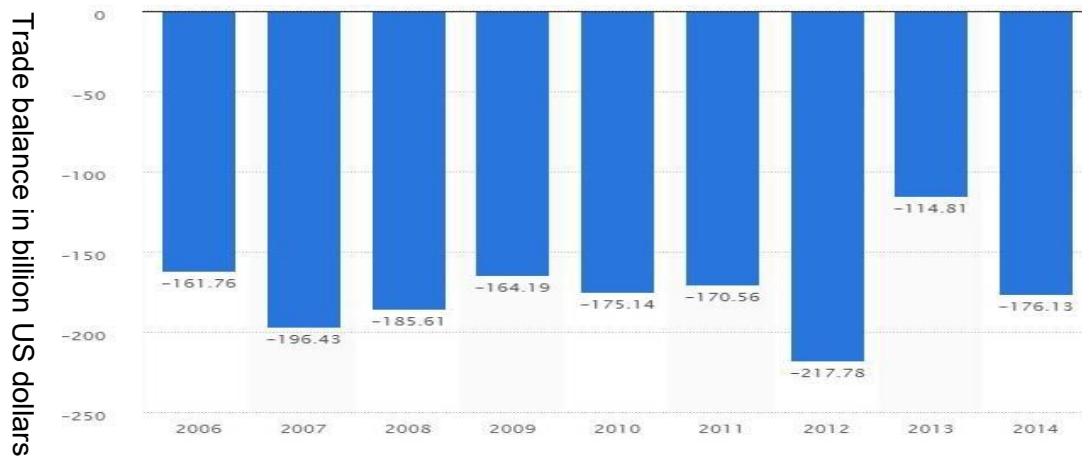
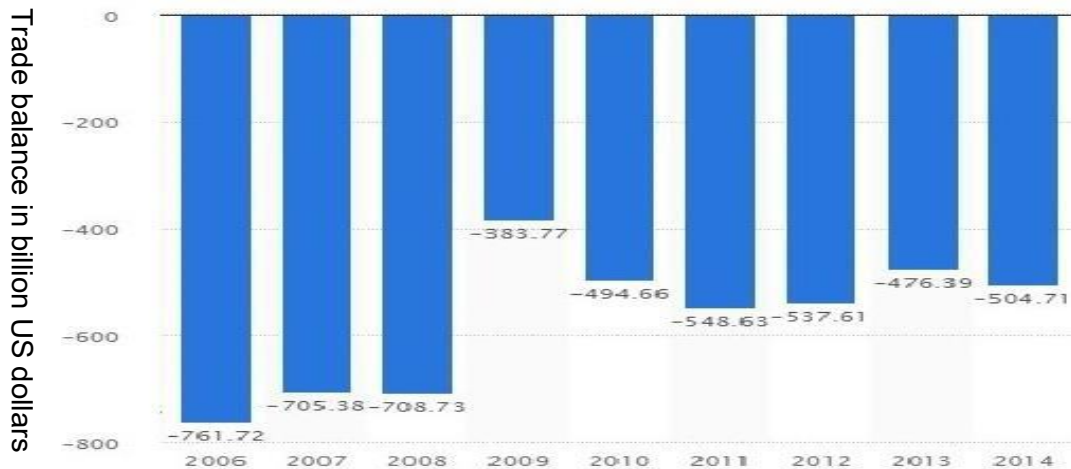


Figure 4: US's Balance of Trade (in billion US dollars)



Source: www.statistica.com/stats

Questions

- Using Figures 3 and 4, compare the change in the balance of trade of US with that of UK between 2006 and 2014. [2]
- Using AD/AS analysis, explain how 'the inevitable rise in interest rates over the next few years could weaken the economy' (Extract 4). [4]
- Explain the trade-off between economic growth and inflation. [2]
- Compare the causes of the trade deficit in US and UK. [6]
- Extract 7 says that UK's widening trade deficit would be a big challenge facing the government over the next five years. Discuss the impact of a worsening trade balance on the UK economy and its living standards. [8]
- Assess the view that signing free trade agreements is the most effective policy to correct the trade deficit in the US. [8]

[Total: 30]

Section B

Answer **one** question from this section.

- 3** (a) Explain how the price mechanism allocates scarce resources to address the problem of scarcity. [10]
- (b) Some governments are reducing subsidies for retraining programmes citing large fiscal budget deficits as the reason.
- Discuss whether the reductions in subsidies are justified. [15]
- 4** Many countries aim to improve their economic performance which includes internal and external price stability, healthy balance of payments, sustained economic growth and full employment.
- (a) Explain the consequences of failing to achieve internal and external price stability. [10]
- (b) Discuss the extent to which globalisation can help Singapore improve her economic performance. [15]



JURONG JUNIOR COLLEGE

2015 JC2 ECONOMICS 8819 (H1)

PRELIMINARY EXAMINATION

ANSWER BOOKLET

Suggested Answers for 2015 J2 H1 (8819) Economics Prelim Case Study Questions

Question 1

- a) Compare the patterns of price changes for Chinese domestic steel prices and iron ore prices from January 2010 to August 2014. [2]

Both prices of Chinese domestic steel and iron ore fell during this period of time [1] with the prices of iron ore falling faster than that of steel.[1]

Or the prices of iron ore showed greater fluctuation and were more volatile than that of steel.

- b) With the help of a demand and supply diagram, explain how the enforcement of stricter environmental control in steel production and the government's effort to steer away from infrastructure development affect the market for steel in China. [6]

The enforcement of stricter environmental control in steel production will increase the cost of production for steel. This reduces the profit margin and decreases the incentive to produce. Supply thus decreases and supply curve shifts to the left from S_1 to S_2 in the following diagram. At the same time, government's effort to steer away from infrastructure development will decrease the demand for steel. This causes demand to fall and demand for steel shifts to the left from D_1 to D_2 .

The fall in demand and supply result in 3 possible outcomes depending on the relative magnitude of shifts. In this case, the fall in demand is likely to be more significant as China's move away from infrastructure development towards consumption-led growth would result in a large fall in the demand for steel in the economy. Also the stricter environment control will not likely lead to a large increase in the cost of production as labour cost and rental is likely to take up a more significant portion of the total cost and so the shift in supply is relatively smaller. Thus steel prices fall from P_1 to P_2 according to Figure 1 as the fall in supply is less than the fall in demand. Quantity also falls from Q_1 to Q_2 .

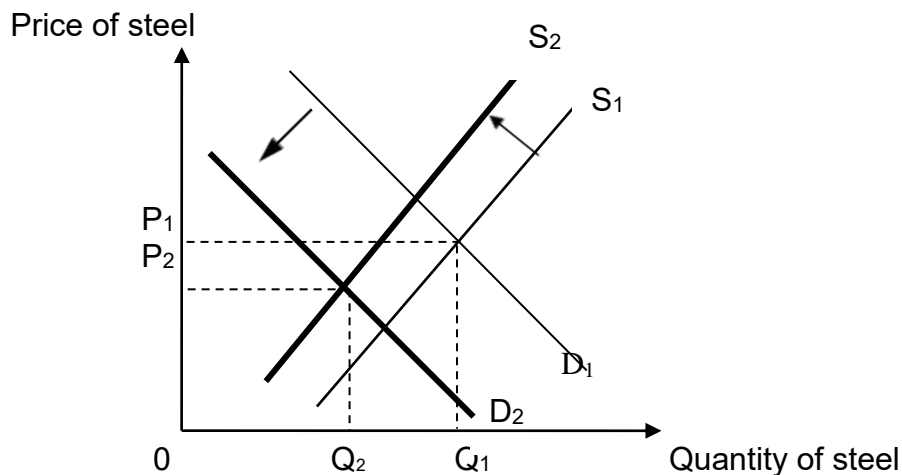


Figure 1: Market for Steel

Explanation of each shift. (2m each)

Justification for the magnitude of shift and explanation of diagram. (2m)

- c) Explain the difference in value of the price elasticity of supply of a manufactured good such as cars with that of a primary product such as iron ore. [3]

The supply of manufactured goods such as cars is generally price elastic, i.e. $PES > 1$. This is because the factor inputs are easily obtainable in general. It is also easier to have stocks of raw materials, components and finished products such that the firm is able to change its output quickly in response to a price change.

On the other hand, the supply of a primary product such as iron ore tends to be price inelastic, i.e. $PES < 1$. This is because of the long time period required to find iron ore and set up the mining operations to extract iron ore from the ground. The initial capital outlay for such production is also usually high and thus such firms find it difficult to enter and exit the industry. Thus they are less responsive to a price change.

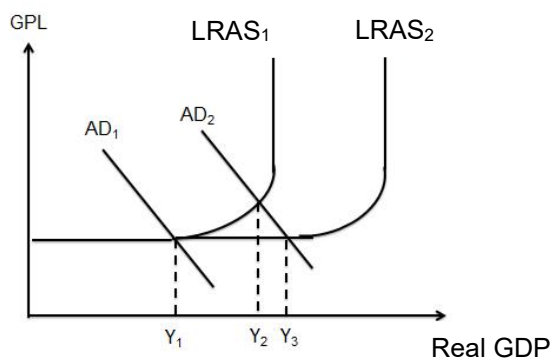
(1m for the difference in value (to include value) and 2m for the explanation.)

- d) **Discuss whether the expenditure on infrastructure by the Chinese government helps to improve the standard of living of the people.** [8]

Thesis

Standard of living measures the quantitative and qualitative aspects of living. As mentioned in Extract 2, government expenditure on infrastructure has been contributing much to economic growth in China since 1990s. Hence any changes to the spending on infrastructure will bring about a significant impact on the Chinese economy.

In the short run, an increase in government expenditure on infrastructure acts as a stimulus to the economy as it increases aggregate demand from AD_1 to AD_2 as shown in the diagram below. This leads to a multiple increase in national income from Y_1 to Y_2 as the initial income earned by factor owners in round one of expenditure are spent on consumer goods generating further increases in output in subsequent rounds. As national income increases, assuming population remaining the same, the amount of goods and services becoming available to the people rises and this increases the quantitative aspect of living standards. The increase in national income also increases production which leads to an increase in employment of factors of production such as labour. Employment rate thus increases. This increases the income of the people thus increasing their purchasing power and consumption of goods and services, further showing an improvement in standard of living.



In the long run, such infrastructure spending will increase the efficiency of doing business and increase productivity in the country. This improvement will also attract investment in China including foreign direct investment. This is shown in the shift of the long-run aggregate supply curve from $LRAS_1$ to $LRAS_2$ resulting in further growth in China and real GDP increases to Y_3 . Such an improvement in GDP, assuming population remaining constant, will result in an increase in the quantitative aspect of living standard even in the long term.

In addition as mentioned in Extract 2, government expenditure on infrastructure has led to much improvement in municipal infrastructure, utilities, transportation system and social

infrastructure for the people. This results in an improvement in the quality of life of the people which enhances the qualitative aspect of standard of living.

Anti-thesis

However government expenditure on infrastructure may have its disadvantages. Firstly, as mentioned in Extract 2, such large expenditure has contributed to the budget deficit of the government. This accumulation of fiscal debt leads to a burden for the future generation. This can adversely affect SOL for the people in the future.

As mentioned in Extract 2, it can also lead to crowding out effect. Crowding out can be in the form of physical and financial resources. The large amount of infrastructure development undertaken by the government requires many factors of production. Excessive demand for land and labour for example can drive up wages and land cost. This is detrimental to private enterprise as it causes an increase in cost of production for them. In addition, as mentioned in Extract 2, some of the infrastructure spending is too excessive leading to over-capacity and hence under-utilization of some of the facilities. Financial crowding out can also occur as funds are diverted to infrastructure spending leading to limited funds for private sector investment. Thus an increase in government expenditure may have a trade-off in terms of a fall in private investment thus placing a limit on the rise of national income due to infrastructure spending. As a result, standard of living may not have improved much.

Infrastructure development may also lead to degradation of environment as more land are cleared to build facilities. Thus qualitative aspect of living standard may worsen.

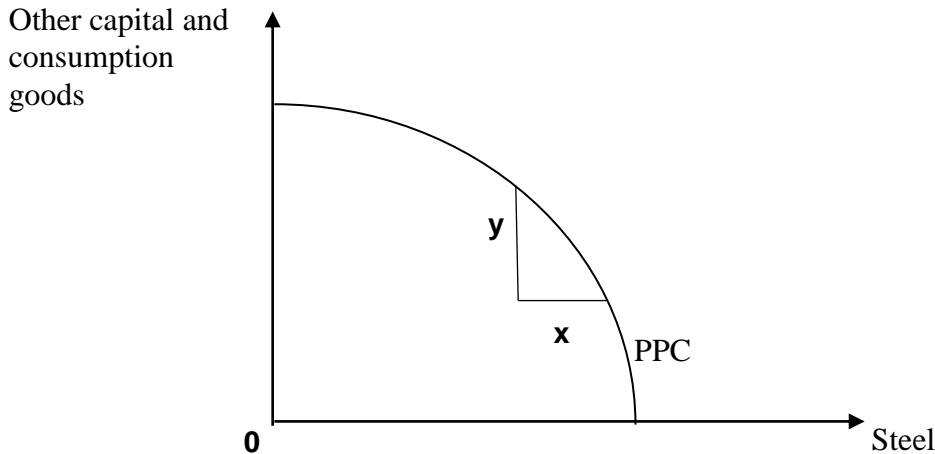
Conclusion

In conclusion, the government expenditure on infrastructure is likely to have led to a net improvement in the standard of living of the people in China. This is evident from Extract 2, where it mentioned that government spending on infrastructure has contributed much to China's economic growth. In addition, utilities infrastructure development have allowed 99 per cent of the population now to have access to electricity and 98 per cent of the urban population to have reliable water sources. There has also been improvement in the quality of transport for many of the people. Thus the quantitative and qualitative aspects of standard of living have improved as a result of infrastructure spending in China.

Level	Mark Scheme	Marks
L3	Well-developed explanation on how government expenditure on infrastructure may or may not lead to an improvement in SOL with strong reference to case study material AND Reasoned overall stand. Maximum of 6 marks if there is no overall stand and justification.	6-8
L2	Under-developed explanation on how government expenditure on infrastructure may or may not lead to an improvement in SOL with reference to some case study material Maximum of 4 marks if there is no case study evidence. Maximum of 4 marks for a one-sided view.	3-5
L1	A descriptive answer that explains how government expenditure on infrastructure affects SOL.	1-2

- e) Using a production possibility curve, explain the opportunity cost incurred when more resources are allocated to the production of steel in a country. [3]

Opportunity cost refers to the next best alternative forgone when making a choice. In this case, when more resources are allocated to the production of steel, these resources cannot be used to produce other goods. Thus the opportunity cost is in terms of the other goods that are forgone when resources are used to produce steel. This is represented in the production possibility curve shown below:



As shown in the diagram above, an increase of x units of steel leads to an opportunity cost of y units of other goods forgone.

(1 mark for diagram and 2m for explanation)

- f) Assess whether you support the view that “US’s imposition of tariffs on steel imports would create a significant net loss of economic benefits to the US economy” (Extract 3). [8]

Thesis

When US imposes tariffs on steel imports, it is practising protectionism which is the act of sheltering the domestic industries from foreign competition. Such a measure could lead to economic losses to the US economy.

As mentioned in Extract 3, tariffs would lead to an increase in the cost of production for industries that use steel as an input. This includes the export-oriented industries such as cars and machinery industries which will become less price competitive. Assuming that the demand for such exports is price elastic due to the availability of substitutes, quantity demanded will decrease more than proportionately leading to a fall in export revenue. Ceteris paribus, net exports fall and thus US current account may worsen. In addition, the fall in production would lead to a fall in employment in these steel-related industries and as mentioned in Extract 3, it would hurt the workers, stakeholders and consumers of these related industries. Also it will encourage some firms to choose to expand overseas where tariffs do not apply. This further aggravates the detrimental effect on the US economy.

Also, it is likely that the protectionistic measure by US would invite retaliation from trading partners who would then impose tariffs on the exports of US. This will cause the prices of US exports to be more expensive thus causing the export sector to suffer due to the fall in export revenue.

Imposing a tariff can also be harmful as they distort market signals. It encourages inefficient US steel firms that do not have the comparative advantage to expand as they are protected from foreign competition. This will result in an inefficient allocation of resources. Consumers

will also suffer as they have to pay a higher prices due to the tariff and consumer welfare falls.

Anti-Thesis

Although the imposition of tariffs can lead to much losses to the US economy, it is believed that it can also bring about some benefits to the economy.

Tariffs lead to an increase in the price of steel imported into US. This causes a fall in the quantity demanded for imported steel and people would switch to the consumption of steel produced locally. This increases the production of local steel and employment in the steel industry thus increases.

In addition, as mentioned in Extract 3, US accused other countries of dumping steel into the economy. This means that steel is sold below its marginal cost in US by foreign firms. If predatory dumping occurs, the intention is to drive out domestic firms and allow the foreign firms to gain monopoly power after which they could raise prices. Thus by imposing tariff as an anti-dumping measure, US is able to protect its own industries against such predatory dumping. However as mentioned in Extract 3, evidence for such dumping acts may be difficult to prove as prices of steel could have been low due to the over-supply of steel in China.

Conclusion

In conclusion, it is felt that US imposition of tariffs on steel imports would create a significant net loss of benefits to the US economy as costs outweigh benefits. It is likely that the jobs gain in the steel industry as a result of the tariffs would be less than the loss in jobs in the other related industries as a result of the loss of price competitiveness or retaliation. In addition, consumers suffer from a higher price not only for steel but for all products using steel as an input. Imposition of tariff goes against the theory of comparative advantage which explains that countries with differences in relative opportunity cost can benefit from an increase in world output and consumption beyond its own production possibility curve when it engages in trade and specialization. The use of tariff thus causes US to lose the benefits of free trade.

Instead of imposing the protectionistic measure, US should try to enhance the competitiveness of its steel industry and take policy measures such as encouraging more research and development to improve technology and bring about higher productivity and efficiency to compete with foreign firms.

Level	Mark Scheme	Marks
L3	Well-developed explanation on how the imposition of steel tariff may or may not lead to significant net loss of benefits to US economy AND Reasoned overall stand. Maximum of 6 marks if there is no overall stand and justification.	6-8
L2	Under-developed explanation on how the imposition of steel tariff may or may not lead to significant net loss of benefits to US economy. Maximum of 4 marks if there is no case study evidence. Maximum of 4 marks for a one-sided view.	3-5
L1	A descriptive answer that explains how the imposition of tariff on steel affects US economy.	1-2

CSQ2

a) Using Figures 3 and 4, compare the change in the balance of trade of US with that of UK between 2006 and 2014. [2]

- Similarity: Both current accounts are in a deficit throughout. (1m)
- Difference: The balance of trade deficit in US is improving while the deficit in UK is worsening. (1m)

b) Using AD/AS analysis, explain how ‘the inevitable rise in interest rates over the next few years could weaken the economy’ (Extract 4). [4]

- An increase in interest rate will increase the cost of borrowing. Marginal projects which were profitable at lower interest rates become unprofitable, thus investment decreases. At the same time, the increase in cost of borrowing will cause consumers to reduce their spending, especially on big ticket items as they borrow less. Households will also increase their savings and reduce consumption as the opportunity cost of consumption increases.
- When consumption and investment falls, aggregate demand decreases, shifting AD curve from AD_0 to AD_1 to the left as shown in Figure 1. This will reduce national income by the multiple, through the multiplier process as real GDP falls from Y_f to Y_1 , thus weakening the economy.

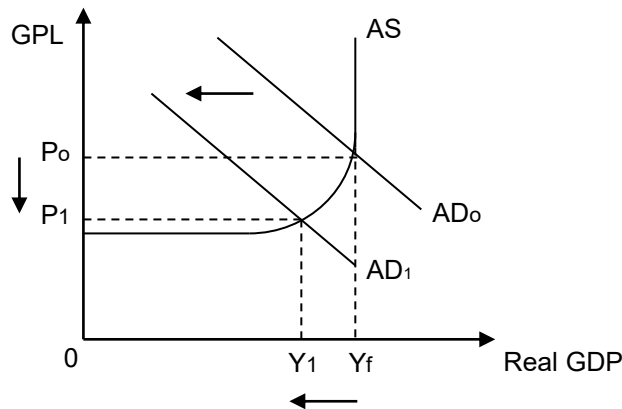


Figure 1

*3m for explanation of how C and I lead to the weakening of economy
1m for the diagram and explanation*

c) Explain the trade-off between economic growth and inflation. [2]

- When an economy approaches full employment (1m) and experiences rapid growth, it will eventually be accompanied by inflation.
- When aggregate demand increases, more resources have to be employed in order to increase production causing resources to become scarcer, thus pushing their prices up. This in turn increases the price of goods and services. Hence, if growth is too rapid, the economy is likely to overheat. (1m) Thus the pursuit of growth may result in inflation.

d) Compare the causes of the trade deficit in US and UK. [6]

Similarities:

1) Strong Currency (USD/Pound) (Extracts 5, 6 and 7)

- Appreciation of the USD/Pound has eroded the export competitiveness of the US/UK products in the international market. It will cause the prices of exports to become relatively more expensive in foreign currencies. At the same time, a stronger USD/Pound will make the price of imports cheaper in terms of domestic currency. Assuming that Marshall-Lerner condition holds where the sum of the price elasticity of demand for exports and imports is greater than one, net exports will fall, hence leading to a trade deficit.

2) Strong growth in consumer spending (Extracts 6 and 7)

- There is an increase in consumption in both US and UK. The increase in consumption will lead to an increase in demand for imports and thus import expenditure. Assuming that export earnings remained unchanged, this may contribute to a trade deficit.

Difference (Extracts 6 and 7):

- The weak Eurozone will lead to a fall in national income in EU. This reduces their purchasing power and consumption, leading to a fall in demand for imports. They will now thus demand less of UK's exports leading to fall in export revenue. Ceteris paribus, this might lead to a trade deficit. US on the other hand experiences a fall in export demand probably due to the lack of export competitiveness of its manufactured goods in terms of quality for example. The corresponding fall in export revenue will lead to a trade deficit assuming ceteris paribus.

2m for each factor explained.

- e) **Extract 7 says that UK's widening trade deficit would be a big challenge facing the government over the next five years. Discuss the impact of a worsening trade balance on the UK economy and its living standards. [8]**

Explain how a worsening trade deficit affects external stability (BOP and ER)

BOP

- From Extract 7, a worsening trade deficit may contribute to a huge and persistent balance of payments deficit and can be a cause of concern for the UK government. It may lead to falling foreign reserves or borrowing which will lead to external debt. Figure 2 shows that UK is ranked second with the largest external debt in the world.
- There will be an opportunity cost incurred as the funds used to repay the debt could be used for infrastructural development which helps to create growth.

ER

- There is also a risk that the Pound will depreciate due to the worsening trade deficit. The fall in export revenue will lead to a fall in demand for Pound while the increase in import expenditure will lead to an increase in supply for Pound, leading to the depreciation. With the weakening of the Pound, it will also encourage capital flight and discourage short term capital inflow to the UK as speculators anticipate the Pound to depreciate further. This will worsen the capital account.

Extent of impact

- The impact is large as a worsening trade deficit will hinder UK's attempt in rebalancing the economy from consumption towards exports.
- The huge external debt accumulated will also lead to adverse consequences in the long run.

Explain how a worsening trade deficit affects internal stability (EG, N and inflation)

EG, N

- Net exports is a component of the aggregate demand (AD). A worsening trade deficit or fall in net exports will reduce aggregate demand and decrease national income by the multiple, through the multiplier effect. Actual growth will fall.
- Firms will then adjust to this fall in demand by decreasing the level of production and hire less factors of production which include labour. Cyclical unemployment will rise.

Extent of impact

- The extent of impact on growth and employment depends on UK's multiplier size. If UK's multiplier size is large, the impact might be large.

- The extent also depends on the state of the economy. If UK is near or at full employment, a fall in AD may lead to a fall in GPL instead of a fall in real income, thus mitigating the impact.

Inflation

- With a weakening Pound, imports will be relatively more expensive in terms of domestic currency. This will lead to imported inflation. If imported raw materials become more expensive, cost of production will rise which leads to cost push inflation.

Extent of impact

- The extent of impact might not be that severe as UK is not heavily dependent on imports as being a large country, it is likely to have an abundance of raw materials.

Explain how a worsening trade deficit affects living standards.

- If the population remains unchanged, the fall in national income will lead to a fall in real per capita income. This will cause a fall in purchasing power and consumption of goods and services. Quantitative standard of living will worsen.
- However if the worsening trade deficit is mainly due to the rising import expenditure, qualitative SOL might have risen as consumers consume better quality imports.

Conclusion and Evaluation

- A worsening trade deficit poses a challenge for the government as it can impact UK's macroeconomic goals and standard of living adversely.
- Overall, the impact might not be that severe as Extract 7 mentioned that the trade deficit only worsened slightly. However, the large amount of external debt is a huge concern and the government does need to prevent the trade deficit from worsening.
- The overall impact of a worsening trade deficit also depends if the trade deficit can be offset by a surplus in the invisible trade or/and capital account. If the trade deficit can be offset by such surpluses, it may not be a concern to the UK government as the impact on the UK economy might not be that serious.

Level	Mark Scheme	Marks
L3	Well-developed analysis of the impact of a worsening trade balance on the UK economy and its living standards. AND Reasoned overall stand. Maximum of 6 marks if there is no overall stand and justification.	6-8
L2	Under-developed explanation of the impact of a worsening trade balance on the UK economy and its living standards. Maximum of 4 marks if there is no case study evidence.	3-5
L1	A descriptive answer that explains how a worsening trade balance can impact the UK economy and its living standards.	1-2

f) Assess the view that signing free trade agreements is the most effective policy to correct the trade deficit in the US. [8]

- A large and persistent trade deficit in the US can bring about negative impacts on both the internal and external stability of the economy. The US government can sign free trade agreements to correct the surging trade deficit. Extract 6 mentioned that President Barack

Obama needs to complete a trade agreement with 11 other nations, an agreement known as the Trans-Pacific Partnership to help correct the trade deficit.

Thesis: Signing free trade agreements is the most effective policy to correct the trade deficit in the US.

Signing Free trade agreements

- Signing free trade agreements (FTAs) is the most effective policy to correct a trade deficit in the US because she will benefit greatly from the lowering or removal of tariffs by other countries as it means that US exports will now be cheaper. This will improve the price competitiveness of the exports. Assuming that the demand for US exports is price elastic due to the availability of substitutes, a fall in the price of exports will lead to a more than proportionate increase in the quantity demanded of exports, increasing US export revenue, correcting the trade deficit, ceteris paribus.

Anti-thesis: Signing free trade agreements is not the most effective policy to correct the trade deficit in the US.

Limitations

- With FTAs, it becomes easier for foreign firms to compete with US firms. This may hurt the local firms and force them out of the industries if they are unable to compete with the foreign firms. This will result in unemployment in the US. Strong foreign competition may also deter potential local investment from taking place if the business sentiment is not optimistic.

Supply side policy

- Besides signing FTAs, US can look at other policies to correct the trade deficit. Extract 6 states that the best way to maintain the quality of exports in an increasingly competitive global economy is through innovation in products, processes, and services. Supply-side policies could be used to retrain workers and subsidise research and development to further improve the efficiency of the production process as well as the quality of products. This will enhance US export competitiveness and help her expand the reach of her exports.
- The US government could also develop research facilities to make US exports more competitive while moving towards an innovative economy in the era of globalisation. The introduction of new products or the increase in quality can lead to an increase in the demand for exports, thus increasing export revenue and correcting the trade deficit, ceteris paribus.

Limitations

- However, huge funding is required and it depends on the ability of the US government to fund such R&D initiatives. The use of the government funds also incurs an opportunity cost as these funds could be spent on other areas like healthcare.

Depreciation of the USD

- From Extracts 6 and 7, one of the root causes of the trade deficit is the strong dollar. Thus, to effectively correct the trade deficit, the US government can allow the US dollar to weaken since the USD has been strong as mentioned in the data. As the USD depreciates, exports will become relatively cheaper in foreign currencies and imports will become relatively more expensive in USD. Assuming that Marshall-Lerner condition holds where the sum of the price elasticity of demand for exports and imports is greater than one, net exports will increase, hence correcting the trade deficit.

Limitations

- The adversely affected trading partners might eventually retaliate by lowering the value of their currencies too, which will cancel out the favourable effects of the depreciation by US. It will also result in hot money outflow as speculators expect the currency to depreciate further in the future, leading to a worsening of the capital account. US is an international

financial hub and the USD is heavily traded hence the extent of the capital flight would be large.

- Depreciation of the USD might also lead to imported inflation as imports are now relatively more expensive in terms of domestic currency. Domestic firms that use imported raw materials might pass the higher cost to their consumers in the form of higher prices, increasing the cost of living.

Conclusion and Evaluation

- Overall, signing free trade agreements is not the most effective policy to correct a trade deficit because it takes time for countries to agree to the terms and sign the agreement and it does not solve the root causes of the problem. The trade deficit in the US is largely due to the strong USD and the lack of export competitiveness in terms of quality.
- To correct the trade deficit more effectively, it is important that the US government introduces a combination of policies to tackle her worsening trade deficit. For example, in the long run, the US government can continue provide funds for research and development to develop new comparative advantages to address the problem of the lack of export competitiveness. Meanwhile in the short run, the government can allow the USD to depreciate to prevent the trade deficit from worsening further.

**Protectionism and CMP/CFP not accepted.*

Level	Mark Scheme	Marks
L3	Well-developed answer that explains the effectiveness of signing FTAS and at least 1 alternative policy, with its limitations, in correcting a trade deficit in the US. AND Reasoned overall stand. Maximum of 6 marks if there is no overall stand and justification.	6-8
L2	Under-developed answer that explains the effectiveness of signing FTAs and at least 1 alternative policy, with its limitations, in correcting a trade deficit in the US. Maximum of 3 marks for well-developed explanation of how FTAs can correct the trade deficit (with its limitations) without alternative policies, with use of case study evidence. Maximum of 4 marks if there is no case study evidence.	3-5
L1	A descriptive answer that explains the effectiveness of signing FTAs in correcting a trade deficit in the US.	1-2

Section B Essay Mark Schemes

3 (a) Explain how the price mechanism allocates scarce resources to address the problem of scarcity. [10]

(b) Some governments are reducing subsidies for retraining programmes citing large fiscal budget deficits as the reason.

Discuss whether the reductions in subsidies are justified. [15]

Knowledge, Application, Understanding and Analysis		
L3	Well-developed analysis of how price mechanism allocates scarce resources to address the problem of scarcity.	7 - 10
L2	Under-developed explanation of how price mechanism allocates scarce resources to address the problem of scarcity	4 - 6
L1	Descriptive knowledge of how price mechanism allocates scarce resources to address the problem of scarcity.	1 - 3

Knowledge, Application, Understanding and Analysis		
L3	Well-developed analysis of the reasons on whether the reductions in government subsidies are justified.	9 - 11
L2	Under-developed explanation of the reasons on whether the reductions in government subsidies are justified. Max 6 marks awarded if answer is one-sided.	6 - 8
L1	Descriptive knowledge of the reasons on whether the reductions in government subsidies are justified.	1 - 5
Evaluation		
E2	For an evaluative assessment based on economic analysis.	3 - 4
E1	For an unexplained assessment or one that is not supported by economic analysis.	1 - 2

- (a) Explain how the price mechanism allocates scarce resources to address the problem of scarcity. [10]

The problem of scarcity arises as a result of unlimited wants and limited resources. As a result, choices need to be made and the price mechanism can be used to help achieve an efficient allocation of resources assuming that there are no externalities and there is perfect competition in the markets. Resources are efficiently allocated when production is at the level where marginal social benefit (MSB) is equal to marginal social cost (MSC) and society's welfare is maximised.

The price mechanism works to resolve the basic economic problems of what, how much, how and for whom to produce based on consumers' demand preferences for the types and quantities of goods and services that they prefer. Consumers influence producers' decisions on what to produce based on their demand preferences. The amount they are willing and able to pay is determined by the additional satisfaction they derived from consuming an additional unit of the good. This is represented by the demand curve which is also the marginal private benefit (MPB) curve of the consumers. Assuming that there is an absence of externalities, $MPB=MSB$.

Producers who are profit maximizers will receive the price signal from consumers. The amount which producers are willing and able to supply at various price levels represents the supply curve. Producers' decision to supply is based on the extra cost incurred in producing an extra unit of the good or service. Hence, the producer supply curve is also the marginal private cost (MPC) curve. Assuming that there are no externalities, $MPC=MSC$.

Demand curve will intersect supply curve resulting in attainment of an equilibrium price and quantity at P_e and Q_e where $MSB=MSC$ and resources are efficiently allocated.

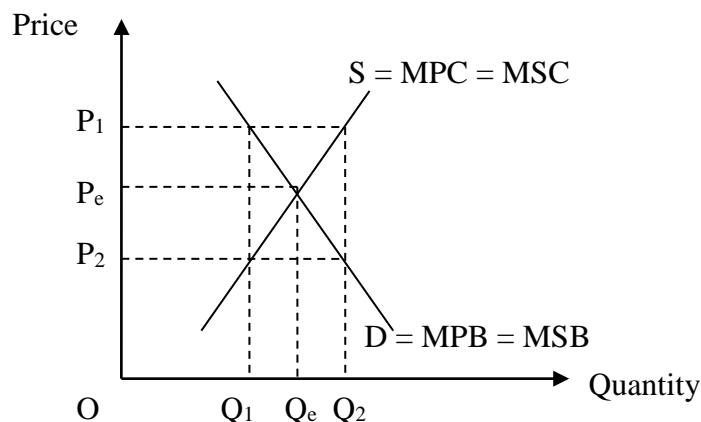


Figure 1

At price P_2 , quantity demanded Q_2 is more than quantity supplied Q_1 . Thus, there will be an upward pressure on prices as there is a shortage of the good. Producers channel resources to produce more of the good, until Q_e is reached at price P_e . At price P_1 , quantity demanded Q_1 is less than quantity supplied Q_2 . Thus, the price falls as there is a surplus of the good. Producers will divert resources away from the good, producing less, until Q_e is reached at price P_e . The adjustment process of the price mechanism will ensure that Q_e is reached and resources are allocated efficiently. The price mechanism works to determine what and how much to produce.

The price mechanism determines how to produce through relative price signals too. Business firms produce goods by combining resources in the least costly way. Firms will substitute the relatively cheaper factor to replace the more expensive factor. For example, if the relative price of farm land increases, farmers will use more labour and tractors to work the land more intensively.

In addition, to solve the problem on “for whom” to produce, consumers who have the dollar votes will get the products. This means that consumers who have the money and are willing to pay the price for the products get them. Those without the dollar votes will not be able to get the products.

In conclusion, the price mechanism works to determine what, how much, how and for whom to produce based on consumers’ preference and the aim of producers is to maximize profits. Hence resources can be efficiently allocated to mitigate the problem of scarcity. However, when there is a lack of perfect information or when there is the presence of externalities, the price mechanism will fail to achieve an efficient allocation of resources.

- (b) **Some governments are reducing subsidies for retraining programmes citing large fiscal budget deficits as the reason.**

Discuss whether the reductions in subsidies are justified.

[15]

Introduction

Market failure occurs when the free operation of the price mechanism fails to allocate resources efficiently, and government intervention is required to correct the market failure. An efficient allocation of resources occurs when production is such that marginal social benefit is equal to marginal social cost and society’s welfare is maximised.

Body: Explain why reduction in subsidies is not justified

Retraining is an example of a merit good. A merit good is one where its consumption is deemed intrinsically desirable by the government and it has positive externalities in addition to private benefits. Positive externalities are benefits to third parties who are not directly involved in the production or consumption of a good. The benefits are not reflected in the price of the good. In the case of retraining programmes, a consumer would incur marginal private cost (MPC) of training which is the cost paid for training for one more unit as well as marginal private benefit (MPB) which includes the higher wages obtained as a result of undergoing one more unit of training. However it will also have external benefits which include the benefits to companies as their workers become more productive after undergoing the training. A more productive workforce also attracts investment which spurs economic growth which benefits the economy.

Marginal social benefit (MSB) is the additional social benefit from the additional unit of retraining program consumed, $MSB = MPB + MEB$ where MEB are the external benefits. Due to the presence of positive externality, which is shown by the marginal external benefit (MEB) at a particular level of output, marginal social benefit (MSB) is greater than marginal private benefit (MPB), i.e. $MSB > MPB$. This means that the benefits of consumption to society include not just the benefit to the consumer but also the benefits to others enjoying the positive spill-over effects shown as MEB. Assuming $MPC = MSC$, there will be a divergence of marginal private benefit (MPB) and marginal social benefit (MSB).

Since consumers will only consider their private benefits and costs, while ignoring the external benefits to third parties, he will consume at the level Q_p , where $MPB = MPC$. However, the socially optimal level of output occurs at Q_s , where $MSB = MSC$. Since Q_p is less than Q_s , it means that the price mechanism is unable to achieve an optimal allocation of resources on its own. There is under-consumption of retraining programmes. Between Q_p and Q_s , the social benefits are higher than the social costs for an additional unit of retraining programmes consumed, resulting in welfare loss equivalent to the shaded area. Thus the government will need to intervene to achieve the socially optimal level of output where society’s welfare is maximised.

One way to do so is to provide subsidies for retraining through the training institutions. When the subsidy per unit is equal to MEB at Q_s , this reduces the cost of programmes which is assumed to lower the cost to consumers assuming that cost savings are passed

on to consumers, thus shifting MPC to the right to MPC' in the diagram below. This increases the consumption output from Q_p to Q_s which addresses the market failure.

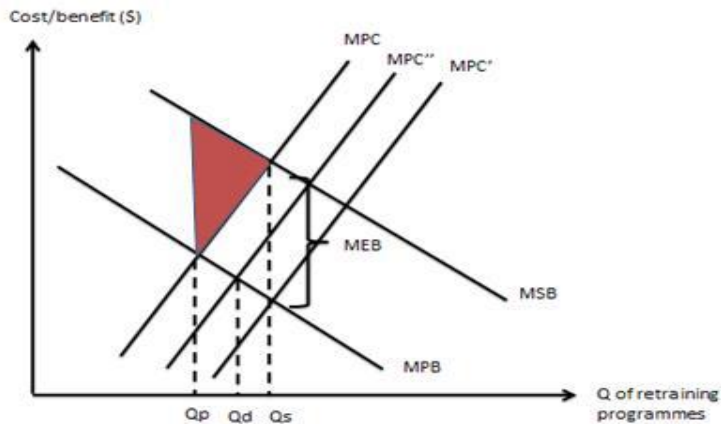


Figure 1: Positive externality

However if there is a reduction of subsidies for retraining, MPC' will shift to MPC'' and the socially efficient level of output is not achieved at Q_d . Thus a reduction in subsidies is not justified. (Assume that there are still some subsidies given).

In addition, with the reduction in subsidies, the quality of retraining programmes can be compromised. Training Institutions will find it tougher to maintain high-quality teaching, learning and research. Unless they can manage cost savings efficiently, the deteriorating quality of retraining programmes will reduce productivity and quality of labour. This will cause a decline in the country's competitiveness. This can lower business confidence that can lead to a fall in investment which causes aggregate demand and long run aggregate supply to fall, lowering actual and potential growth. Also the reduction of subsidies can lead to some training courses being cut, leading to the retrenchment of lecturers and other training staff. This worsens the unemployment in the country.

Reduction in subsidies may increase structural unemployment in a country. For example, as UK's economy undergoes a shift from manufacturing industries to services and high technology industries, some workers from the manufacturing industries may not have the necessary skills to get employed in the high tech industries. With the reduction in subsidies, these structurally unemployed workers may not be able to afford the higher cost of retraining programmes and would remain unemployed due to the mismatch between the workers' skills and jobs requirement.

Thus the reductions in subsidies are not justified based on the above reasons.

Body: Explain why reductions in subsidies is justified

On the other hand, under some circumstances, the government would need to reduce the subsidies for retraining programmes such as when it is facing a large fiscal deficit.

For example, the recent global financial crisis has resulted in budget deficits in Europe and US as level of income falls resulting in a fall in tax revenue collected. This is insufficient to cover their government spending which needs to be increased when fiscal stimulus is implemented to help the economy. A continuous budget deficit can result in the accumulation of a large fiscal debt for the country. To reduce the budget deficit or fiscal debt, some governments would need to prioritize their expenditure and spend on more essential items such as healthcare and national security. Therefore there may be a reduction in subsidies for retraining which is not deemed to be the top priority of the country

especially in the short term. Such subsidies may however be restored in the long term when there are more funds available.

Reduction in subsidies is also justified in the case when the government has overestimated the level of MEB and gave excessive subsidies initially, resulting in inefficient allocation of resources in the retraining programme market. Therefore, it is justified for the government to reduce subsidies to improve allocation of resources in the market.

Lastly, the government may feel that the marginal private benefits of retraining have been rising as increasingly the workers are aware of the need to stay up-to-date and upgrade their skills in the competitive world. This reduces the gap between MPB and MSB. Thus it is felt that there is a lesser need to pump in the same subsidies for retraining. Hence subsidies are reduced to reflect the current situation.

Conclusion and Evaluation

Reduction in subsidies may be justified in the short run if the economy is facing a large fiscal budget deficit and the government has other priorities such as national security which are more essential. Also, the government may want to transfer the burden of paying for retraining to private firms since a higher quality and more productive workforce benefits them as well. However, in the long term, if the reduction in subsidies results in less training for workers, it would have adverse effect on the country's macroeconomic objectives especially when they result in falling productivity of the labour force.

Whether the reductions in subsidies are justified also depends on a country's stage of economic development. It may be more justified for developed countries to cut subsidies as compared to developing economies. Developed economies may already have a highly skilled and educated labour force as compared to developing countries. Thus a reduction in subsidies may have less impact on developed countries than in the case of developing economies where building up the capacity of the workforce is still relatively important.

Also it is dependent on whether structural unemployment is high in the economy. In countries such as US and UK where structural unemployment is high among the youths, reduction in subsidies for retraining may not be justified as it worsens the situation.

Ultimately, the justification depends on the relative value of competing national goals and priorities to each government under the prevailing circumstances.

4. Many countries aim to improve their economic performance which includes internal and external price stability, healthy balance of payments, sustained economic growth and full employment.

(a) Explain the consequences of failing to achieve internal and external price stability.

[10m]

(b) Discuss the extent to which globalisation can help Singapore improve her economic performance.

[15m]

(a)

Knowledge, Application, Understanding and Analysis		
L3	Well-developed analysis of the consequences of failing to achieve internal and external price stability.	7 - 10
L2	Under-developed explanation of the consequences of failing to achieve internal and external price stability. Max of 5m if the consequences of only one type of stability are explained.	4 - 6
L1	For a descriptive knowledge of the consequences of failing to achieve internal and external price stability.	1 - 3

(b)

Knowledge, Application, Understanding and Analysis		
L3	For a well-developed answer that analyses both positive and negative effects of globalisation on economic performance and its extent. Max 9 marks awarded if script did not state the extent of the effects.	9-11
L2	For an under-developed answer that gives an explanation of both positive and negative effects of globalisation on economic performance. Max 6 marks awarded if answer is one-sided.	6-8
L1	For an answer that shows descriptive knowledge of the effects of globalisation with limited attempts to link them to economic performance.	1 - 5
Evaluation		
E2	For an evaluative assessment based on economic analysis i.e. one that considers the nature of economy, government policies, etc.	3 - 4
E1	For an unexplained evaluative assessment, or one that is not supported by economic analysis.	1 - 2

(a) Explain the consequences of failing to achieve internal and external price stability.

[10m]

Introduction

Internal price stability refers to a situation when there is zero or small rise or fall in the general price level. Pursuing internal price stability is important as inflation or deflation can lead to adverse internal and external consequences on the economy. External price stability refers to the country having a stable market exchange rate. A stable exchange rate facilitates trade and investment. In contrast, exchange rate instability, in terms of a rapidly depreciating currency, can result in a rise in imported inflation, or in the case of a rapidly appreciating currency, a reduction in the competitiveness of the country's exports.

Body

Internal effects of unstable internal prices: Investment, employment and growth

By attaining internal price stability, the economy could avoid the costs of inflation or deflation. This essay focuses on the costs of inflation. Inflation affects economic growth, balance of payments and employment levels in a country. When an economy is below full employment and is experiencing mild demand-pull inflation where excessive aggregate demand exceeds aggregate supply near or at full employment, the rate of increase in price is faster than that of cost which leads to rising profit levels. The increase in profitability thus induces producers to be more willing to invest and expand the line of production. This can lead to an increase in investment, thus leading to higher employment and growth. However when there is cost-push inflation which is caused by rising cost of production in the economy that is not due to excess demand, the rise in cost is more rapid than the rise in price. Hence producers are likely to put off any investment. Most importantly, in a high inflation rate environment, interest rates tend to be high to compensate savers for the loss of real savings. Producers hence are reluctant to borrow at high nominal interest rates as few investments give such high rates of return to make the project viable. Hence high inflation rates can reduce the level of investment due to the high cost of borrowing as reflected by the high nominal interest rates.

In addition, when inflation rate is moving in an erratic and unpredictable manner, businessmen will hesitate to commit themselves to long-term deals because of greater uncertainties and risks involved. Thus they will be less willing to take risks and invest, especially in long-term projects. This leads to a fall in investment. Without long-term deals, business investments fall and thus economic growth might fall.

Internal effects of unstable internal prices: Redistribution effect

Also, inflation results in redistribution of income as some people will be made better off while others are made worse off. This can be socially upsetting especially when the majority of people are worse off. When there is inflation, fixed income earners lose and producers gain during unanticipated inflation. Fixed income earners include employees whose salaries are fixed by contract, pensioners and landlords who continue to receive contracted rent. The purchasing power of the fixed-income earners decreases because they have to pay more for a product. Conversely, producers gain because they are making higher profits as price may rise faster than cost. Unless the fixed income earner can get wage increases as fast as the rate of inflation, he is worse off in real terms. Lenders will lose and borrowers gain during unanticipated inflation. Borrowers gain because the real values of their debts are reduced by the price increase. This is because although the sum that is repaid in nominal terms is what has been agreed, its purchasing power is much less. In contrast, lenders end up getting back a sum worth much less than agreed in real terms.

External effects of unstable internal prices: Balance of payments

Also if a country's inflation rate is relatively higher than its trading partners, her exports will be relatively more expensive and therefore less competitive. If the demand for the country's exports is price elastic, this will lead to a more than proportionate fall in quantity demanded leading to a fall in export earnings. On the other hand, her imports will be relatively cheaper than home-produced goods and thus demand for imports increases and her import expenditure will rise. Hence net exports fall which worsens the current account and may lead to a worsening of the balance of payments and a fall in foreign reserves if it is persistent.

Impacts of unstable external prices

When a country is experiencing external price instability in the form of a rapidly depreciating currency, it will affect its balance of payments, economic growth and employment in the country.

When a currency depreciates in a country, this will lead to the prices of exports becoming cheaper in terms of foreign currency and the prices of imports becoming more expensive in terms of local currency. Assuming that Marshall Lerner condition holds, ie the sum of price elasticities of demand for imports and exports is greater than one, this will lead to an improvement in net exports. Increase in net exports will lead to a rise in AD and thus general price level if the economy is **near or at full employment**. The increase in AD increases competition for scarce resources, thereby leading to increased prices of factor inputs and hence price of output, resulting in **demand-pull inflation**.

With the relatively more expensive imports, it can lead to rising prices of final goods and services as well as rising cost of imported inputs for industries. Thus imported inflation in the country worsens. This is more serious in a country such as Singapore where she is heavily dependent on imports for most of her foodstuffs, raw materials and fuel.

The rapidly depreciation of a currency may also bring about uncertainty due to the fear of future depreciation and this loss of confidence in the currency can cause speculative capital flight out of the country, thereby worsening the country's capital account. In addition, if a country has a huge external debt, a depreciation of the currency will increase the burden of servicing the debt which is in foreign currency.

On the other hand, when the country is facing a rapidly appreciating currency, the country's export becomes relatively more expensive in terms of foreign currency, while its imports become relatively cheaper in terms of domestic currency. Assuming that Marshall-Lerner condition holds where the sum of the price elasticity of demand for exports and imports is more than 1, this will lead to a fall in net exports, resulting in a fall in AD and thus multiple fall in NY via the multiplier effect. The fall in income and production will lead to a fall in demand for labour and thus unemployment increases. A rapidly appreciating currency may lead to the cost of investment to be relatively higher in terms of foreign currency and this may deter foreign investors from investing in a country which is detrimental to her economic growth.

In conclusion, the consequences of failing to achieve internal and external price stability are mainly detrimental to a country. Therefore, the government will implement appropriate policies to bring about internal and external price stability to facilitate the government to achieve the other macroeconomic objectives.

b) Discuss the extent to which globalisation can help Singapore improve her economic performance. [15m]

Introduction

Globalisation refers to the increased integration of national economies into the international economy through trade, foreign direct investment, capital flows, migration, and the spread of technology. A country's economic performance mainly focuses on its ability to achieve its macroeconomic goals, namely internal price stability, sustained growth, full employment, and healthy balance of payments (BOP).

Thesis: Globalisation can help Singapore improve her economic performance

Enlargement of the world market

For a small country such as Singapore, globalisation allows her to overcome the small domestic market size by providing greater opportunities to venture into overseas markets and benefit from trading according to the theory of comparative advantage. Domestic producers will gain from an enlarged export market, as they are able to reap internal EOS due to the larger scale of production resulting in lower average cost of production. This would improve her export competitiveness in

the international market. Assuming that the demand for her exports is price elastic due to the availability of substitutes, the fall in price would lead to a more than proportionate increase in quantity demanded, leading to a rise in export revenue.

With higher export revenue, *ceteris paribus*, net exports increase and current account balance improves. *Ceteris paribus*, BOP will improve. With an increase in net exports, aggregate demand increases leading to a multiple increase in national income through the multiplier process. Actual growth can be achieved. With higher output and production, employment also increases as more jobs are created.

As Singapore has a small domestic market, she is heavily dependent on the world market to buy her exports. Thus the enlargement of the world market brought about by globalisation will improve her economic growth, unemployment rate and balance of payments to a large extent.

Increase sources of imports

Globalization also provides more opportunities for sourcing cheaper and better quality imports from other countries. This is very important for Singapore as she lacks natural resources. Cheaper imports will help to curb imported inflation. The fall in the price of imported raw materials also leads to a fall in COP, thus reducing cost push inflation. This in turn helps to maintain export competitiveness as the imported raw materials are needed to produce the exports.

The extent of benefit is large as Singapore imports large amounts of raw materials and end-products.

Increase in FDI

Globalisation also results in a higher inflow of foreign direct investment which improves Singapore's economy. Singapore for example has been attracting FDI in the areas of life sciences, biotechnology, water technology and tourism services. In the short run, this helps to improve the capital account and may improve the BOP. In addition, I and thus AD will increase and national income will increase by multiple times via the multiplier process, resulting in actual growth. In the long run, there is technology and knowledge transfer from these FDI to the economy as well resulting in an increase in capital accumulation which increases the productive capacity of the economy and shift LRAS to the right. This results in potential growth. Together with actual growth, sustained economic growth will be achieved. This means that Singapore's economy can continue to grow without the economy overheating.

This improves Singapore's economy to a large extent as domestic investment might not be adequate to enhance productive capacity of the economy and provide enough jobs. Local start-ups and small and medium enterprises (SME) tend to be smaller in scale than FDI, thus generating less employment.

Increase in Mobility of labour

Globalisation also allows a freer movement of labour. This is especially important for a small country like Singapore which suffers from a tight labour supply. For instance, Singapore brings in a lot of low skilled foreign workers to work in the construction sector and as domestic helpers. The higher inflow of foreign talents and labour will increase the quantity and quality of labour, thus increasing the productive capacity of the economy and causing LRAS to shift to the right, boosting potential growth. Without the influx of foreign labour, her productive capacity will be very much limited by the small labour force available and cost of labour will be much higher. The inflow of labour helps to keep cost push inflation at bay as wages can be kept low.

The extent of benefits is great as Singapore has limited manpower, thus mobility of labour enables Singapore to overcome the constraints of the lack of labour and enhance her productive capacity significantly.

Antithesis: Globalisation will worsen Singapore's macroeconomic performance

Loss of comparative advantage

The increase in competition due to globalisation might cause Singapore to lose her CA in low-end manufacturing industries to China as China enjoys low cost of production due to cheap labour and land costs. Industries in Singapore may relocate to another one with lower opportunity cost of production. For example, manufacturing firms in Singapore have relocated and outsourced production to low-cost countries such as Cambodia and China that have abundance of labour. Retrenched workers then do not have the relevant skills to work in capital-intensive sunrise industries such as biotechnology, resulting in structural unemployment. The fall in X-M and FDI will lead to a fall in AD and thus multiple fall in NY via the multiplier process, resulting in a decrease in actual growth. The fall in production leads to a fall in demand for labour and thus an increase in cyclical unemployment. Hence, this results in an increase in overall unemployment.

The extent of impact is small as Singapore is constantly sourcing for and developing markets with new comparative advantage. Also, with the increase in competition, companies in Singapore are motivated to do research on lowering the cost of production or improving the quality of the product to ensure that her exports are able to compete with her trading partners in terms of quality and prices. Lastly, as Singapore's industries are mainly capital intensive, the extent of the impact on unemployment rate will be minimal.

Vulnerability to external shocks and greater economic instability

Globalisation increases the vulnerability of a small country to external shocks. For example, during the 2008 Global Financial Crisis, Singapore's major trading partner US experienced a recession and a decrease in income level. The fall in their purchasing power and consumption lead to a fall in their demand for imports. This caused a fall in the demand for Singapore's exports, resulting in a fall in export revenue and net exports decrease ceteris paribus. The corresponding fall in AD resulted in a significant decrease in GDP, leading to negative actual growth and increase in cyclical unemployment. Balance of payments also worsened.

The extent of impact can be large as exports are 250% of her GDP. Countries such as US and Eurozone are important trading partners of Singapore. Thus the impact on growth, cyclical unemployment and balance of payments can be large when there is a global crisis.

Small economies, such as Singapore, are highly dependent on imported raw materials due to the lack of natural resources. External shocks such as droughts in US and Middle-East Crisis have led to increases in food and oil prices respectively. These led to Singapore suffering from imported inflation.

The extent of the impact on imported inflation depends on whether Singapore is able to reduce unit cost of production by other measures such as increasing productivity.

Evaluative Conclusion

Globalisation can help Singapore improve her macroeconomic performance to a large extent as the benefits of globalisation outweigh the costs. This is due to the nature of Singapore which is a small economy that has limited resources and is trade dependent. However the ability to improve macroeconomic performance in Singapore is not solely dependent on embracing globalisation. Other factors such as the quality of her labour force and infrastructure can also be important in attracting investment and enhancing growth.

Achievements from globalisation are also dependent on the government's ability to implement policies to maximise the benefits of globalisation and minimize its costs. For example, Singapore government reduces corporate tax rates to attract inward FDI, invests in skills retraining and upgrading schemes to deal with structural unemployment, and provides incentives for firms to do R&D.



**Jurong Junior College
2015 JC2 Preliminary Examination**

ECONOMICS

Higher 2

9732/01

Paper 1

31 August 2015

2 hours 15 minutes

READ THESE INSTRUCTIONS FIRST

Write your name and class on all the work you hand in.
Write in dark blue or black pen on both sides of the paper.
You may use a soft pencil for any diagrams, graphs or rough working.
Do not use staples, paper clips, highlighters, glue or correction fluid.

Answer **all** questions.

Start each question on a new piece of paper.

At the end of the test, tie all your work securely together.
The number of marks is given in brackets [] at the end of each question or part question.

Answer **all** questions.

Question 1

Public Transport in Singapore

Table 1: Average Daily Ridership ('000 passenger-trips)

	Bus	Taxi
2010	3,199	912
2011	3,385	933
2012	3,481	967
2013	3,601	967
2014	3,751	1,020

Source: Land Transport Authority

Table 2: Estimates of elasticities of demand for public transport in Singapore

	Market segment	Elasticity of demand
Public transport ridership with respect to public transport fares	Peak	-0.15 to -0.3
Public transport ridership with respect to public transport fares	Off-peak	-0.3 to -0.6
Private automobile travel with respect to public transport fares	Overall	0.03 to 0.1

Source: National University of Singapore

Extract 1: Taxi booking apps are transforming Singapore's taxi industry

For the longest time, the taxi industry in Singapore has been dominated by established taxi companies such as ComfortDelGro. These taxi companies spend millions of dollars acquiring and building up their taxi fleet which are then rented out to taxi drivers at a fee. To help taxi drivers get more jobs, taxi companies have their own service centres so that drivers can be better matched with passengers.

Over the last two years however, a new breed of company has risen to change the way taxi booking is done: taxi booking apps such as GrabTaxi and Uber. Unlike established taxi companies such as ComfortDelGro, these apps do not have any hardware infrastructure costs, as they only facilitate the taxi booking process between taxi drivers and passengers through their

mobile apps. The business models for both traditional taxi companies as well as taxi booking apps are vastly different.

Source: *Vulcan Post*, 2 March 2015

Extract 2: Taxi surcharges

The taxi industry in Singapore has been deregulated since 1998. There are now six companies, with the biggest player - ComfortDelGro - holding over 50 per cent of the market share. Over 26,000 air-conditioned cabs ply the roads and they can be flagged down 24 hours a day on most roads, with well-marked taxi-stands available outside most major shopping centres and hotels. All taxi rides are metered, based on a flag-down fare and the distance travelled where additional surcharges may apply during peak hour and midnight for example. Currently, all companies levy a surcharge of 25 per cent of the metered fare during the peak period and 50 per cent during the midnight period.

On the issue of surcharges, Transport Minister Lui Tuck Yew in a parliamentary reply said that they play an important role in better matching supply and demand when and where there is persistent shortage of taxis, for example, at certain times of the day or in certain locations where it is financially less attractive for taxi drivers to ply. Surcharges give taxi drivers the incentive to do so. Therefore, while a surcharge system is by no means perfect and adds to the complexity of the fare structure, it may be necessary in order to ensure widespread availability of taxis. Many other cities such as New York, London and Perth also use them to regulate supply and demand.

Sources: *Land Transport Authority and Ministry of Transport*

Extract 3: Why bus contracting?

Starting from 2016, the Singapore bus industry will adopt a new contracting model which will enable the government to make public bus services more responsive to changes in ridership and commuter needs. It will also inject more competition into the industry, leading to higher service levels for commuters over time. Under this new model, the Land Transport Authority (LTA) will engage bus operators to run services through competitive bidding, determine the bus routes to be provided and set service standards. Operators will be paid fees to operate the services, while the government bears revenue risk by retaining the fare revenue. To make it easier for new players to enter the market and replace an incumbent operator, the government will own all bus infrastructure such as depots, and operating assets including buses and a common bus fleet management system.

Over time, bus contracting will promote greater competition and efficiency among operators as they now have to compete for the right to run the services. This will, in turn, lead to provision of better bus services in a cost-competitive manner, thereby benefiting commuters. At the same time, bus contracting will strengthen the government's ability to respond faster to changes in travel demand and service level expectations. Under the current privatised industry model where bus services are run by SMRT and SBS Transit, it is more difficult to increase capacity and improve service standards as quickly, as the operators are expected to cover their capital and operating expenses and earn their returns from fare revenue, and so may not run services if these are assessed not to be profitable.

Bus contracting will be implemented in phases over several years to ensure a smooth transition for all stakeholders. Bus services in Singapore will be bundled into twelve bus packages with about 300-500 buses each. For a start, LTA will tender out three packages. The contracts will be for five years, and can be extended by another two years on good performance. In total, the three packages will comprise about 20% of existing buses. The other nine bus packages, comprising

the remaining 80% of existing buses, will continue to be operated by the existing operators as negotiated contracts, for durations of about five years. After these negotiated contracts expire, more bus services will be gradually tendered out.

Sources: *The Straits Time*, 8 June 2015 and *Ministry of Transport*, 2015

Questions:

- (a) Compare the changes in the average daily ridership of bus with that of taxi between 2010 and 2014. [2]
- (b) With reference to Table 2:
- (i) Explain the difference in value of the price elasticity of demand for public transport during peak period compared to off-peak period. [2]
- (ii) Explain the value of the cross elasticity of demand between private automobile travel and public transport. [2]
- (c) Compare the likely barriers to entry facing potential entrants to the taxi industry with those to taxi booking apps like Uber. [2]
- (d) Explain the market structure which the current bus industry operates in Singapore and how it can be a source of market failure. [4]
- (e) Extract 2 states that the taxi companies levy a surcharge of 25 percent of the metered fare during the peak period and 50 per cent during the midnight period.
- Discuss whether the different taxi surcharges for the peak hour and midnight period mentioned in Extract 2 is an example of price discrimination, and explain the desirability of such a pricing policy. [8]
- (f) Assess the impact of introducing competitive bus contracting on consumers, producers and the society. [10]

[Total: 30]

Question 2**US and UK Economy****Extract 4: An economic check-up**

The US economy is at a critical juncture. The Federal Reserve's very easy monetary policy during the past few years has been the root of both good and ill: reduced unemployment on the one hand and increased financial risks on the other. The danger now is that the inevitable rise in interest rates over the next few years could in turn weaken the economy and lead to another economic downturn.

With the overall unemployment rate down to 5.4% and the rate among college graduates at only 2.7%, there is little or no slack left in labour markets. As a result, labour costs are now rising at a faster rate. Rising labour costs usually lead to a higher rate of price inflation. This time inflation has temporarily been kept in check by the decline over the past year in the prices of gasoline and other forms of energy and by the rising dollar's impact on the cost of imported goods.

Although there have recently been some mixed signals about the strength of demand, the economy will remain on a solid growth path for the coming year unless it is upset by events in the financial markets. Real GDP grew at more than 4% in the second half of 2013, driven by the rise of household wealth. Bad weather weakened the economy in the first quarter of 2014, but after that consumer spending and business investment together continued to rise at an annual rate of more than 4%.

Source: *Martin Feldstein, www.time.com, 28 May 2015*

Extract 5: Strong US dollar pressures exporters

The sharp rise in the value of the US dollar is hitting American exporters and forcing layoffs at makers of everything from steel to machinery, taking the shine off stronger job creation across the broader economy.

Exports make up about an eighth of America's economic output and helped power the initial economic recovery from the 2007-2009 recession. But exporters' job losses do raise some concerns about economic growth as the Federal Reserve moves closer to its first interest rate rise since 2006. Among the top exporters, primary metals producers, which include steel making, have shed 1,800 jobs this year, US Labour Department data showed.

One risk for the US economy is that the dollar might be dragging on growth more strongly than policymakers anticipate. Economic growth stalled in the first quarter partly because of plunging exports and surging imports.

Source: *Jason Lange, www.reuters.com, 8 May 2015*

Extract 6: US trade deficit jumps to 6-year high of US\$51.4 billion

The US trade deficit in March jumped to the highest level in more than six years as a small increase in exports was swamped by a flood of imports from cars to cellphones. The deficit rose to US\$51.4 billion, the largest trade gap since October 2008 and more than 43 percent higher than the February imbalance, the Commerce Department reported Tuesday.

Exports have been hurt by an increase in the value of the dollar against other major currencies over the past year. At the same time, US consumers with more jobs and higher pay may be ramping up demand for foreign-made goods, further exacerbating the trade gap.

For the first three months of this year, the trade deficit was 5.2 percent higher than the same period a year ago. A larger trade deficit acts as a drag on growth because it means more US producers are losing sales to foreign competitors. For March, the deficit with China surged 38.7 percent to US\$31.2 billion. The US trade deficit with China is the largest for any country and is on track to set another record this year.

Manufactured goods make up the bulk of US's exports and the competition is especially strong. The manufacturing sector faces significant challenges from the effects of falling export demand and rapidly changing technology. The US Department of Commerce's Manufacturing Council has been working to recommend ways for the US government to help US manufacturers alleviate the lack of export competitiveness. For the export industry, the question is how best to maintain the quality of exports in an increasingly competitive global economy. The competitive pressure on US manufacturers has forced them to cut costs, adopt lean manufacturing techniques and implement quality control programs that guarantee zero defects in production. Innovation in products, processes and services will be a key determinant for success.

With barriers to trade falling rapidly over the past decade, President Barack Obama has been pushing the benefits of free trade in an effort to convince Congress that it can help ease the trade deficit. To do so, he needs to complete a trade agreement with 11 other nations, an agreement known as the Trans-Pacific Partnership.

Source: www.dailymail.co.uk, 5 May 2015

Extract 7: Widening UK trade deficit highlights challenge for government

Britain's trade deficit widened in the first three months of 2015, highlighting one of the biggest challenges facing the government over the next five years. The deterioration was driven by weaker exports to the EU, as oil exports to countries such as the Netherlands fell.

"The strong pound is hitting demand for UK goods in overseas markets," said Chris Williamson, chief economist at Markit. "Further export losses look likely in coming months, dealing another blow to hopes that the UK economy is rebalancing away from domestic consumption towards exports." David Kern, Chief Economist at the British Chambers of Commerce (BCC) said "It is disappointing that the trade deficit widened again. While the decline was only slight, the weaknesses in the global economy like the weak Eurozone are still a problem and the challenges facing UK exporters are being made even greater by the strengthening pound."

With the economic recovery set to be fuelled this year by strong growth in consumer spending, it remains more likely that imports will grow at a faster rate than exports.

Source: www.telegraph.co.uk, 8 May 2015

Figure 1: External Debt, Top 5 – World (US\$ Billion)



Source: <https://www.cia.gov/library/publications/the-world-factbook/>, 1 January 2014

Figure 2: UK's Balance of Trade (in billion US dollars)

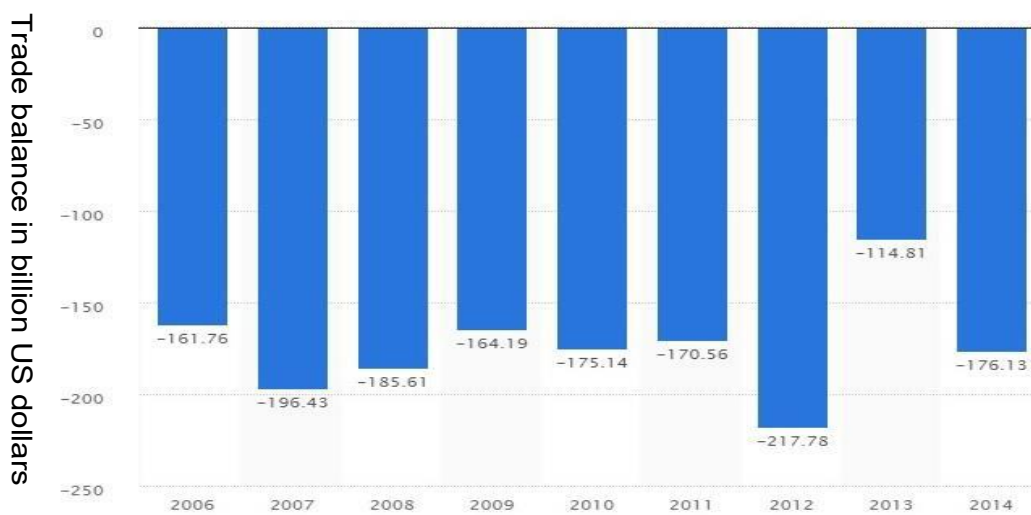
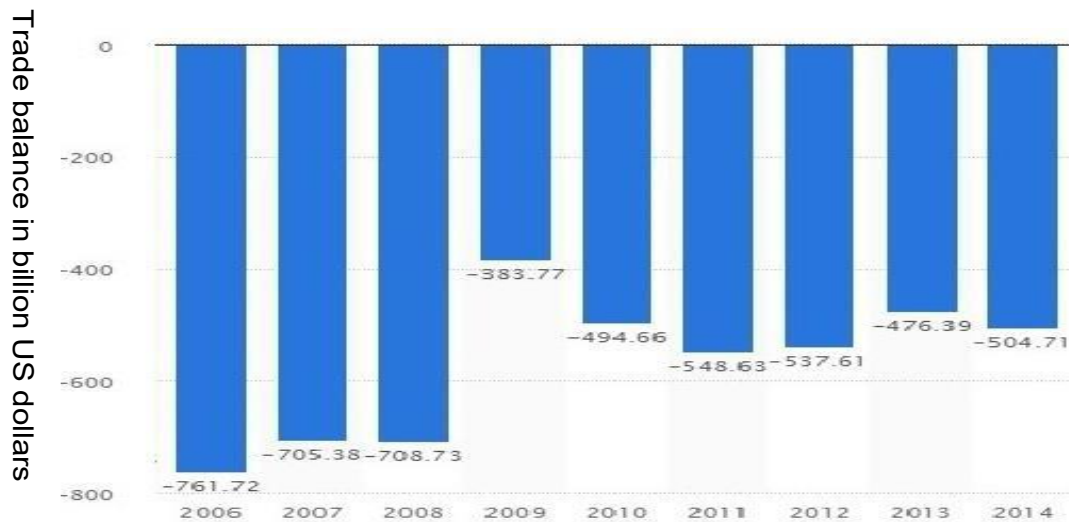


Figure 3: US's Balance of Trade (in billion US dollars)



Source: www.statistica.com/stats

Questions

- (a) Using Figures 2 and 3, compare the change in the balance of trade of US with that of UK between 2006 and 2014. [2]
- (b) Using AD/AS analysis, explain how 'the inevitable rise in interest rates over the next few years could weaken the economy' (Extract 4). [4]
- (c) Compare the causes of the trade deficit in US and UK. [6]
- (d) Extract 7 says that UK's widening trade deficit would be a big challenge facing the government over the next five years. Discuss the impact of a worsening trade balance on the UK economy and its living standards. [8]
- (e) Assess the view that signing free trade agreements is the most effective policy to correct the trade deficit in the US. [10]

[Total: 30]



**Jurong Junior College
2015 JC2 Preliminary Examination**

ECONOMICS

Higher 2

9732/02

Paper 2

14 September 2015

2 hours 15 minutes

READ THESE INSTRUCTIONS FIRST

Write your name and class on all the work you hand in.
Write in dark blue or black pen on both sides of the paper.
You may use a soft pencil for any diagrams, graphs or rough working.
Do not use staples, paper clips, highlighters, glue or correction fluid.

Answer **three** questions in total, of which **one** must be from Section A, **one** from Section B and **one** from **either** Section A or Section B.

Start each question on a new piece of paper.

Fill in the necessary information on the cover sheet.

At the end of the examination, fasten all your work securely **with the cover sheet at the top.**

The number of marks is given in brackets [] at the end of each question or part question.

Answer **three** questions in total.

Section A

One or two of your three chosen questions must be from this section.

- 1 Dining options are often varied, ranging from high-end fine dining to the quick and cheap options in hawker centres.

Discuss the effects of falling rental costs and economic recession on the markets for fine dining and hawker food. [25]

- 2 (a) Explain the relevance of barriers to entry to a firm's decisions on price and output. [12]

(b) Assess whether profit-maximising firms should adopt the strategy of mergers and acquisitions. [13]

- 3 Many working parents enrol their children in childcare centres for supervision during the day. In Singapore, parents are eligible for a basic subsidy of \$300 per child for childcare services. In contrast, in the United States, childcare subsidies are not given.

(a) Explain how the price mechanism allocates resources efficiently in a free market. [10]

(b) Assess the economic case for the two different approaches towards childcare services in Singapore and United States. [15]

Section B

One or two of your three chosen questions must be from this section.

- 4 (a) Explain how economists compare the economic performance of different countries. [10]
- (b) Discuss the extent to which trade-offs between different macroeconomic objectives may occur when a country seeks to improve its economic performance. [15]
- 5 (a) Explain why governments aim to achieve internal and external price stability. [10]
- (b) Assess the relative effectiveness of monetary policy and fiscal policy in achieving economic growth in different economies. [15]
- 6 Discuss whether a country that practises protectionism should adopt free trade instead. [25]



JURONG JUNIOR COLLEGE

2015 JC2 ECONOMICS 9732 (H2)

PRELIMINARY EXAMINATION

ANSWER BOOKLET

Suggested Answers for 2015 J2 H2 (9732) Economics Prelim Case Study Questions

Question 1

(a) Compare the changes in the average daily ridership of bus with that of taxi between 2010 and 2014. [2]

- The average daily riderships of bus and taxi have both increased between 2010 and 2014. (1m)
- The average daily ridership of bus increased at a faster rate of 17.3% compared to taxi which increased at a rate of 11.8%. (1m)

(b) With reference to Table 2:

(i) Explain the difference in value of the price elasticity of demand for public transport during peak period compared to off-peak period. [2]

- The demand for public transport during peak period (-0.15 to -0.3) is more price inelastic (1m) than that for off-peak periods (-0.3 to -0.6) as the degree of necessity (1m) of public transport is higher during peak periods as people need to take public transport to get to work or school on time. Hence the quantity demanded for public transport during peak periods is less responsive to prices compared to off-peak periods.

(ii) Explain the value of the cross elasticity of demand between private automobile travel and public transport. [2]

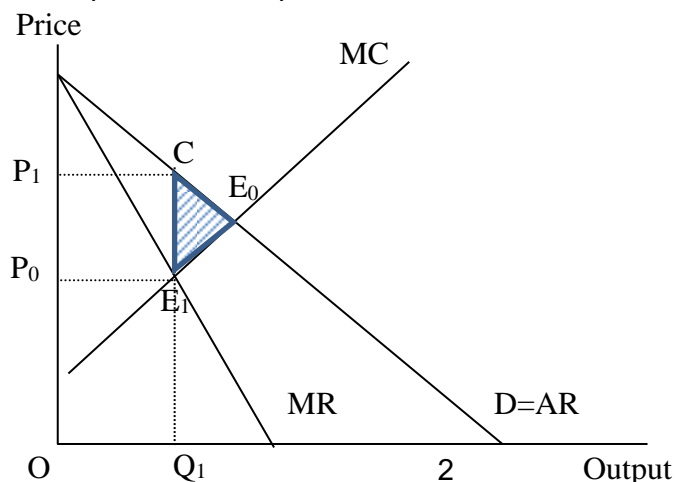
- Private automobile travel and public transport are substitutes as seen by the positive cross elasticity of demand value of 0.03 to 0.1. (1m) They are substitutes as they are both transport options.
- However, they are weak substitutes as the CED value is relatively low. They are weak substitutes as they offer a different level of comfort and convenience. (1m)

(c) Compare the likely barriers to entry facing potential entrants to the taxi industry with those to taxi booking apps like Uber. [2]

- Barriers to entry are potential obstacles that impede the entry of firms into an industry, thereby limiting the amount of competition faced by existing firms. Potential entrants to the taxi industry will face significantly higher barriers to entry (1m) compared with those to taxi booking apps like Uber.
- As seen in Extract 1, potential entrants to the taxi industry face high barriers to entry due to the high initial capital outlay (1m) required to acquire and build up their taxi fleet. Companies like taxi booking apps face lower barriers to entry as they do not need to incur hardware infrastructure costs, making it easier for them to enter the industry once they have developed the relevant technology.

(d) Explain the market structure which the current bus industry operates in Singapore and how it can be a source of market failure. [4]

- As seen from Extract 3, the current bus industry in Singapore operates as an oligopoly as it is dominated by 2 large firms SMRT and SBS Transit.
- As there are only 2 firms in the industry, each firm has high market power. This gives rise to market dominance and the ability of the firms to charge a price above marginal cost. As seen in the diagram below, the firm will produce at output Q_1 , where $MR = MC$. The equilibrium price is at P_1 .



- This gives rise to allocative inefficiency as when price (P_1) is greater than marginal cost (P_0), the value that society places on the last unit of the good is higher than the marginal cost of producing it. Hence there is welfare loss as shown by the shaded triangle.

Correct identification of oligopoly market structure with evidence - 2m

Explanation of how it results in market dominance (market failure) - 2m

(e) Extract 2 states that the taxi companies levy a surcharge of 25 percent of the metered fare during the peak period and 50 per cent during the midnight period.

Discuss whether the different taxi surcharges for the peak hour and midnight period mentioned in Extract 2 is an example of price discrimination, and explain the desirability of such a pricing policy. [8]

Price discrimination is the practice of charging different groups of people different prices for the same product for reasons not associated with differences in costs of production. In Extract 2, it was mentioned that taxi companies levy a surcharge of 25 per cent of the metered fare during the peak period and 50 per cent during the midnight period. Hence taking a taxi during midnight is more costly than during peak hour.

Thesis: Yes, the proposed pricing policy is an example of price discrimination

- This pricing policy seems to fit the description of **third-degree price discrimination** which is the practice of grouping consumers into two or more independent markets, provided each market has a different price elasticity of demand, and charging each market a separate price.
- Next, the conditions for price discrimination are met. Firstly, the taxi industry operates like an oligopoly where the biggest player - ComfortDelGro - holds over 50 per cent of the market share. Hence, the taxi companies do have the market power necessary to influence the pricing.
- Secondly, resale of the taxi ride during peak hour and midnight is impossible since the time period is different and there is no way for a commuter who is paying a lower fare during peak hour to resell it to another commuter taking the ride during midnight.
- Thirdly, the market can be segmented based on the PED of commuters of taxis. The demand of the commuters during midnight is likely to be more price inelastic as there is a lack of substitutes of public transport during midnight, hence they are charged a higher price. The demand of commuters during peak hour is likely to be more price elastic as there are substitutes like MRT and buses available during the period. Hence, they are charged a lower price.

Therefore, based on the above considerations, this is likely to be an example of price discrimination.

Anti-thesis: The proposed pricing policy is not an example of price discrimination

- On the other hand, the proposed pricing policy may not be a case of price discrimination as the costs of providing the taxi service to the 2 groups of commuters could be different. For example, during midnight, it would be harder for the taxi drivers to find commuters wanting a taxi and they might have to spend more on petrol cost driving the taxi around to look for customers, hence they incur a higher cost compared to peak hour where it would be relatively easier to find commuters.

Conclusion and Evaluation:

- In conclusion, it is **likely to be an example of price discrimination** as it fits all the three conditions. Moreover, the additional cost incurred during midnight is unlikely to be significant and might not make up a big proportion of the total cost which includes rental of the taxi.

Explain the desirability of such a policy

- The higher surcharge during midnight creates an incentive for taxi drivers to ply the roads during midnight.
- If they are not able to charge a higher fare during midnight, their earnings may not be able to cover their costs and they might not offer the service.

- Hence the pricing policy is desirable as the higher surcharge during midnight helps to increase the taxi drivers' earnings and ensure that taxis are available during midnight which would benefit commuters who require the service during midnight.

Marking Scheme		
L2	Well-developed two-sided explanation on whether the pricing policy is an example of price discrimination. <u>Maximum 4 marks</u> if answer is 1-sided. <u>6 marks only</u> if answer includes a reasoned assessment (evaluation) on whether the pricing policy is an example of price discrimination.	4-6
	Under-developed two-sided explanation on whether the pricing policy is an example of price discrimination. <u>Maximum 3 marks</u> for answers with no case study evidence.	1-3
2 additional marks for explanation of the desirability of the pricing policy		
	Desirability of the pricing policy well explained.	2
	Explanation of the desirability of the pricing policy is underdeveloped.	1

- (f) Assess the impact of introducing competitive bus contracting on consumers, producers and the society. [10]**

Impact on consumers

- The increase in competition will lead to higher service levels for commuters over time (Extract 3) as the bus operators will now have to bid to run the service. As such they would have to improve on their quality standards such as frequency of buses and waiting times to increase their chances of winning the bids.
- As the fare revenue is now collected by the government, the firms would not be able to exploit their market power by charging prices above marginal cost. Hence if the government keeps the fares low and affordable, consumer welfare will improve.
- Bus contracting will strengthen the government's ability to respond faster to changes in travel demand and service level expectations compared to the incumbent operators as the government is not driven by profits, hence it would be able to react faster to increase capacity and improve service standards rather than being concerned over whether the capital and operating expenses can be covered by the fare revenue (Extract 3).
- Moreover, the government can choose to run services even if the routes are unprofitable for example in industrial areas or less populated estates as they are not bounded by the need to make profits unlike the private firms. This would improve accessibility for consumers.
- As the government will now take over the bus infrastructure and operating assets, the operators will be able to focus their resources on improving their quality of service and service standards.
- Overall, the impact on consumers is largely positive as service levels and accessibility would improve which would enhance the convenience of traveling and the experience of taking public transport.
- However, as the operators are paid fees by the government, their profits might be curtailed which might limit their ability to engage in R&D to improve their service. The uncertainty over the extension of their contracts might also hinder them from making long term investment in R&D. Hence consumer welfare might be compromised.

Impact on producers

- The introduction of more competition into the industry will likely reduce the market share of SMRT and SBS Transit as the government is likely to award the twelve bus packages to different bidders to increase diversity in the market.
- The firm's ability to reap economics of scale might be reduced as their scale of operation might not be that extensive compared to the current situation as each package has only about 300-500 buses each.

For example, their ability to reap financial EOS might be reduced as larger firms are often able to get bank loans at lower rates of interest and with better conditions due to their credit-worthiness. Hence their average cost might increase which would reduce their profits given that they are paid fees by the government.

- As the operators are paid fees by the government, their supernormal profits might be reduced compared to the current system where they can retain whatever profits they have made.
- New bus operators would benefit as it is now easier for them to enter the industry as they no longer have to incur huge initial capital outlay with the government taking over the infrastructure. Private bus operators for example can now make inroads into the public bus sector.
- Overall, the impact on incumbents would be negative due to the fall in market share while new bus operators would benefit as they can enter a new market.

Impact on society (efficiency, equity)

- As the fare revenue is now collected by the government, the firms would not be able to exploit their market power by charging prices above marginal cost. Hence if the government keeps the fares low and affordable, the extent of allocative inefficiency and welfare loss would be mitigated.
- As the operators are paid fees, their supernormal profits might be curtailed. This may improve income equity as the profits are less concentrated in the hands of a few producers at the expense of the majority consumers.
- The lack of investment on R&D due to the lack of funds might reduce the level of innovation and dynamic efficiency.
- Overall, the introduction of competitive bus contracting is likely to improve equity and efficiency.

Conclusion and Evaluation

Stand + justification

- In conclusion, the impact of introducing competitive bus contracting is likely to be positive on the consumers, new bus operators and society. The incumbent operators are likely to suffer.
- It is expected that the move would greatly increase bus service standards as the increase in competition will spur firms to deliver more efficient and effective services which is crucial for consumers given the increasing ridership of buses over the years.
- The lack of R&D can be mitigated if the government spends resources to engage in R&D to improve the service for example by providing bus arrival times at bus stops.
- Moreover the bus contracting will be implemented in phases over several years to ensure a smooth transition for all involved and that the incumbents have enough time to adjust and adapt.

Marking Scheme		
L2	Well-developed explanation of the impact of introducing competitive bus contracting on consumers, producers and the society. <u>Maximum 4 marks</u> for answers without reference to case study evidence. <u>Maximum 4 marks</u> if only 2 parties are covered.	4 – 6
L1	Under-developed explanation of the impact of introducing competitive bus contracting on consumers, producers and the society.	1 – 3
E1	Underdeveloped analysis of the extent or types (positive or negative) of impact.	1 – 2
E2	Overall judgement that is well supported by case study evidence and well-developed analysis of the extent or types (positive or negative) of impact.	3 – 4

CSQ2

a) Using Figures 2 and 3, compare the change in the balance of trade of US with that of UK between 2006 and 2014. [2]

- Similarity: Both balance of trade accounts are in a deficit throughout. (1m)
- Difference: The balance of trade deficit in US is improving while the deficit in UK is worsening. (1m)

b) Using AD/AS analysis, explain how ‘the inevitable rise in interest rates over the next few years could weaken the economy’ (Extract 4). [4]

- An increase in interest rate will increase the cost of borrowing. Marginal projects which were profitable at lower interest rates become unprofitable, thus investment decreases. At the same time, the increase in cost of borrowing will cause consumers to reduce their spending, especially on big ticket items as they borrow less. Households will also increase their savings and reduce consumption as the opportunity cost of consumption increases.
- When consumption and investment falls, aggregate demand decreases, shifting AD curve from AD_0 to AD_1 to the left as shown in Figure 1. This will reduce national income by the multiple, through the multiplier process as real GDP falls from Y_f to Y_1 , thus weakening the economy.

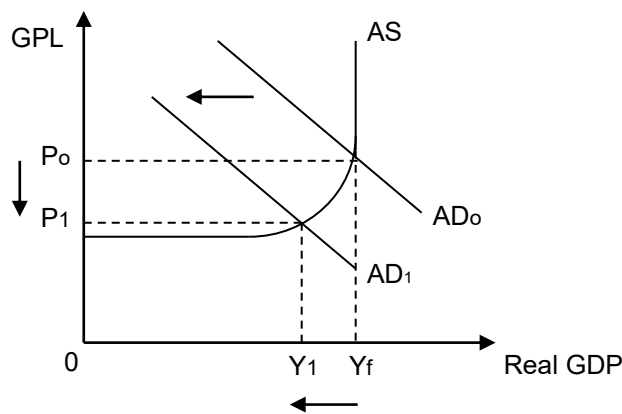


Figure 1

*3m for explanation of how C and I lead to the weakening of economy
1m for the diagram and explanation*

c) Compare the causes of the trade deficit in US and UK. [6]

Similarities:

1) Strong Currency (USD/Pound) (Extracts 5, 6 and 7)

- Appreciation of the USD/Pound has eroded the export competitiveness of the US/UK products in the international market. It will cause the prices of exports to become relatively more expensive in foreign currencies. At the same time, a stronger USD/Pound will make the price of imports cheaper in terms of domestic currency. Assuming that Marshall-Lerner condition holds where the sum of the price elasticity of demand for exports and imports is greater than one, net exports will fall, hence leading to a trade deficit.

2) Strong growth in consumer spending (Extracts 6 and 7)

- There is an increase in consumption in both US and UK. The increase in consumption will lead to an increase in demand for imports and thus import expenditure. Assuming that export earnings remained unchanged, this may contribute to a trade deficit.

Difference (Extracts 6 and 7):

- The weak Eurozone will lead to a fall in national income in EU. This reduces their purchasing power and consumption, leading to a fall in demand for imports. They will now thus demand less of UK's exports leading to fall in export revenue. Ceteris paribus, this might lead to a trade deficit. US

on the other hand experiences a fall in export demand probably due to the lack of export competitiveness of its manufactured goods in terms of quality for example. The corresponding fall in export revenue will lead to a trade deficit assuming ceteris paribus.

2m for each factor explained.

- d) **Extract 7 says that UK's widening trade deficit would be a big challenge facing the government over the next five years. Discuss the impact of a worsening trade balance on the UK economy and its living standards. [8]**

Explain how a worsening trade deficit affects external stability (BOP and ER)

BOP

- From Extract 7, a worsening trade deficit may contribute to a huge and persistent balance of payments deficit and can be a cause of concern for the UK government. It may lead to falling foreign reserves or borrowing which will lead to external debt. Figure 1 shows that UK is ranked second with the largest external debt in the world.
- There will be an opportunity cost incurred as the funds used to repay the debt could be used for infrastructural development which helps to create growth.

ER

- There is also a risk that the Pound will depreciate due to the worsening trade deficit. The fall in export revenue will lead to a fall in demand for Pound while the increase in import expenditure will lead to an increase in supply for Pound, leading to the depreciation. With the weakening of the Pound, it will also encourage capital flight and discourage short term capital inflow to the UK as speculators anticipate the Pound to depreciate further. This will worsen the capital account.

Extent of impact

- The impact is large as a worsening trade deficit will hinder UK's attempt in rebalancing the economy from consumption towards exports.
- The huge external debt accumulated will also lead to adverse consequences in the long run.

Explain how a worsening trade deficit affects internal stability (EG, N and inflation)

EG, N

- Net exports is a component of the aggregate demand (AD). A worsening trade deficit or fall in net exports will reduce aggregate demand and decrease national income by the multiple, through the multiplier effect. Actual growth will fall.
- Firms will then adjust to this fall in demand by decreasing the level of production and hire less factors of production which include labour. Cyclical unemployment will rise.

Extent of impact

- The extent of impact on growth and employment depends on UK's multiplier size. If UK's multiplier size is large, the impact might be large.
- The extent also depends on the state of the economy. If UK is near or at full employment, a fall in AD may lead to a fall in GPL instead of a fall in real income, thus mitigating the impact.

Inflation

- With a weakening Pound, imports will be relatively more expensive in terms of domestic currency. This will lead to imported inflation. If imported raw materials become more expensive, cost of production will rise which leads to cost push inflation.

Extent of impact

- The extent of impact might not be that severe as UK is not heavily dependent on imports as being a large country, it is likely to have an abundance of raw materials.

Explain how a worsening trade deficit affects living standards.

- If the population remains unchanged, the fall in national income will lead to a fall in real per capita income. This will cause a fall in purchasing power and consumption of goods and services. Quantitative standard of living will worsen.
- However if the worsening trade deficit is mainly due to the rising import expenditure, qualitative SOL might have risen as consumers consume better quality imports.

Conclusion and Evaluation

- A worsening trade deficit poses a challenge for the government as it can impact UK's macroeconomic goals and standard of living adversely.
- Overall, the impact might not be that severe as Extract 7 mentioned that the trade deficit only worsened slightly. However, the large amount of external debt is a huge concern and the government does need to prevent the trade deficit from worsening.
- The overall impact of a worsening trade deficit also depends if the trade deficit can be offset by a surplus in the invisible trade or/and capital account. If the trade deficit can be offset by such surpluses, it may not be a concern to the UK government as the impact on the UK economy might not be that serious.

Marking Scheme		
L2	Well-developed analysis of the impact of a worsening trade deficit on the UK economy and its living standards.	7-8
	AND Reasoned assessment (evaluation) on the overall impact.	
L1	Under-developed explanation of the impact of a worsening trade deficit on the UK economy and its living standards.	4-6
	<u>Maximum 4 marks</u> for answers with no case study evidence.	
L1	Smattering of valid points.	1-3

e) Assess the view that signing free trade agreements is the most effective policy to correct the trade deficit in the US. [10]

- A large and persistent trade deficit in the US can bring about negative impacts on both the internal and external stability of the economy. The US government can sign free trade agreements to correct the surging trade deficit. Extract 6 mentioned that President Barack Obama needs to complete a trade agreement with 11 other nations, an agreement known as the Trans-Pacific Partnership to help correct the trade deficit.

Thesis: Signing free trade agreements is the most effective policy to correct the trade deficit in the US.

Signing Free trade agreements

- Signing free trade agreements (FTAs) is the most effective policy to correct a trade deficit in the US because she will benefit greatly from the lowering or removal of tariffs by other countries as it means that US exports will now be cheaper. This will improve the price competitiveness of the exports. Assuming that the demand for US exports is price elastic due to the availability of substitutes, a fall in the price of exports will lead to a more than proportionate increase in the quantity demanded of exports, increasing US export revenue, correcting the trade deficit, ceteris paribus.

Anti-thesis: Signing free trade agreements is not the most effective policy to correct the trade deficit in the US.

Limitations

- With FTAs, it becomes easier for foreign firms to compete with US firms. This may hurt the local firms and force them out of the industries if they are unable to compete with the foreign firms. This

will result in unemployment in the US. Strong foreign competition may also deter potential local investment from taking place if the business sentiment is not optimistic.

Supply side policy

- Besides signing FTAs, US can look at other policies to correct the trade deficit. Extract 6 states that the best way to maintain the quality of exports in an increasingly competitive global economy is through innovation in products, processes, and services. Supply-side policies could be used to retrain workers and subsidise research and development to further improve the efficiency of the production process as well as the quality of products. This will enhance US export competitiveness and help her expand the reach of her exports.
- The US government could also develop research facilities to make US exports more competitive while moving towards an innovative economy in the era of globalisation. The introduction of new products or the increase in quality can lead to an increase in the demand for exports, thus increasing export revenue and correcting the trade deficit, ceteris paribus.

Limitations

- However, huge funding is required and it depends on the ability of the US government to fund such R&D initiatives. The use of the government funds also incurs an opportunity cost as these funds could be spent on other areas like healthcare.

Depreciation of the USD

- From Extracts 5 and 6, one of the root causes of the trade deficit is the strong dollar. Thus, to effectively correct the trade deficit, the US government can allow the US dollar to weaken since the USD has been strong as mentioned in the data. As the USD depreciates, exports will become relatively cheaper in foreign currencies and imports will become relatively more expensive in USD. Assuming that Marshall-Lerner condition holds where the sum of the price elasticity of demand for exports and imports is greater than one, net exports will increase, hence correcting the trade deficit.

Limitations

- The adversely affected trading partners might eventually retaliate by lowering the value of their currencies too, which will cancel out the favourable effects of the depreciation by US. It will also result in hot money outflow as speculators expect the currency to depreciate further in the future, leading to a worsening of the capital account. US is an international financial hub and the USD is heavily traded hence the extent of the capital flight would be large.
- Depreciation of the USD might also lead to imported inflation as imports are now relatively more expensive in terms of domestic currency. Domestic firms that use imported raw materials might pass the higher cost to their consumers in the form of higher prices, increasing the cost of living.

Conclusion and Evaluation

- Overall, signing free trade agreements is not the most effective policy to correct a trade deficit because it takes time for countries to agree to the terms and sign the agreement and it does not solve the root causes of the problem. The trade deficit in the US is largely due to the strong USD and the lack of export competitiveness in terms of quality.
- To correct the trade deficit more effectively, it is important that the US government introduces a combination of policies to tackle her worsening trade deficit. For example, in the long run, the US government can continue provide funds for research and development to develop new comparative advantages to address the problem of the lack of export competitiveness. Meanwhile in the short run, the government can allow the USD to depreciate to prevent the trade deficit from worsening further.

**Protectionism and CMP/CFP not accepted.*

Level	Mark Scheme	Marks
L2	<p>Well-developed explanation of how FTAs and two alternative polices can correct the trade deficit with strong use of case study evidence.</p> <p><u>Maximum 4 marks</u> for answers without reference to case study evidence.</p> <p><u>Maximum 4 marks</u> for well-developed explanation of FTAs and one other policy.</p>	4 – 6
L1	<p>Under-developed explanation of how FTAs and alternative policy/policies can correct the trade deficit, with some use of case study evidence.</p> <p>Or</p> <p>Well-developed explanation of how FTAs can correct the trade deficit without alternative policies, with use of case study evidence.</p>	1 – 3
E1	Underdeveloped analysis of the effectiveness of FTAs and the limitations of the other policies.	1 – 2
E2	Overall judgement that is well supported by case study evidence and well-developed analysis of the effectiveness of FTAs and other policies.	3 – 4

H2 Econs Paper 2 Essays Mark Schemes

- 1 Dining options are often varied, ranging from high-end fine dining to the quick and cheap options in hawker centres.

Discuss the effects of falling rental costs and economic recession on the markets for fine dining and hawker food. [25]

Knowledge, Application, Understanding and Analysis		
L3	For a well-developed explanation of how falling rental costs and economic recession could affect the price and quantity of fine dining and hawker food, with application of elasticity concepts.	15 - 21
L2	For an under-developed answer that gives an explanation of how falling rental costs and economic recession will affect the price and quantity of fine dining and hawker food. <u>Max 12m</u> for a developed answer that synthesizes the demand and supply factors with justifications, linking to price and quantity of fine dining and hawker food. No application of PED and PES. <u>Max 14m</u> for a developed answer that applies PED and PES concepts to analyze the impact of falling rental costs and economic recession on price and quantity. No analysis of simultaneous shifts of demand and supply curves.	9 - 14
L1	For a smattering of valid points, or an answer that shows descriptive knowledge of how falling rental costs and economic recession affect the demand and supply of fine dining and hawker food.	1 - 8
Evaluation		
E2	For an evaluative assessment based on economic analysis, e.g. depends on severity of recession and other factors such as degree of competition.	3 - 4
E1	For an unexplained assessment or one that is not supported by economic analysis.	1 - 2

**Acceptable for students to argue that hawker food is a necessity.*

Introduction

Falling rental costs and an economic recession will affect the supply and demand for fine dining and hawker food respectively. However, the impacts differ based on the income elasticity of demand, and price elasticity of demand and supply of each of the goods.

Body

Analysis of demand and supply factors

A decrease in rental costs leads to a fall in cost of production of fine dining and hawker food. As a result, the profit margin of producing these two goods will increase, thus increasing the incentive of producers to supply these two goods. Hence, the supply of both fine dining and hawker food will increase.

On the other hand, an economic recession will lead to a different impact on hawker food and fine dining based on their income elasticity of demand (YED). Income elasticity of demand measures the responsiveness of the demand for a good to a given change in the level of income, ceteris paribus. Hawker food is widely deemed to be of lower quality and is considered to be an inferior good ($YED < 0$). An economic recession causes incomes to fall. As a result, consumers switch to inferior goods, and the demand for hawker food rises. However, fine dining is considered to be a luxury good ($YED > 1$). As such, during an economic recession when income and purchasing power falls, the demand for fine dining will fall more than proportionately to income.

Synthesize demand and supply factors

[Note: any reasonable argument other than those listed below is accepted]

According to the above analysis, there will be an increase in demand and supply of hawker food. The increase in demand for cheap food options like hawker food during a recession is expected to be very significant as workers are retrenched and many people experience a fall in income. However, the increase in supply of hawker food due to falling rental costs may be less significant as hawkers require a license to operate. Although falling rental costs increases their profit margin and incentive to supply, the number of licenses is regulated by the government. As such, the resultant increase in supply is not as significant.

As such, falling rental costs and an economic recession will lead to a rightward shift of the supply curve from S_1 to S_2 , and a larger rightward shift of the demand curve from D_1 to D_2 respectively, as shown in Figure 1. There will be an overall increase in equilibrium price from P_1 to P_2 and an increase in quantity from Q_1 to Q_2 . There will be increase in revenue from $(P_1 \times Q_1)$ to $(P_2 \times Q_2)$ for sellers of hawker food while consumers' expenditure on hawker food will increase by the same amount.

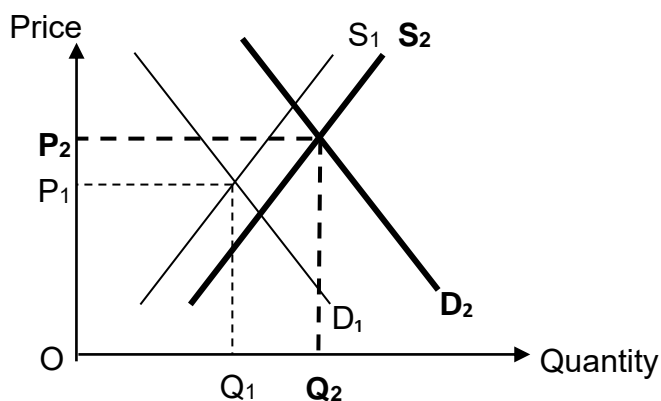


Figure 1: Market for hawker food

With regard to fine dining, falling rental costs and an economic recession will lead to an increase in supply and a fall in demand respectively. The fall in demand is expected to be very significant as fine dining is a luxury good and demand will fall more than proportionately to the fall in income. On the other hand, the increase in supply will be less significant as rental costs take up only a proportion of the total costs of running a restaurant (which include labour costs and cost of ingredients), leading to a limited fall in cost of production.

Combining the two effects, the increase in supply of fine dining is shown as a rightward shift of the supply curve from S_1 to S_2 , while the more significant fall in demand is illustrated by the larger leftward shift of the demand curve from D_1 to D_2 , as shown in Figure 2. There will be an overall fall in equilibrium price of fine dining from P_1 to P_2 and a fall in quantity from Q_1 to Q_2 . There will be fall in revenue from $(P_1 \times Q_1)$ to $(P_2 \times Q_2)$ for producers of fine dining while consumers' expenditure on fine dining will decrease by the same amount.

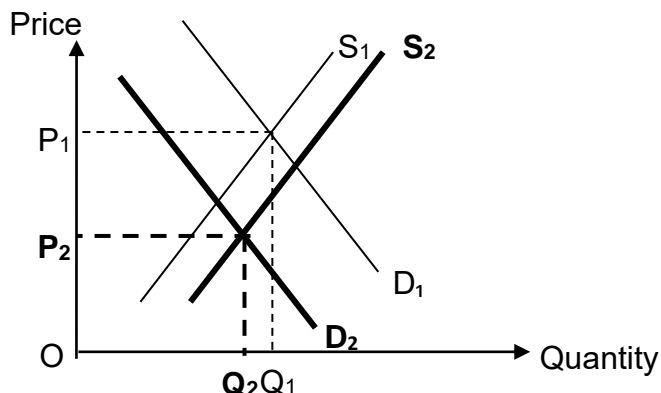


Figure 2: Market for fine dining

Extent of impact of falling rental costs - Apply PED

[Note: any reasonable justification of PED and PES values is accepted]

The concepts of price elasticity of demand and supply are required to examine the **extent** of the impact on price and quantity of falling rental costs and an economic recession on the two goods.

Price elasticity of demand (PED) is defined as the responsiveness of quantity demanded of a good to a given change in the price of the good itself, *ceteris paribus*. Fine dining is expected to have a price elastic demand ($PED > 1$) as it takes up a large proportion of income, as illustrated by D_e in Figure 3. On the other hand, hawker food is expected to have a price inelastic demand ($PED < 1$) since hawker food takes up a small proportion of income, as represented by D_i .

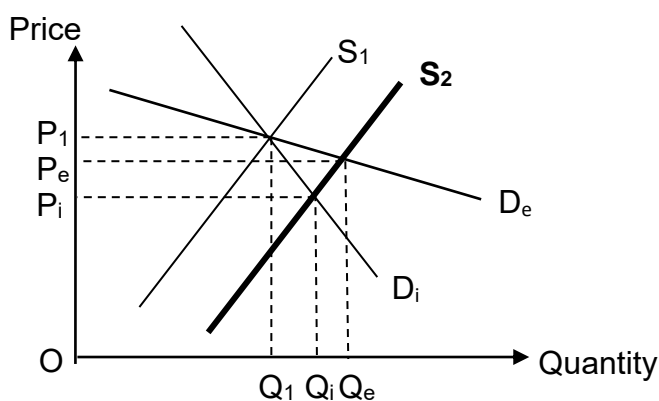


Figure 3: Increase in supply

When there is a fall in rental costs, the supply of both hawker food and fine dining will increase, as shown by the rightward shift of the supply curve from S_1 to S_2 in Figure 3. However, there will be a less significant fall in the price of fine dining from P_1 to P_e compared to from P_1 to P_i for hawker food. There will also be a more significant increase in the quantity of fine dining from Q_1 to Q_e compared to from Q_1 to Q_i for hawker food. Given the fall in price, TR for hawker food will decrease while the TR for fine dining will increase.

Extent of impact of economic recession - Apply PES

With regard to the extent of the impact on price and quantity due to the economic recession, we need to examine the price elasticity of supply values of hawker food and fine dining. Price elasticity of supply (PES) is defined as the responsiveness of quantity supplied of a good to a given change in the **price of the good itself**, *ceteris paribus*. The supply of fine dining is expected to be price inelastic ($PES < 1$) due to factor immobility. For example, it is difficult to increase the production of fine dining in response to a rise in

price as it is difficult to find chefs that have the technique and skill for producing high quality dishes. Certain ingredients may also be unique and difficult to obtain.

As a result, the supply of fine dining is indicated by S_i in Figure 4. The economic recession and resultant fall in income is expected to cause a decrease in demand for fine dining, since it is a normal good. This is represented by the leftward shift of the demand curve from D_1 to D_2 .

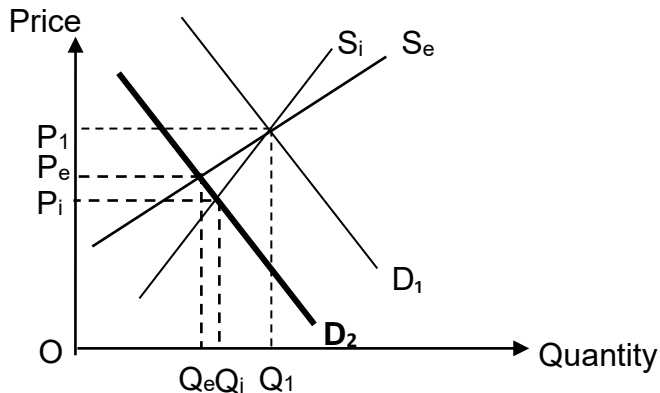


Figure 4: Fall in demand for fine dining

The fall in demand will produce a more significant fall in price of fine dining from P_1 to P_i compared to the fall in price from P_1 to P_e for a good with price elastic supply (S_e). In addition, there will be a less significant decrease in quantity of fine dining from Q_1 to Q_i compared to the fall in quantity from Q_1 to Q_e of a good with price elastic supply (S_e).

On the other hand, the economic recession will lead to an increase in demand for inferior goods such as hawker food. The supply of hawker food is expected to be price elastic ($PES > 1$) because of factor mobility – it is relatively easy to set up another stall due to the less stringent training required to cook the dishes, and the ease of obtaining ingredients.

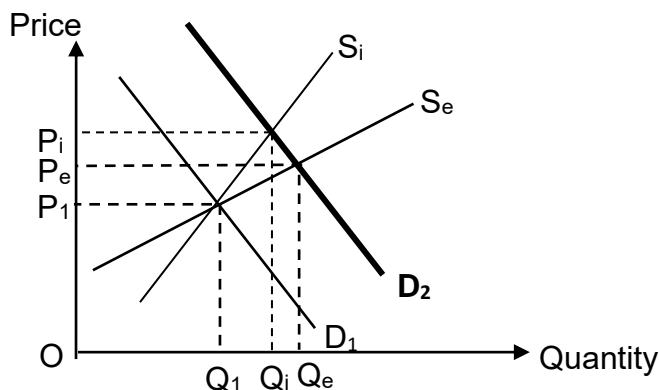


Figure 5: Increase in demand for hawker

The supply of hawker food is indicated by S_e in Figure 5. The increase in demand due to economic recession is represented by the rightward shift of the demand curve from D_1 to D_2 . The increase in demand will produce a less significant increase in price of hawker food from P_1 to P_e compared to the increase in price from P_1 to P_i for a good with price inelastic supply (S_i). In addition, there will be a more significant increase in quantity of hawker food from Q_1 to Q_e compared to the increase in quantity from Q_1 to Q_i of a good with price inelastic supply (S_i).

Conclusion and evaluation

Justification 1:

Overall, the impact on the market due to falling rental costs and economic recession depends on the nature of the good and the proportion of costs represented by rentals. The analysis indicates that the combined effect of an economic recession and falling rental costs will lead to a fall in price and quantity of fine dining, but a rise in price and quantity of hawker food. However, factors such as the severity of the recession could also impact the outcome. For example, a mild recession would lead to only a small

increase in the demand for hawker food, in which case the impact of falling rental costs could exert a greater effect, leading to an overall fall in price.

Further justification:

Moreover, firm's strategies may also matter – while the analysis indicates an overall increase in the price of hawker food, individual hawkers may refrain from increasing their price to maintain their competitiveness relative to competing stalls. Fine dining restaurants may also change their menu to less luxurious options to prevent a large decline in the demand for their good in the event of a prolonged recession, thereby preventing such a sharp decrease in their price.

- 2 a) Explain the relevance of barriers to entry to a firm's decisions on price and output. [12]
- b) Assess whether profit-maximising firms should adopt the strategy of mergers and acquisitions. [13]

Part (a)

Knowledge, Application, Understanding and Analysis		
L3	Well-developed analysis of how barriers to entry influence decisions on price and output for all relevant market structures.	9 - 12
L2	Undeveloped explanation of barriers to entry and its impact on market power, with under-developed analysis of how barriers to entry influence price and output decisions in the relevant market structures. Max <u>6m</u> for well-developed explanation of how barriers to entry affects price and output decisions in one market structure. Max <u>8m</u> if the answer does not explain the adjustment to the long-run equilibrium in a market structure with no/low barriers to entry.	6 - 8
L1	A smattering of valid points	1 - 5

Part (b)

Knowledge, Application, Understanding and Analysis		
L3	Well-developed analysis of the benefits and costs associated with mergers and acquisitions. <u>Max 7m</u> for answers without application to real world examples.	7 - 9
L2	Under-developed explanation of the benefits and costs associated with mergers and acquisitions. <u>Max 5m</u> for a one-sided answer that only explains the benefits or the costs associated with mergers and acquisitions.	5 - 6
L1	Descriptive knowledge of what mergers and acquisitions are. A smattering of valid points.	1 - 4
Evaluation		
E2	For an evaluative assessment based on economic analysis, e.g. depends on the nature of the good or ability to reap internal economies of scale.	3 - 4
E1	For an unexplained assessment or one that is not supported by economic analysis.	1 - 2

*Acceptable to argue that firms should not adopt the strategy of mergers and acquisitions as there are other strategies to maximise profits.

Part (a)

Introduction: define BTE

Barriers to entry are obstacles that hinder the entry of new firms into the industry, which can be artificially created or natural. Differing levels of barriers lead to differing degrees to which firms can influence the price and output of their goods and services. Monopoly and oligopoly market structures arise due to high barriers to entry. Firms in a monopolistically competitive market structure face low barriers to entry while firms in a perfectly competitive market face no barriers to entry.

Body

Explain how high BTE affects price and output decisions

Using a monopoly firm as an example, we can illustrate the impact of high barriers to entry on price and output. A monopoly is a market structure in which a single firm produces a unique product, which has no close substitutes. Barriers to entry in a monopoly include artificial barriers to entry, for example patent rights or copyrights issued by the government. There may also be natural barriers to entry, such as the ability to reap internal economies of scale. For instance, Singapore Power is a monopoly due to its high start-up costs of setting up and maintaining the power grid. As such, it is able to reap significant internal economies of scale by producing at a large output, thereby producing at a very low average cost and selling at a low price that cannot be matched by a new entrant producing at a lower output and higher average cost.

Monopoly power implies that the demand curve of the firm is downward sloping, since the firm has the ability to set either the price or the quantity. The demand curve is also relatively price inelastic since the good produced has no close substitutes.

Consider a monopolist making supernormal profits in the short run. Referring to Figure 1, the profit-maximising firm will determine its price and output using the profit-maximizing condition where marginal cost equals marginal revenue ($MC=MR$), such that output is at OQ_1 and price is at OP_1 .

The total revenue is shown by area OP_1AQ_1 and total cost is given by area $OQBQ_1$. Hence, the monopolist makes supernormal profits of area CP_1AB . Due to the existence of barriers to entry, there will not be entry of new firms into the market even though the firm is making supernormal profits. As such, the monopolist can maintain the price of its goods at OP_1 in both the short run and long run and continue to earn supernormal profits even in the long run.

Comparing directly against a perfectly competitive industry, in which prices are determined where market demand cuts supply, i.e. at P_0 as shown in Figure 1, the monopoly price is higher at P_1 . Also, the monopoly output is lower at Q_1 compared to Q_0 , assuming the cost of production is the same under both market structures.

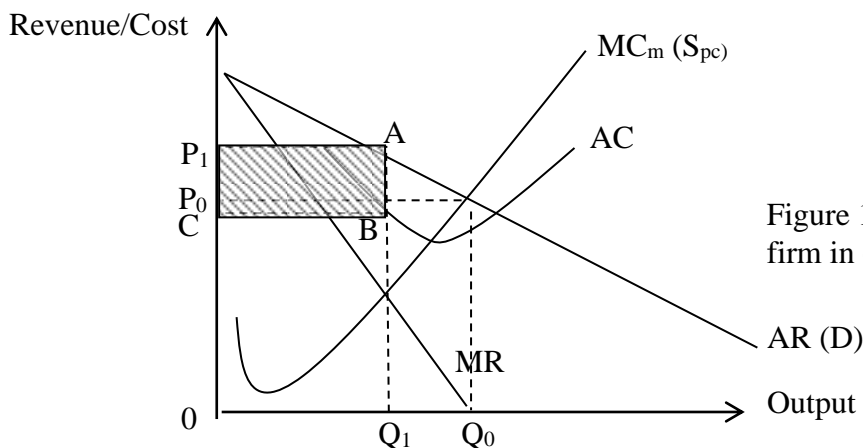


Figure 1: Monopoly firm in equilibrium

Explain how low barriers to entry influence price and output decisions

In contrast, a perfectly competitive market is one where barriers to entry do not exist. A perfectly competitive market also has the characteristics of many buyers and sellers, homogeneous product, perfect knowledge and perfect factor mobility. Due to the absence of barriers to entry, there are many

small firms in the industry. Each seller produces a very insignificant share of the entire market supply such that changes in a firm's output level has no impact on the market supply. Since buyers and sellers cannot influence market demand and supply, then each firm is a price taker.

Referring to Figure 2b below, the equilibrium price in a perfectly competitive market is $0P_1$ in the short run, determined by the industry demand and supply curves. Each firm will take this market price as given. Hence, the lack of barriers to entry causes firms to have no control over the market price.

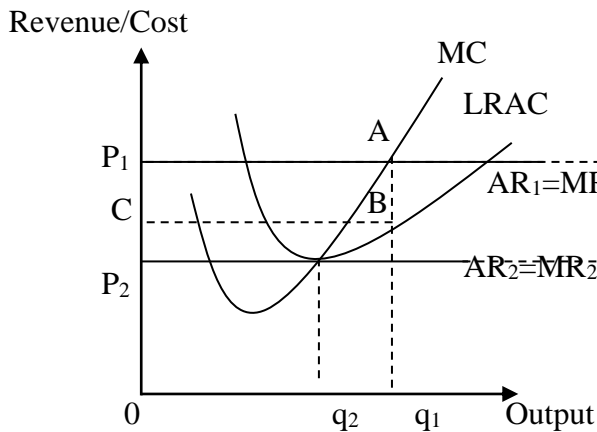


Figure 2a: PC Firm

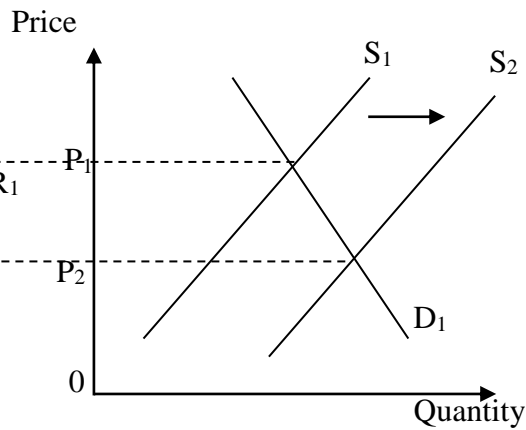


Figure 2b: PC industry

Since the market price is $0P_1$ and each firm is a price taker, the demand curve faced by each firm is a perfectly price elastic and horizontal demand curve as shown in Figure 2a. In addition, since each additional unit is sold at the same price of $0P_1$, average revenue (AR)=MR. Each firm will hence produce at profit maximizing output of $0q_1$ where $MC=MR$ at price $0P_1$. At this price and quantity, each firm is making supernormal profits as shown by area CP_1AB .

In the long run, due to the lack of barriers to entry, new firms will be attracted to join the industry in response to the supernormal profits, leading to an increase in the number of producers and increasing the market supply. This shifts the industry supply curve rightwards. As long as firms make supernormal profits, more firms will enter and the market supply curve will keep shifting to the right. This causes the market price to keep falling. As firms are price takers, their prices will also fall accordingly, and the output produced by each firm will fall as more firms enter the market.

Eventually, when the industry supply curve shifts from S_1 to S_2 , reducing the market price to $0P_2$, all existing firms earn only normal profits and produce at the minimum point of the long run average cost (LRAC) curve. The entry of new firms stops and the supply curve will not shift rightwards anymore. Thus, each price taking perfectly competitive firm that is profit-maximising will price its goods at the new market price of P_2 and earn only normal profits in the long run. All this is due to the absence of barriers to entry.

Conclusion

In conclusion, barriers to entry reduce competition in the industry, enabling firms like a monopolist to price its goods higher than firms facing no barriers to entry, like a firm in a PC market. Moreover, in the long run, the barriers to entry enable a monopoly to maintain its high price and continue to earn supernormal profits, while a perfectly competitive firm earning supernormal profits in the short run will need to price its goods at a new and lower market price in the long run due to the entry of new firms.

Part (b)

Introduction:

Define mergers & acquisitions

Mergers and acquisitions are strategies to enable a firm to grow in size. A merger is the combination of two companies to form a larger company. Different types of mergers include: (i) horizontal mergers, where two or more firms in the same industry and stage of production merge (e.g. DBS merging with POSB in 1998); (ii) vertical mergers, where two firms in the same industry but at different stages of production merge (e.g. a car manufacturer merging with a steel manufacturer); or (iii) conglomerate merger, where firms in different industries merge to form one company (e.g. General Electric, which comprises many businesses such as telecommunications and finance). Acquisitions are takeovers where a larger firm buys up at least 50 percent of the shares of a smaller firm.

Body

Thesis: Profit-maximizing firms should engage in mergers and acquisitions

Profit-maximizing firms aim to maximise revenue and minimise costs. Hence they should engage in mergers and acquisitions due to the revenue and cost benefits.

Revenue benefits include allowing a firm to **increase its market share**, thereby increasing demand for its product and allowing it to earn higher revenue. This is especially true for horizontal mergers between companies in the same industry and stage of production, for example the acquisition of Overseas Union Bank Limited (OUB) by UOB which increased its pool of clients. The increase in market share also tends to **reduce competition**, causing the demand for a firm's product to become less price elastic. If demand becomes price inelastic, the firm could raise its price to increase total revenue, as quantity demanded for its good would decrease less than proportionately to the rise in price.

Mergers and acquisitions also help a firm to **diversify its products**, thereby capturing a wider range of consumers with different tastes and needs, and also becoming less vulnerable to changes in demand for its products. For instance, Facebook acquired mobile messaging service WhatsApp in 2014, thereby ensuring a continued source of revenue even as Facebook declines in popularity. Also, the acquisition of WhatsApp adds a revenue stream from China as Facebook is blocked in China whereas WhatsApp is permitted to operate there.

Cross-border mergers or acquisitions of firms in other countries could provide a firm with an easier avenue for **access to foreign markets** as foreign firms would have better knowledge of market conditions and distribution channels overseas. For example, the acquisition of Asia-Pacific Breweries by the Dutch brewer Heineken allowed it to expand into the fast-growing Asian market by improving its access to distribution channels in Asia.

Larger firms might also be more able to **attract international talents** or have more funds to **engage in R&D**, thereby coming up with better quality products to increase revenue, or more cost efficient production methods to help to increase profit margins for the firm.

Aside from revenue benefits, firms could also reap cost benefits from mergers and acquisitions, such as **reaping internal economies of scale**. For example, UOB could reap managerial economies of scale by practising functional specialization as its accounting and finance departments could now oversee a larger scale of operations, thereby reducing the unit cost of its output. It could also reap marketing economies of scale by spreading the costs of advertising its products over a larger output. This cost benefit is particularly large for firms where the minimum efficient scale sets in at a large output, as illustrated in Figure 3. As the firm's output expands from Q_1 to Q_2 , the average cost of output falls from C_1 to C_2 .

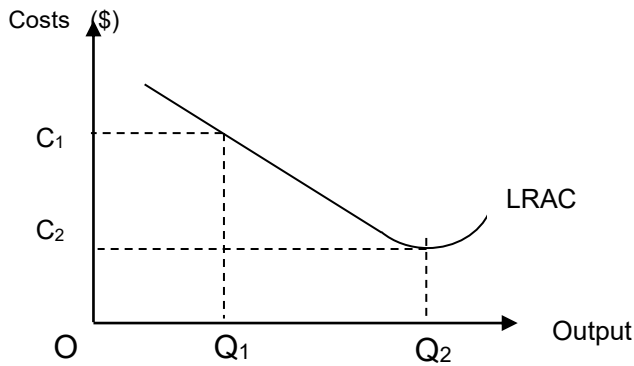


Figure 3

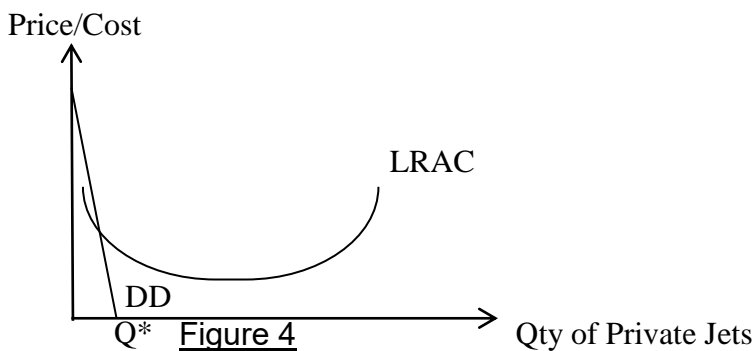
Vertical mergers also help in **cost reduction** as they allow firms to carry out their production with less disruption through better control of the supply of raw materials. For instance, a vertical merger of a car manufacturer with a steel manufacturer would reduce the costs of renewing contracts with steel suppliers.

Anti-thesis: Profit-maximizing firms should not engage in mergers and acquisitions

However, not all firms should engage in mergers and acquisitions as there are several disadvantages associated with this strategy.

Firstly, large firms are not beneficial where **personalised services** are required. For example, hair salons and clinics may choose to remain small in order to provide personalized services to their clients. Moreover, smaller firms are more **nimble** and more able to quickly adapt to changes in market conditions or consumer patterns. For example, the market for home interior design is highly susceptible to changes in income of consumers as it is considered a luxury good, which consumers can do without if they have lower income. Therefore, the demand for home interior design varies greatly according to economic conditions. Hence, firms might choose to remain small as the gain in revenue from expansion is not certain, and the firm would need to adapt quickly to changes in market conditions by changing its offerings of designs and materials.

Moreover, the gain from certain types of mergers like vertical mergers may not be significant if the market size is **small**. The gain from a vertical merger with a firm at a previous stage of production is the benefit of being able to ensure a constant supply of raw materials. For example, a car manufacturer faces a large market demand and produces a large output, and therefore needs to ensure few disruptions to the supply of its raw materials like steel. Therefore, it is likely to engage in a vertical merger with a steel producer. However, the market for other vehicles like private jets may be very small in comparison to that for cars.



From Figure 4, the private jet manufacturer will not be able to expand its output beyond the maximum quantity demanded of Q^* , even though MES is reached at a large output. Therefore, a private jet manufacturer has less need to ensure a constant supply of raw materials due to its small output, and it will gain less from a vertical merger with a steel producer, compared to a car manufacturer.

In addition, a firm may not be able to reap cost benefits from mergers and acquisitions if **internal diseconomies of scale set in at a small output**. In this case, a small firm will be much more cost

efficient than a large one. From Figure 5, a firm producing at output Q_2 will have a higher average cost of production of C_2 compared to a firm producing at a smaller output of Q_1 with average cost C_1 .

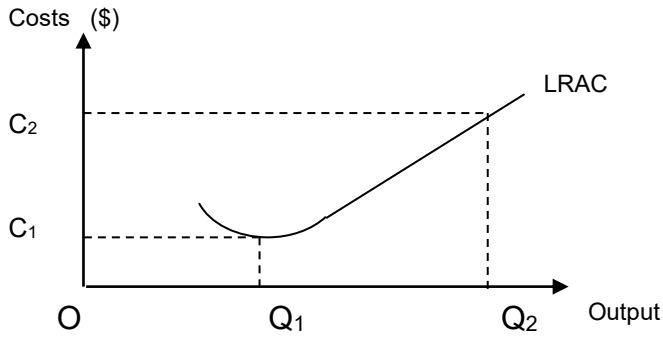


Figure 5

In some cases, the merged firm might become so big that internal diseconomies of scale start to set in. Internal managerial diseconomies of scale may set in due to the difficulty of coordinating between larger departments, or the difficulty of managing complex distribution channels. These problems are likely to occur in conglomerate mergers where each acquired firm runs a different business in a different market, which makes it difficult to manage the conglomerate.

Conclusion and evaluation

Stand and Justification:

Overall, the decision of whether to engage in mergers and acquisitions depends on the relative costs and benefits of this strategy. Mergers and acquisitions are likely to be useful for firms that can reap extensive internal economies of scale, and who face large market demand for their product like smartphones. Firms that face uncertain market conditions or that sell products requiring personalized attention like hairdressing should remain small instead.

Justification 2:

With the increasing trend towards globalization, and an increase in foreign competition, there may be a greater need for firms to merge to gain greater market share and resources in order to remain competitive. For instance, a merger may provide a greater source of funding for research and development to create better and more competitive products.

Justification 3:

The decision of whether to engage in mergers and acquisitions also depends on the type of merger being considered. Conglomerate mergers run a higher risk of incurring internal diseconomies of scale due to the difficulty of managing and coordinating the production of different goods and services and reacting to conditions in different markets. Hence, the decision of whether to engage in such a strategy depends on the firm's ability to manage a larger and more complex scale of operations.

3 Many working parents enrol their children in childcare centres for supervision during the day. In Singapore, parents are eligible for a basic subsidy of \$300 per child for childcare services. In contrast, in the United States, childcare subsidies are not given.

(a) Explain how the price mechanism allocates resources efficiently in a free market. [10]

(b) Assess the economic case for the two different approaches towards childcare services in Singapore and United States. [15]

Knowledge, Application, Understanding and Analysis		
L3	For an answer that shows a well-developed explanation of how the price mechanism allocates resources efficiently in a free market.	7-10
L2	For an answer that shows an under-developed explanation of how the price mechanism allocates resources efficiently in a free market.	4-6
L1	For an answer that shows descriptive knowledge of how the price mechanism allocates resources efficiently in a free market and /or a smattering of valid points.	1-3

Knowledge, Application, Understanding and Analysis		
L3	Well-developed analysis of how the consumption of childcare services results in positive externalities and why the government intervenes in the market in Singapore but not in US.	9-11
L2	For an answer that shows an under-developed explanation of how the consumption of childcare services results in positive externalities and why the government intervenes in the market in Singapore but not in US. OR Well-developed analysis of how the consumption of childcare services in Singapore results in positive externalities and why the government intervenes in the market in Singapore without the analysis on US. [6 marks] Maximum of 8m if the difference in MEB is not explained.	6-8
L1	For an answer that shows descriptive knowledge of how the consumption of childcare services results in positive externalities and why the government intervenes in the market in Singapore but not in US. Very limited or no attempt to use relevant economic concepts.	1-5
Evaluation		
E2	For a reasoned assessment on why the Singapore government should subsidise childcare services but not US.	3-4
E1	Unreasoned judgement on why the Singapore government should subsidise childcare services but not US.	1-2

a) Explain how the price mechanism allocates resources efficiently in a free market. [10]

Introduction

One of the key microeconomic objectives of the government is to achieve efficient allocation of resources. Faced with the problem of scarcity where there are unlimited wants but limited resources, the market economy uses the price mechanism to allocate its scarce resources. The price mechanism works automatically to allocate resources efficiently based on demand and supply forces to address the problem of scarcity, and the end result is that resources are efficiently allocated and, hence the society's welfare is maximised. This is attained when the amount of resources allocated to production is such that marginal social benefit (MSB) equals marginal social cost (MSC).

Body

The price mechanism works to resolve the basic economic problem of **what, how much, how and for whom to produce**. The basic principle underlying the price mechanism is that goods and services are provided through the market and that consumers and producers act in their self-interest. Consumers in the **pursuit of self-interest** will cast their dollar votes to show their preferences for the types and quantities of goods and services they prefer. Consumers influence producers' decisions on **what to produce** based on their demand preferences. Demand refers to the willingness and ability of consumers to purchase a particular good or service at various prices over a period of time, *ceteris paribus*. The amount they are willing and able to pay is determined by the additional satisfaction they derived from consuming an additional unit of the good or service. This is represented by the demand curve which is also the marginal private benefit (MPB) curve of the consumers. Assuming that there is an absence of externalities, $MPB=MSB$.

Producers who are profit maximisers will receive the price signal from consumers. Producers will decide on **how to produce** by comparing the relative prices of factors of production to achieve the lowest cost. The supply of a good is the amount of the good or service that producers are willing and able to offer for sale at various prices over a period of time, *ceteris paribus*. Producers' decision to supply is based on the extra cost incur in producing an extra unit of the good or service. Hence, the producer's supply curve is also the marginal private cost (MPC) curve. Assuming that there are no externalities, $MPC=MSC$.

The price thus acts as a signal which consumers send to producers indicating their demand for a good or service and producers will allocate resources among competing needs to the production of the goods most desired by consumers, backed by their ability to pay. In this way, the price mechanism plays the allocative and rationing function. Prices perform a signalling function. Market prices will adjust to reflect where resources are required and where they are not.

The intersection of the demand ($D=MPB=MSB$) and supply ($S=MPC=MSC$) curves in Figure 1 leads to the attainment of an equilibrium price at P_e and quantity at Q_e . At this price at P_e , consumers decide what and how much to buy and producers decide on what and how to produce based on price signals. At equilibrium price P_e , quantity demanded is equal to quantity supplied. As **$MSC=MSB$, resources are efficiently allocated.**

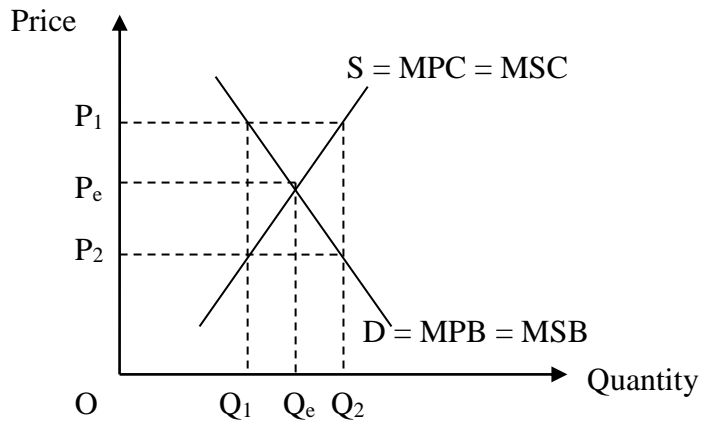


Figure 1

At price P_2 , quantity demanded Q_2 is more than quantity supplied Q_1 . Thus, there will be an upward pressure on prices as there is a shortage of the good. Producers channel resources to produce more of the good, until Q_e is reached at price P_e . At price P_1 , quantity demanded Q_1 is less than quantity supplied Q_2 . Thus, the price falls as there is a surplus of the good. Producers will divert resources away from the good, producing less, until Q_e is reached at price P_e . The adjustment process of the price mechanism will ensure that Q_e is reached and resources are allocated efficiently. The price mechanism works to determine what and how much to produce.

The price mechanism determines how to produce through relative price signals too. Firms produce goods by combining resources in the least costly way. Firms will substitute the relatively cheaper factor to replace the more expensive factor. For example, if the relative price of farm land increases, farmers will use more labour and tractors to work the land more intensively.

Conclusion

The pursuit of self-interest allows the **price mechanism to allocate resources efficiently in a free market**. But in reality, the presence of externalities, failure to provide public goods, imperfectly competitive market, imperfect information and immobility of factors of production will limit the working of the price mechanism.

(b) Assess the economic case for the two different approaches towards childcare services in Singapore and United States. [15]

Introduction

Efficient allocation of resources is attained when the amount of resources allocated to production is such that marginal social benefit (MSB) equals marginal social cost (MSC), i.e. **MSB = MSC**. When this occurs, allocative efficiency is achieved. **Allocative efficiency** is achieved when it is impossible to change the allocation of resources to make someone better off without making someone else worse off. In the case when free market fails due to the existence of externalities in the consumption of a good or service, the government often has to intervene to ensure a more efficient allocation of resources. For example, government intervention might be needed to correct the problem of underconsumption of childcare services.

Explain how the consumption of childcare services results in positive externalities

Figure 2 illustrates the situation when the consumption of childcare services leads to positive externalities. Positive externality is the benefit to third party who is not directly involved in the production or consumption of a good and such benefits are not reflected in the price of the product. The marginal private benefit to the parents consuming childcare services is them being able to work and able to **work without worrying for the safety of their children** for every additional unit of childcare services consumed. The marginal private cost to the parents will be **the cost of childcare services** for every additional unit of childcare services consumed.

External benefits refer to the increase in the quantity of labour as more women are able to re-enter the labour force hence contributing to potential growth as productive capacity increases. Companies also benefit as there is less disruption to their work processes when the female employees rejoin the company after their maternity leave. **Marginal social benefit (MSB)** is the additional social benefit from the last unit of a good consumed, $MSB = MPB + MEB$ where MEB is the marginal external benefits.

Due to the presence of positive externality, which is shown by the **marginal external benefit (MEB)** at a particular level of output, marginal social benefit (MSB) will be **greater** than marginal private benefit (MPB), i.e. **MSB > MPB**. There is a **divergence of MPB and MSB**. This means that the benefits of consumption to society include not just the benefits to the consumer but also the benefits to others enjoying the positive spillover effects, shown as MEB. Assume that $MPC = MSC$. Since consumers will only consider their private benefit and cost while ignoring the benefits to third parties, they will consume at the level **Q_p** where **MPB = MPC**. However, the **socially optimal level** of output occurs at **Q_s** where **MSC = MSB**.

Since Q_p is less than Q_s, it means that the price mechanism on its own cannot achieve an optimal allocation of resources. There is **underconsumption** of the good. Between Q_p and Q_s, the social benefit of an additional unit of childcare services consumed is higher than the social cost, resulting in **welfare loss** equivalent to the shaded area. Hence, market failure occurs in the consumption of childcare services and government intervention, such as subsidies, might be required to bring about an efficient allocation of resources.

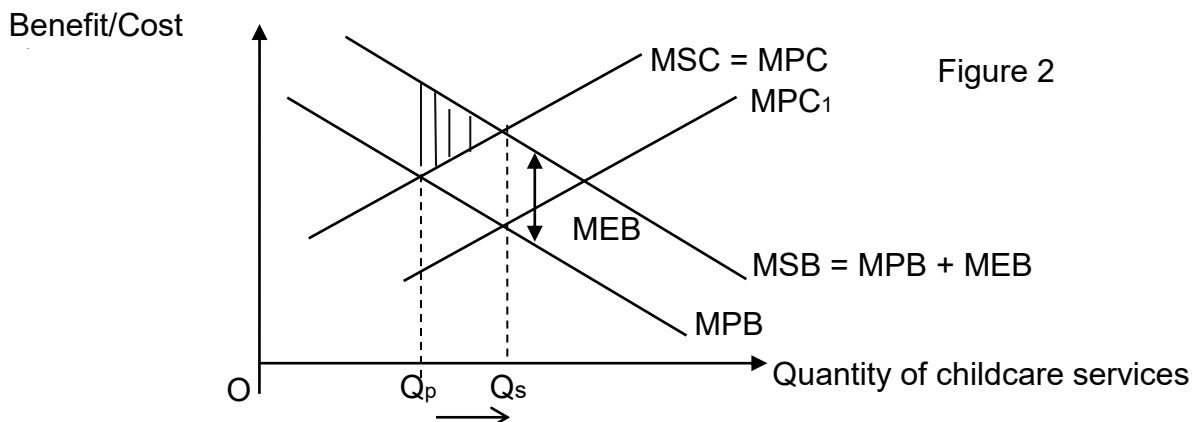


Figure 2

How subsidies correct market failure

In the case of Singapore, subsidies are given by the government. The government can give **subsidies** per unit, equivalent to the **marginal external benefits** at Q_s , to childcare providers so that childcare services are available to the parents at a lower cost. Subsidies help to **lower the cost of production** for the childcare services and this will lead to a lower cost of childcare services when producers pass on the cost savings. As seen in Figure 2, the **marginal private cost (MPC) will fall and shift to the right to MPC_1** . The level of consumption of childcare services will **increase from Q_p to Q_s** , which is the socially optimal level of consumption.

Aside from intervening to achieve efficient allocation of resources, the government might also intervene on grounds of equity. The childcare service subsidy is to help parents defray some of the cost of the fees and to ensure affordability and accessibility of childcare services for all Singaporeans.

Explain the difference in the level of intervention in Singapore and US childcare services

Difference in MEB

The cost of childcare services is often cited as a major barrier for women to re-enter the labour force in Singapore. Due to her small labour force as a result of her small population, it is essential that Singapore increases its quantity of labour so as to better utilize workers to fill up the various vacancies in the economy. Hence in Singapore, the **marginal external benefits** of consuming childcare services allowing parents to re-enter the labour force is high and significant.

In contrast, in the case of US, the government may chose not to intervene in the childcare services market as the **positive externalities are perceived to be negligible**. Big economies like USA have an abundance of labour due to their large population. This results in a greater supply of readily available workers and hence the marginal external benefits of consuming childcare services allowing parents to re-enter the labour force might not be that significant. Hence, government intervention might not be necessary.

Difference in economic priorities

As Singapore is a small economy with labour as one of her main resources, one of the government's priorities is to allow mothers to re-enter the labour force so as to increase the size of the labour force. This will result in an increase in productive capacity and long run aggregate supply, leading to potential growth. Coupled with rising AD, Singapore will then be able to achieve sustained economic growth.

In contrast, the US government might have other more pressing economic priorities. The US government may be more focussed on stimulating the economy through fiscal stimulus and building of infrastructure so as to resolve the slow growth in recent years. Intervention in the childcare services market might incur **huge opportunity cost** as the funds could be used for other more pressing needs.

Budget Position

In the US the ability to intervene in the childcare services market is further limited by their large fiscal deficit. With their rising national debt, the cost of intervention is high as giving subsidies means an increase in government expenditure, hence incurring a larger debt. An increasing national debt will result in a burden for the future generations. In contrast, in Singapore, the prudence of the government has enabled her to accumulate reserves and run a budget surplus for most of the years. Hence, the government has a greater ability to provide subsidies for childcare services.

Conclusion and Evaluation

Stand and Justification: In conclusion, whether the government intervenes and the extent of intervention in a market depends on the perceived marginal external benefits by the government, economic priorities and budget position which differ for different economies. It is likely that the Singapore government perceives the marginal external benefits from the consumption of childcare services to be high while the US government perceives it to be low, thus resulting in the Singapore government giving subsidies for childcare services while the US government chooses not to intervene.

Justification 2: Government failure

However, it should be noted that government intervention might result in government failure due to red tape and imperfect information. The government may also not know the correct amount to subsidise to bring output to the socially optimal level. Although the socially optimal level of output may not be attained due to limitations of implementing measures such as inability to assess the level of MEB or lack of government expertise, government intervention usually ensures a more efficient allocation of resources and results in an output level that is closer to the socially optimal level.

4(a) Explain how economists compare the economic performance of different countries. [10]

(b) Discuss the extent to which trade-offs between different macroeconomic objectives may occur when a country seeks to improve its economic performance. [15]

Knowledge, Application, Understanding and Analysis		
L3	For an answer that shows a well-developed explanation of how macroeconomic indicators can be used to compare the economic performance of different countries. (4 objectives excluding ER would be sufficient to get the top marks.)	7-10
L2	For an answer that shows under-developed explanation of how macroeconomic indicators can be used to compare the economic performance of different countries.	4-6
L1	For an answer that shows descriptive knowledge of how macroeconomic indicators can be used to compare the economic performance of different countries.	1-3

Knowledge, Application, Understanding and Analysis		
L3	Well-developed explanation of how trade-offs between different macroeconomic objectives can occur when a country seeks to improve its economic performance + extent of the trade-offs	9-11
L2	Under-developed explanation of how trade-offs between different macroeconomic objectives can occur when a country seeks to improve its economic performance Max 6m for a one sided answer. Max 8m if the pursuit of only 1 macroeconomic objective is discussed in the answer.	6-8
L1	Descriptive knowledge of how trade-offs between different macroeconomic objectives can occur when a country seeks to improve its economic performance.	1-5
Evaluation		
E2	For an evaluative assessment that is based on economic analysis. (e.g.: extent of trade-offs depends on nature of economy, policies implemented etc.)	3-4
E1	For an unexplained assessment or one that is not supported by economic analysis.	1-2

a.

Introduction

The economic performance of a country can be measured by the 5 macroeconomic objectives. The macroeconomic objectives include internal price stability, sustained economic growth, full employment, satisfactory balance of payments and a stable exchange rate. The comparison of the performance of different countries can be assessed by comparing the macroeconomic indicators across countries.

Body**Economic growth**

A country is said to have performed better if it has a higher real Gross Domestic Product (GDP) per capita growth rate. A higher real GDP per capita growth would mean that there is a faster increase in the level of income of the people which leads to higher quantitative standard of living as more goods and services can be purchased and consumed.

Gross Domestic Product (GDP) shows the total value, before deduction of depreciation, of goods and services produced by all residing within the geographical boundary of a country during a specific period of time. By comparing GDP over a period of time, we can estimate whether the economy is growing, stagnant or declining. Compared to GDP, real GDP per capita has been adjusted for inflation and population size.

The rate of economic growth is usually measured by the annual percentage change in the real GDP per capita. Growth must be measured in real terms because it is the change in the quantity of goods and services that we are measuring and not the change in the nominal value.

$$\text{Economic Growth} = \frac{\text{Period 2 Real GDP per capita} - \text{Period 1 Real GDP per capita}}{\text{Period 1 Real GDP per capita}} \times 100\%$$

Internal price stability

Inflation can be defined as a sustained increase in the general price level in the economy and is measured using the consumer price index (CPI). The CPI measures the cost of buying some fixed basket of consumer goods and services of a typical household, relative to the costs in a specified base year. Inflation rate measures the percentage change in general price level over 2 consecutive years.

$$\text{Inflation rate} = \frac{\text{CPI in current year} - \text{CPI in previous year}}{\text{CPI in previous year}} \times 100\%$$

In comparing the economic performance of countries in terms of internal price stability, the performance of the country with lower and more stable inflation rates is better than one with high and erratic inflation rates. This is because when the price level rises, the internal value of money falls as fewer things can be purchased with the same amount of money. In addition, high and unanticipated inflation rates will lead to other internal and external macroeconomic problems such as a balance of payments deficit. In addition, high and erratic inflation rates would discourage investment due to the uncertainty which would in turn affect economic growth.

Full employment

When comparing the macroeconomic performance across countries in terms of unemployment, the country with the lower the unemployment rate is deemed to have performed better. Unemployed refers to people in the labour force who are of working age, available for work and actively searching for a job but cannot find one. Labour force refers to people of working age who are employed or unemployed. Unemployment rate is measured as the percentage of the labour force that is unemployed.

$$\text{Unemployment rate} = \frac{\text{Number of unemployed}}{\text{Labour force}} \times 100\%$$

A higher unemployment rate in the country would mean a loss of income of the people in general and thus, a fall in their standard of living. If the situation persists, it may lead to a loss of self-esteem and

depression of the unemployed, resulting in social problems. Unemployment also leads to wastage of scarce resources as the economy is producing below its productive capacity.

Balance of payments

When comparing the macroeconomic performance across countries in terms of balance of payments, a country is deemed to have performed better if it has a larger surplus or a smaller deficit. The balance of payments records the monetary transactions between a country and the rest of the world in a given period of time. The balance of payments includes the current account and the capital account. A balance of payments deficit from the current account may occur when the value of exports of goods and services is less than the value of imports of goods and services while a balance of payments deficit from the capital account may occur when there is a net outflow of short term and long term capital.

When a satisfactory balance of payments is not attained, it could imply a lower demand for the country's exports which can lead to an economic slowdown and higher unemployment rate. A persistent BOP deficit would also mean that the foreign reserves are being depleted or the country has to resort to external borrowing. However, a current account deficit may be due to industrialisation and the economy needs to import a large amount of raw materials and machinery. As import expenditure depends on national income, an economy enjoying economic growth will also experience an increase in import expenditure. Thus, a current account deficit may also indicate a good performance of the domestic economy. Hence it is also important to look at the cause of the deficit or surplus.

A balance of payments deficit in the capital account due to the short term capital account deficit may be a reflection of certain economic fundamental weaknesses in the economy which deters inflow of hot money. On the other hand, a long-term capital account deficit due to a lack of FDI inflow would mean lower economic growth and employment rate for the economy.

Stable exchange rate

When comparing the macroeconomic performance across countries in terms of exchange rate, a country is deemed to have performed better if her currency is gradually strengthening over a period of time. A country with erratic movements in her exchange rate or a persistent weakening in her exchange rate will be deemed as one who is performing poorly. The exchange rate of a country's currency (also called the external value of a currency) is the amount of foreign currency that can be exchanged for one unit of the national currency. It is actually the price of one currency in terms of another currency.

A rapid depreciation of the currency could imply a loss in export competitiveness or capital flight due to the loss of confidence by speculators in the currency. A volatile exchange rate tends to create uncertainty for trade and investment which is undesirable.

Conclusion

In conclusion, all 5 macroeconomic objectives should be taken into consideration when comparing the economic performance across countries. It is also useful to compare the change in the indicators over time rather than just looking at a particular year.

b.
Introduction

The macroeconomic objectives of the government are sustained economic growth (EG), full employment, price stability and healthy balance of payments (BOP). While the government would like to achieve all of the above macroeconomic objectives, it is sometimes difficult to achieve them simultaneously as they are conflicting in nature. Hence, governments tend to prioritise their objectives and achieving high economic growth is often at the top of their list. This is because economic growth can bring about higher disposable income and standard of living. The higher demand and optimistic business outlook will further fuel investment that keeps unemployment rate low. To bring about actual EG, the government can use fiscal or monetary stimulus to boost the domestic demand when the economy's AD is weak.

Body: Thesis

Conflict 1: Economic growth and full employment achieved through fiscal stimulus versus low inflation

When an economy experiences rapid growth through the use of fiscal or monetary stimulus, it will eventually be accompanied by demand-pull inflation as AD moves closer to the full employment level of national income unless measures are taken to bring about potential economic growth. High inflation rate discourages savings and investments, which retard economic growth. It also erodes the country's export competitiveness.

As shown in Figure 1, as AD increases from AD_1 to AD_2 , more resources have to be employed in order to increase production causing resources to become scarcer, thus pushing their prices up. This in turn increases the price of goods and services from P_1 to P_2 . An example would be the case of China where her stellar economic growth performance for the past few years has resulted in pressures on the general price level to rise and is a concern to the Chinese government. Hence, if growth is too rapid, the economy is likely to overheat. Thus the pursuit of growth through the use of expansionary fiscal policy might result in inflation.

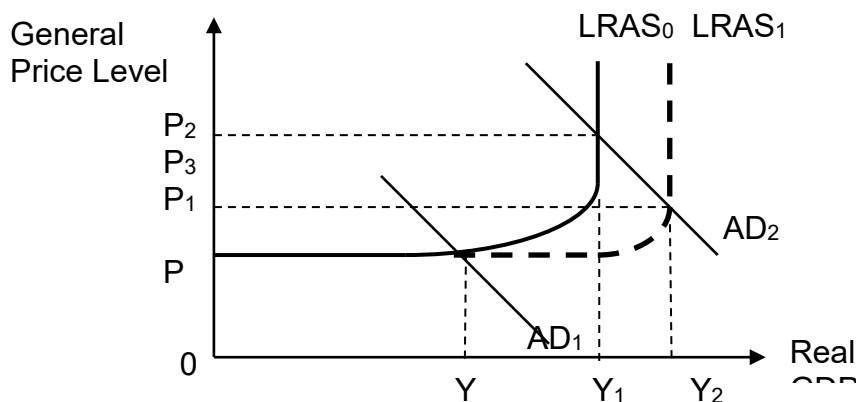


Fig 1: Rising AD and Rising

Extent

The extent of the conflict would be more severe if the fiscal stimulus is not carefully calibrated and is too excessive, causing a large increase in AD and thus a large increase in GPL. The conflict would also be more serious if the economy is near full employment as any fiscal stimulus would impact the GPL significantly.

Conflict 2: Economic growth and full employment achieved through fiscal stimulus versus healthy BOP

Another source of conflict of using fiscal or monetary stimulus to stimulate economic growth is between economic growth and healthy BOP. Assuming that the stimulus is successful and an economy enjoys economic growth and higher national income, the increase in purchasing power and consumption will lead to a greater demand for imports. This is especially so for import-reliant countries like Singapore. Ceteris paribus, higher import expenditure will decrease net exports and cause the current account to worsen. Unless the capital account throws up a huge surplus to offset this, it might lead to a balance of payments

deficit. A persistent deficit can cause a country to run down its foreign reserves or borrow heavily, resulting in a heavy burden on future generations.

Extent

This conflict between economic growth and healthy BOP is more serious for countries with a high marginal propensity to import (MPM). For example, Singapore lacks natural resources and has to import raw materials, intermediate goods and finished goods, resulting in a high MPM. Thus an increase in income will lead to a large increase in import expenditure and affect her BOP significantly.

Conflict 3: Economic growth achieved through economic restructuring versus structural unemployment

When an economy seeks to improve her growth through economic restructuring to develop new growth sectors, structural unemployment will result. Many workers retrenched from the sunset industries do not have the necessary skills and training to switch to jobs in the sunrise industries. This mismatch of skills between the workers and the job requirements will result in structural unemployment. Thus, it can be seen that structural unemployment occurs even when employment in some industries expand while others contract, as those retrenched or unemployed do not have the skills required in expanding industries. Such unemployment is prevalent in many countries, especially developed countries.

Extent

This conflict between economic growth and healthy employment is more serious for countries with a lower skilled labour force. When the labour is lowly skilled, they are less mobile and hence, less able to move across different industries. It is also harder for them to be retrained or pick up new skills due to the lack of fundamental knowledge or certain basic training.

Conflict 4: Low inflation through appreciation versus healthy BOP

A country might seek to achieve low inflation by appreciating the currency. A strengthening currency will cause exports to become relatively more expensive in terms of foreign currency and imports to be cheaper in domestic currency. Assuming that the Marshall Lerner condition holds where the sum of the price elasticity of demand for exports and imports is more than 1, an appreciation will lead to a fall in X-M, AD and thus GPL, curbing demand-pull inflation. Cheaper imports also reduce imported inflation. The fall in price of imported raw materials helps to reduce COP and cost-push inflation. However the fall in X-M due to the appreciation will lead to a worsening balance of trade which may lead to a deficit in the BOP.

Extent

The conflict between low inflation and healthy BOP depends on how much the currency is allowed to appreciate. For countries like Singapore where the currency is under a managed float regime, the appreciation is more gradual, hence the adverse impact on BOP might not be that serious.

Anti-thesis: Trade-off will not occur if appropriate policies are implemented

Conflict 1

The conflict of economic growth and full employment versus low inflation can be avoided. The government can adopt appropriate supply-side (SS) policies to enhance the productive capacity of the economy. This can be achieved through skilful economic management by providing training and education to improve labour productivity, incentives for R&D and accumulation of capital stock through investment. As shown in Figure 1, an increase in LRAS from LRAS₀ to LRAS₁ will help to lower the general price level from P₂ to P₃. Therefore, it is possible to enjoy sustainable growth that is non-inflationary if FP is used together with SSP.

Conflict 2

The conflict of economic growth and full employment with a healthy BOP can also be avoided if a country is able to promote strong growth in the export sector, perhaps through making its prices more competitive or improving its quality and marketing techniques. This can be done through SSP by providing incentives for firms to engage in R&D to find more efficient methods of production or improve the quality of their product.

Conflict 3

The conflict of economic growth and structural unemployment can be reduced with appropriate government measures to channel more support and help to the lower skilled workers. SSP such as subsidising skills retraining and upgrading of skills can help the structurally unemployed find employment in sunrise industries.

Conflict 4

The conflict of low inflation (through appreciation) and healthy BOP can be avoided by SSP. For example, incentives for R&D that encourages the firms to find ways to lower the cost of production can mitigate the rise in export prices due to a strong currency. In addition, a strong currency may be a reflection of strong economic fundamentals and performance of the country, thereby attracting more hot money into the country. This will improve the capital account of the BOP and if it is sufficient to offset the deficit in the BOT, the conflict might not occur.

Conclusion and Evaluation

Stand and Justification

The extent to which trade-offs between different macroeconomic objectives may occur when a country seeks to improve its economic performance will be very much dependent on the nature of the economy and whether the government has put in place proper policies to resolve or mitigate the conflicts. For example, when using fiscal stimulus to pursue economic growth, the type of government spending is important as it can also have supply-side effects if the spending is focused on increasing the level of productivity. In Singapore for example, fiscal policy is used mainly for its supply-side effects where spending on education, R&D and infrastructure serves to increase productivity and LRAS and thus lower inflation and improve BOP.

Justification 2

Though governments aim to resolve the conflicts between macroeconomic objectives, sometimes it might be necessary to bear with the trade-offs. For example, during a recession, when the major concern to the government is to stimulate growth and employment, the government might be prepared to bear with a short-term worsening of the BOP as they try to try to increase income which can lead to a rise in import expenditure.

- 5a. Explain why governments aim to achieve internal and external price stability. [10]
- 5b. Assess the relative effectiveness of monetary policy and fiscal policy in achieving economic growth in different economies. [15]

Knowledge, Application, Understanding and Analysis		
L3	Well-developed analysis of the consequences of failing to achieve internal and external price stability.	7-10
L2	Under-developed explanation of the consequences of failing to achieve internal and external price stability. OR Max 5 m for well-developed explanation of the consequences of failing to achieve either internal or external price stability.	4-6
L1	For a descriptive knowledge of the consequences of failing to achieve internal and external price stability.	1-3

Knowledge, Application, Understanding and Analysis		
L3	Well-developed analysis of the relative effectiveness of monetary policy and fiscal policy in achieving economic growth in different economies with examples.	9-11
L2	For an answer that shows an under-developed explanation on the relative effectiveness of monetary policy and fiscal policy in achieving economic growth in different economies. Or Max 8m for a well-developed analysis of the effectiveness of monetary policy and fiscal policy in achieving economic growth between different economies without comparison between FP and MP in a country.	6-8
L1	For an answer that shows descriptive knowledge of the relative effectiveness of monetary policy and fiscal policy in achieving economic growth in different economies. OR No comparison is made between policies/countries.	1-5
Evaluation		
E2	For a reasoned assessment on the effectiveness of monetary policy and fiscal policy in achieving economic growth in different economies.	3-4
E1	Unreasoned judgement on the effectiveness of monetary policy and fiscal policy in achieving economic growth in different economies.	1-2

5a. Explain why governments aim to achieve internal and external price stability. [10]**Introduction**

Internal price stability refers to a situation when there is zero or small rise or fall in the general price level. Pursuing internal price stability is important as inflation or deflation can lead to adverse internal and external consequences on the economy. External price stability refers to the country having a stable market exchange rate. A stable exchange rate facilitates trade and investment. In contrast, exchange rate instability, in terms of a rapidly depreciating currency, can result in a rise in imported inflation, or in the case of a rapidly appreciating currency, a reduction in the competitiveness of the country's exports.

Body**Internal effects of unstable internal prices: Investment, employment and growth**

By attaining internal price stability, the economy could avoid the costs of inflation or deflation. This essay focuses on the costs of inflation. Inflation affects economic growth, balance of payments and employment levels in a country. When an economy is below full employment and is experiencing mild demand-pull inflation where excessive aggregate demand exceeds aggregate supply near or at full employment, the rate of increase in price is faster than that of cost which leads to rising profit levels. The increase in profitability thus induces producers to be more willing to invest and expand the line of production. This can lead to an increase in investment, thus leading to higher employment and growth. However when there is cost-push inflation which is caused by rising cost of production in the economy that is not due to excess demand, the rise in cost is more rapid than the rise in price. Hence producers are likely to put off any investment. Most importantly, in a high inflation rate environment, interest rates tend to be high to compensate savers for the loss of real savings. Producers hence are reluctant to borrow at high nominal interest rates as few investments give such high rates of return to make the project viable. Hence high inflation rates can reduce the level of investment due to the high cost of borrowing as reflected by the high nominal interest rates.

In addition, when inflation rate is moving in an erratic and unpredictable manner, businessmen will hesitate to commit themselves to long-term deals because of greater uncertainties and risks involved. Thus they will be less willing to take risks and invest, especially in long-term projects. This leads to a fall in investment. Without long-term deals, business investments fall and thus economic growth might fall.

Internal effects of unstable internal prices: Redistribution effect

Also, inflation results in redistribution of income as some people will be made better off while others are made worse off. This can be socially upsetting especially when the majority of people are worse off. When there is inflation, fixed income earners lose and producers gain during unanticipated inflation. Fixed income earners include employees whose salaries are fixed by contract, pensioners and landlords who continue to receive contracted rent. The purchasing power of the fixed-income earners decreases because they have to pay more for a product. Conversely, producers gain because they are making higher profits as price may rise faster than cost. Unless the fixed income earner can get wage increases as fast as the rate of inflation, he is worse off in real terms. Lenders will lose and borrowers gain during unanticipated inflation. Borrowers gain because the real values of their debts are reduced by the price increase. This is because although the sum that is repaid in nominal terms is what has been agreed, its purchasing power is much less. In contrast, lenders end up getting back a sum worth much less than agreed in real terms.

External effects of unstable internal prices: Balance of payments

Also if a country's inflation rate is relatively higher than its trading partners, her exports will be relatively more expensive and therefore less competitive. If the demand for the country's exports is price elastic, this will lead to a more than proportionate fall in quantity demanded leading to a fall in export earnings. On the other hand, her imports will be relatively cheaper than home-produced goods and thus demand for imports increases and her import expenditure will rise. Hence net exports fall which worsens the current account and may lead to a worsening of the balance of payments and a fall in foreign reserves if it is persistent.

Impacts of unstable external prices

When a country is experiencing external price instability in the form of a rapidly depreciating currency, it will affect its balance of payments, economic growth and employment in the country.

When a currency depreciates in a country, this will lead to the prices of exports becoming cheaper in terms of foreign currency and the prices of imports becoming more expensive in terms of local currency. Assuming that Marshall Lerner condition holds, i.e. the sum of price elasticity of demand for imports and exports is greater than one, this will lead to an improvement in net exports. Increase in net exports will lead to a rise in AD and thus general price level if the economy is **near or at full employment**. The increase in AD increases competition for scarce resources, thereby leading to increased prices of factor inputs and hence price of output, resulting in **demand-pull inflation**.

With the relatively more expensive imports, imported inflation in the country worsens. The rising cost of imported inputs for industries will also worsen cost push inflation. This is more serious in a country such as Singapore where she is heavily dependent on imports for most of her foodstuffs, raw materials and fuel.

The rapidly depreciation of a currency may also bring about uncertainty due to the fear of future depreciation and this loss of confidence in the currency can cause speculative capital flight out of the country, thereby worsening the country's capital account. In addition, if a country has a huge external debt, a depreciation of the currency will increase the burden of servicing the debt which is in foreign currency.

On the other hand, when the country is facing a rapidly appreciating currency, the country's export becomes relatively more expensive in terms of foreign currency, while its imports become relatively cheaper in terms of domestic currency. Assuming that Marshall-Lerner condition holds where the sum of the price elasticity of demand for exports and imports is more than 1, this will lead to a fall in net exports, resulting in a fall in AD and thus multiple fall in NY via the multiplier effect. The fall in income and production will lead to a fall in demand for labour and thus unemployment increases. A rapidly appreciating currency may lead to the cost of investment to be relatively higher in terms of foreign currency and this may deter foreign investors from investing in a country which is detrimental to her economic growth.

Conclusion

In conclusion, the consequences of failing to achieve internal and external price stability are mainly detrimental to a country, hence governments aim to achieve internal and external price stability. The government will implement appropriate policies to bring about internal and external price stability to facilitate the government to achieve the other macroeconomic objectives.

5b. Assess the relative effectiveness of monetary policy and fiscal policy [15] in achieving economic growth in different economies.

Introduction

Economic growth is the increase in real output in an economy. The economy experiences actual growth in the short run when there is a percentage annual increase in output actually produced. Potential growth is achieved when there is a percentage annual increase in the capacity of the economy to produce. A government aspires to achieve economic growth because it brings about higher disposable income and standard of living. The higher demand and optimistic business outlook will further fuel investment that keeps unemployment rate low. The stronger fiscal position of the government due to economic growth would also aid investment in social infrastructure which is crucial to the potential growth of the economy. The government can use expansionary monetary and fiscal policy to achieve economic growth. However, the effectiveness will vary across different economies.

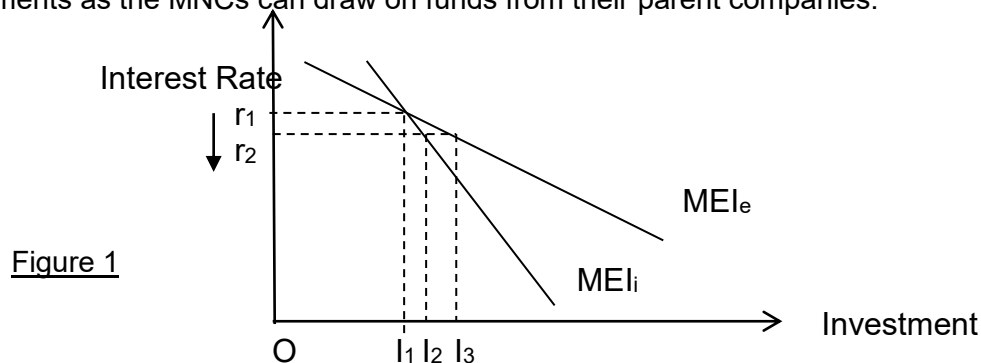
How Expansionary Monetary Policy works

Monetary policy is a deliberate attempt by the government to regulate the economy by controlling money supply or the interest rates, or the exchange rates, thereby influencing aggregate demand and thus stabilizing the level of output or income, prices, and employment at the full employment level. **Expansionary monetary policy** can be used to promote actual growth. This involves increasing money supply and lowering interest rate. A fall in interest rates would result in a lower opportunity cost of consumption (C), giving consumers a greater incentive to consume, thus causing consumption to increase and savings to fall. In addition, lower interest rates result in lower cost of borrowing, causing consumers to borrow more, thus increasing consumption. The lower cost of borrowing means that it is now more profitable to undertake investment projects that were unprofitable at higher interest rates, hence investment (I) will increase. The increase in C and I will lead to an increase in AD, and a multiplied increase in national income via the multiplier, achieving actual growth.

Effectiveness

MEI
For countries like USA where domestic investment is significant, domestic firms have to borrow money to expand or invest, resulting in the marginal efficiency of investment (MEI) curve to be **interest elastic**. Referring to Figure 1, a fall in interest rate from r_1 to r_2 will cause a more than proportionate increase in investment from I_1 to I_3 if the MEI curve is interest elastic as shown by MEI_e . The increase in AD will be more significant so monetary policy using interest rates tends to be more effective.

For countries which depend heavily on MNCs, a fall in interest rate will not have a significant impact on investments as the MNCs can draw on funds from their parent companies.



Hence investment in such countries tends to be interest inelastic. Other factors which determine the marginal efficiency of capital (MEC), which measures the expected rate of returns from investment, such as the quality of workforce, political stability and infrastructure support are much more crucial factors. Referring to Figure 1, a fall in interest rate from r_1 to r_2 will cause a less than proportionate decrease in investment from I_1 to I_2 if the MEI curve is interest inelastic as shown by MEI_i . Hence for countries with interest elastic MEI, MP might be more effective than FP to stimulate growth while for countries with interest inelastic MEI, they might wish to explore the use of fiscal policy (FP) to stimulate growth instead.

Nature of economy

The effectiveness of MP also depends on the nature of the economy. Being the world's largest economy, USA has the ability to influence interest rate. Hence, expansionary monetary policy will be effective. However, for a small and open economy like Singapore, the economy is very open to capital flows. As a result, small changes in the difference between domestic and foreign interest rates would lead to large and quick movements of capital. This makes it difficult to target money supply in Singapore. As a small and open financial centre, Singapore needs to follow international trends in interest rate to avoid large capital flows. Too great a variation would cause instability of the exchange rate due to large capital or hot money flows. Thus, MAS does not influence market interest rate. Singapore is a price taker in terms of interest rates. Hence, monetary policy using interest rates tends to be rather ineffective to achieve economic growth in Singapore and she might have to use FP instead.

OR

Monetary Policy using exchange rate

Monetary policy can also involve the use of the exchange rate. To achieve growth, the government would need to depreciate the currency. This can be done by selling domestic currency in the forex market as the increase in supply of domestic currency will lead to a depreciation. A depreciation would make the country's exports of goods and services cheaper in foreign currency and its imports more expensive in domestic currency. Assuming that Marshall-Lerner condition holds, where the sum of the price elasticity of demand for exports and imports is more than 1, a depreciation would lead to an increase in net exports. The increase in X-M will lead to a rise in AD and a multiple rise in NY via the multiplier effect, thus achieving growth.

Effectiveness**Dependence on external demand**

The effectiveness of the policy will depend on how reliant the economy is on external demand. It would be more effective for countries like China and Hong Kong where external demand is the main driver of growth. However for countries like US which are more dependent on domestic demand, using exchange rates to achieve growth might not be that effective.

Expansionary Fiscal Policy

To bring about actual growth, the government can also use expansionary fiscal policy to boost the domestic demand when the economy's AD is weak. Fiscal policy is the deliberate attempt by the government to change tax rates or the level of government expenditure in order to influence the level of aggregate demand. Expansionary fiscal policy involves increasing government expenditure (G) or reducing tax rates (T). The increase in G through more public projects such as the building of infrastructure like hospitals and transport networks will bring about an increase in demand for more labour in related industries, thereby increasing their income. Reduction in personal income tax rate would stimulate consumer spending through an increase in personal disposable income. Cuts in corporate tax rate will increase after-tax profits and thus encourage private investment. An increase in C, I and G leads to an increase in AD which will cause a multiple increase in national income (NY) due to the multiplier (k) effect. The increase in NY results in actual growth.

Effectiveness**Government's budget position**

The use of expansionary fiscal policy may require the government to plan for a deficit. This is because government spending will rise but tax revenue collection may fall. This may not pose a big problem for governments like Singapore, who have accumulated budget surpluses over the years but it will be difficult for those who are in debt. For example, many of the European countries like Greece and Spain are unable to implement EFP in the midst of recession due to their huge budget deficits and high national debt. Hence they might have to use MP instead.

Crowding-out effect

For the European countries like Greece and Spain, the governments may have to resort to borrowing if they want to implement expansionary fiscal policy. There will be a financial crowding-out effect as the higher G through borrowing leads to higher interest rates as government competes with domestic producers for loanable funds. This will discourage domestic investment, hence reducing the overall

increase in AD. For countries like Singapore, given the fiscal prudence of the Singapore government, she has managed to accumulate huge reserves and thus rarely borrows from the private sector. Hence, the problem of financial crowding-out hardly exists in Singapore. Hence FP might be more effective for countries where the government does not need to borrow to increase spending. Countries which are already in debt and have to borrow to implement FP might choose to use MP instead.

Also, there may be resource crowding-out effect. If the government engages scarce resources for its spending, factors of production will be drawn away from the private sector. This will result in a shortage of factor inputs. Thus cost of production will increase, leading to lower profit margins earned. Firms in the private sector will cut down on their investment. The fall in investment may completely offset the rise in government expenditure, with the result that AD does not increase at all. The impact of fiscal policy on NY is then reduced. This is especially so for countries which lacks resources. For example, for a small country with a small labour force like Singapore, the increase in government construction projects has resulted in a shortage of construction workers for the private projects thus slowing down the increase in I by private firms. However, for large countries like US and China with abundant resources, resource crowding-out is less likely and FP would be effective.

Nature of the economy

The use of expansionary fiscal policy mainly targets C, I and G of AD which is the domestic demand. Some countries, for example, Singapore are more dependent on external demand for economic growth, where her (X-M) is around two-thirds of her GDP. Hence, fiscal policy that targets C, I and G may not be the most effective for her. The case is different for a country like the US where C is 70% of her GDP. In this case, FP would be highly effective. The use of fiscal policy to stimulate growth may be limited for countries like Singapore where the external sector plays a more important role in their economic growth. Such countries might prefer to use exchange rate instead.

Conclusion and Evaluation

Stand and Justification

The relative effectiveness of monetary policy and fiscal policy in achieving economic growth in different economies depends on many factors. The most important factor that limits the effectiveness of the policies will be the nature of the economy. For example, due to the small size of the Singapore economy and her openness to capital flows, MP will not work, hence reducing her policy choice.

Justification 2

In cases where the use of fiscal and monetary policies are limited due to the factors above, the government may wish to use alternative policies like supply side policies to bring about economic growth. Also, for countries with a small multiplier, demand management policies like FP and MP might not be highly effective, thus the government may need to focus more on supply-side policies.

6 Discuss whether a country that practises protectionism should adopt free trade instead.

[25]

Knowledge, Application, Understanding and Analysis		
L3	For a well-developed explanation of why protectionism can be justified and the benefits of free trade. Answer includes limitations of protectionism and well-developed analysis of gains from CA and free trade.	15-21
L2	For an under-developed explanation of why protectionism can be justified and the benefits of free trade <u>Max 12m</u> for a well-developed one-sided answer. (Answer either covers arguments and limitations of protectionism OR gains from CA and trade.)	9-14
L1	For a descriptive explanation of why protectionism can be justified and the benefits of free trade.	1-8
Evaluation		
E2	For an evaluative assessment based on economic analysis	3-4
E1	For an unexplained assessment or one that is not supported by economic analysis	1-2

Introduction

Based on the benefits of free trade and rising trend towards globalisation, it seems that there is no room for protectionism. However in reality, protectionism is practiced in some countries as governments perceive that it can help to achieve certain economic objectives in the short run. Some common forms of protectionism are tariffs, quotas and subsidies.

Body: Thesis - Reasons for protectionism

Protectionist measures are policies which distort market forces in order to give a competitive advantage to the domestic industry of an economy. Protectionist measures can be implemented in an attempt to protect domestic employment. For example, in the US, low end manufacturing industries face great competition from the relatively cheaper imports from China, causing an increase in unemployment. Thus, countries might call for protectionism to help save jobs in declining industries. Trade barriers can increase domestic production and employment.

As seen in Figure 1, when an import tax is imposed on a certain commodity, the domestic price for the commodity increases from OP_0 to OP_1 . This raises domestic production of the commodity from OS_0 to OS_1 at the expense of imported goods, which are reduced from S_0D_0 to S_1D_1 . The increase in home production generates employment and extra profits for the producers while the government also gains revenue from the imposition of the tariff given by the shaded area. Without protectionism, local industries may be edged out by foreign producers resulting in a fall in employment and hence quantitative standard of living.

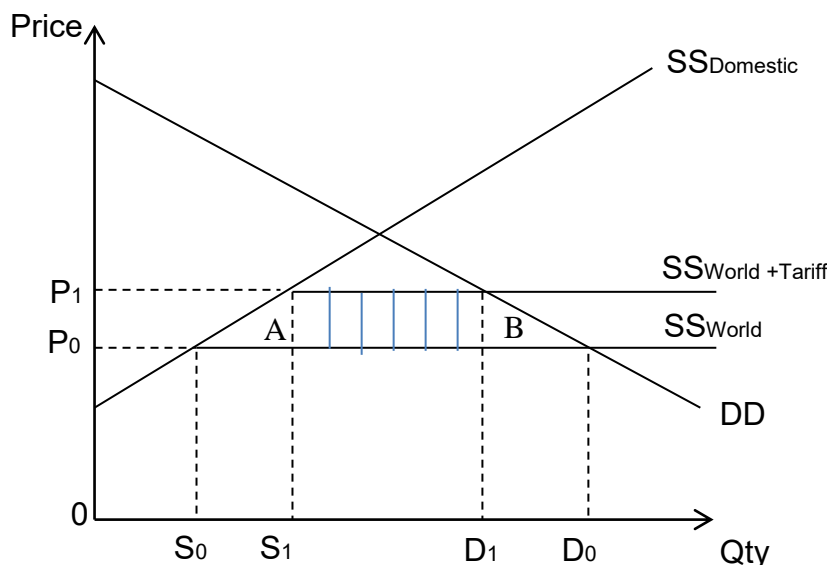


Figure1: Tariff diagram

Evaluation

However, consumers do lose in a big way as they are getting less of the product and have to pay a higher price, reducing their consumer surplus. Their loss, in fact, more than offsets the gain to producers and the government, leading to a welfare loss to the society, as seen by the triangles A and B.

In the long term, the protectionist measures would only perpetuate domestic inefficiency and lead to a misuse of resources. This is because many of the protected domestic industries suffer from wages that have risen faster than the growth of labour productivity, thus their products are less price competitive. In addition, their technological advances may have lagged behind the foreign competitors and therefore they are no longer cost efficient.

Infant industries

Countries might also resort to protectionism as the rising trend of globalisation has exposed the domestic industries to greater competition. This poses a threat to infant industries that may have a comparative advantage (CA) in an industry, but as a late comer to the market, it cannot compete with the established

foreign industries. At the initial stage of operation, the industry is laden with many teething problems unless output is expanded sufficiently to lower average costs of production. For example, workers and managers are inexperienced, and supporting infrastructure such as communications networks and development facilities are lacking. Protection from foreign competition allows the infant industry to expand and become efficient as firms gain both internal and external EOS with the development of critical masses of inputs e.g. skilled labour, capital, technologies etc. A comparative advantage is then developed for the good that this infant industry produces. Moreover, other related industries may also expand as a result of input-output relationships with the protected industry.

Without protection, the industry would never get off ground despite being potentially profitable in the long run. Thus trade restrictions are imposed for the initial period of operation until the infant industry matures and is able to compete with others by charging competitive prices.

Evaluation

While this argument is valid in the short run to produce an equal playing field, there are potential problems in the long run. Protected firms are often complacent and do not take the opportunity to develop and grow. They always remain as infants, hence permanent protection is often required. Moreover it is difficult to remove protectionist measures as pressure from various interest groups will tend to argue that continuous protection is deemed necessary.

Besides, the government may have incorrectly chosen the industries without any potential CA. For example, in the 1980s, Prime Minister of Malaysia launched the national automobile company Proton which was protected by massive subsidies, in order to help it attain EOS and other advantages enjoyed by established automobile exporters. However the EOS it sought to achieve under protectionism were never attained and Proton suffered losses from the very start and the infant industry never grew up under the trap of protectionism.

Anti-dumping

Countries might also choose to protect against dumping. Dumping occurs when an overseas firm sells its product in another country below its marginal cost of production. This causes the domestic industry to face unfair competition that results in a reduction in domestic output and employment. For example, US and European rivals have been accusing Beijing of subsidizing steel companies, offering preferential tax rates, giving access to low-priced materials, and exempting steel firms from labour and environmental rules. In 2010, the US steel industry filed an antidumping suit with American authorities against Beijing, alleging that US\$2.7 billion of pipe steel was unfairly dumped onto the American market in 2009.

Moreover, dumping is sometimes practised to force out domestic producers so as to gain a monopoly position and exploit it later by raising prices. This form of dumping is termed predatory dumping. Hence, it may be justified for the government to practice protectionism in order to protect local industries from such unfair competition in the short term.

Evaluation

However, it might be difficult to determine whether a foreign producer is selling below costs and practising predatory dumping or if it is indeed a highly efficient firm that is able to undercut domestic rivals because of lower cost, access to better technology or more efficient labour/capital.

Furthermore, there is the question of whether the strategy of dumping can be profitable in the long run. This is because once the foreign manufacturer exploits the situation by raising prices; it is likely that other competitors will do likewise; hence the gains are really short term.

To reduce Balance-of-Payments Deficit

In cases where a country is facing a BOP deficit, the government might resort to protectionism to reduce the deficit. Typical policies to reduce BOP deficit includes expenditure reducing and expenditure switching policies. In addition to reducing import expenditure, expenditure reducing policies also reduce consumer spending on the output of domestic industries, hence leading to a rise in unemployment. This results in a call for expenditure switching policies as an alternative way of reducing the deficit. If devaluation is used to correct a deficit, it can have adverse effects on the economy like imported inflation. Hence the government may resort to protectionism like tariffs and quotas to reduce import expenditure and thus improve the

balance of payments.

Evaluation

Some protectionist measures such as tariffs may lead to an increase in the cost of production of industries that use the product as an input, for example in the case of a tariff on steel. This makes industries using steel as an input to experience a rise in cost of production thus making them less competitive and this includes the export-oriented industries such as cars and machinery.

Protectionist measures hurt the trading partners of the country. This is because these measures reduce imports which are the exports of trading partners. This will affect their AD and reduce economic growth of the trading partners. With a fall in income, trading partners' consumption and demand for imports will fall which leads to a fall in demand for the country's exports.

In addition, protectionism might invite retaliation from trading partners. This will in turn hurt the exports of the country. For example, when a tariff was imposed by US on solar panels from China, China retaliated by imposing tariffs on imports of poly-silicon from US, an ingredient for making solar panels.

Body: Anti-thesis: Reasons to adopt free trade

Thus it can be seen that while protectionism can reduce the imports of the industry that is being protected, it can actually bring about many negative implications for the country. This is because protectionism often does not solve the root causes of the problems faced in a country and is just a short term temporary measure. Instead, countries that adopt protectionism should adopt free trade instead due to the many benefits that it brings.

Theory of CA

The most important reason for embracing free trade is to trade according to the theory of comparative advantage (CA), which states that trade between nations is beneficial to both if there is a difference in relative opportunity cost and each specializes according to their comparative advantage. The opportunity cost of producing good X is the amount of the other good which has to be sacrificed in order to produce an additional unit of X.

The gains due to specialisation and trading according to comparative advantage can be illustrated through a numerical example. To explain the theory, assume that both countries have the same amount of resources and each devotes half of its resources to the production of each of two goods, wheat and computers. There is no transport cost, no trade barriers, perfect factor mobility and constant costs.

Table 1: Before Specialisation and Before Trade

Country	Amount of resources	1 unit of resource can produce	
		Computers	Textile
US	2	30	20
China	2	10	15
Total	4	40	35

From Table 1, we can see that using 1 unit of resource, US can produce 30 units of computer and 20 units of textile. Hence the opportunity cost of producing 1 unit of computer is $\frac{2}{3}$ unit of textile. China can produce 10 units of computer and 15 units of textile. Hence the opportunity cost of producing 1 unit of computer is $\frac{3}{2}$ unit of textile.

$$\text{US:} \quad 30C = 20T$$

$$1C = \frac{2}{3}T \quad \text{or} \quad 1T = \frac{3}{2}C$$

$$\text{China:} \quad 10C = 15T$$

$$1C = \frac{3}{2}T \quad \text{or} \quad 1T = \frac{2}{3}C$$

The opportunity cost of producing 1 unit of computer is lower for US than China. US needs to give up only $\frac{2}{3}$ units of textile compared to $\frac{3}{2}$ units of textile if China were to produce computers.

Since US has a lower opportunity cost in producing computers compared to China, US should specialise in the production of computers since it has a CA in it. Similarly, China should specialise in textile since it has a CA in it.

Table 2: After Specialisation and Before Trade

Country	Computers	Textile
US	$1.5 \times 30 = 45$	$0.5 \times 20 = 10$
China	0	$2 \times 15 = 30$
Total	45	40

Table 2 shows that US partially specialises and uses 1.5 units of resources to produce computers and 0.5 unit of resource for textile production. China uses all its resources for textile production.

After specialization, it will benefit both countries to trade with each other as long as the terms of trade lies between the 2 countries' opportunity costs. In this case, the terms of trade for 1 computer can lie between $2/3T < 1C < 3/2T$. Assume that the terms of trade is $1C = 1T$, and US exchanges 12 units of computer for 12 units of textile with China

Table 3: After Specialisation and After Trade

Country	Gun	Textile
US	$45 - 12 = 33$	$10 + 12 = 22$
China	$0 + 12 = 12$	$30 - 12 = 18$
Total	45	40

A comparison between Tables 1 and 3 shows that US has gained 3 and 2 units of computers and textile respectively. China also gains 2 units of computers and 3 units of textile after trade. It can be seen that with specialisation and trade, the world output has increased. Both US and China are now better off with an increase in consumption that is beyond what both countries can initially produce. Hence both countries can consume beyond their PPC.

The above numerical example illustrates that countries trade due to the benefits of specialisation and trading according to the theory of CA.

Other gains from trade

Besides the gains of specialization, there are other economic gains from free trade. International trade allows a country to gain access to a wider range of goods produced by other countries. This increases consumers' level of satisfaction as they get to consume a greater variety of goods or better quality goods.

International trade facilitates the transfer of technology, as trade also involves the sale of capital goods. Technological advancement is beneficial for countries, especially developing nations, as it aids their long term economic growth.

With specialisation according to its CA, countries can allocate more resources to pump up the production of goods in which they are most efficient in producing and thereby reap economies of scale (EOS). Thus reducing the average cost as output increases. This is especially beneficial for small countries as their small domestic markets prevent them from producing on a large scale.

Local producers facing competition from foreign imports will also be forced to improve the quality of their products and efficiency. It may stimulate greater research and development and the more rapid adoption of new technology to increase productivity that lowers their cost of production. This extra competition also prevents the adverse effects of having a domestic monopoly, who charges too high a price.

Lastly, trade tends to foster ties between countries, promoting cooperation and growth, which enhances world peace and brings about greater prosperity. When a country experiences growth, more jobs will be created, bringing about a higher standard of living.

Conclusion and Evaluation

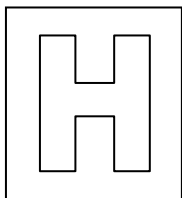
Stand and Justification

In conclusion, a country that practices protectionism should adopt free trade instead. This is because protectionist measures only provide a quick fix solution to any problems that an economy may encounter but will not be able to solve the root cause of the problems. For example, trade deficit is often due to the domestic country having lost her CA. Furthermore, protectionist measures are detrimental to the country in the long run as it goes against the theory of CA and bring about a host of issues such as inefficient allocation of resources and retaliation by trading partners.

Justification 2

With the rising trend of globalisation, there is less room for protectionism. Instead, as an alternative to protectionism, a country should try to stimulate its export competitiveness by making efforts to improve the productivity and lower unit COP of domestic industries by having better training and education, infrastructure and incentives or engage in R&D to produce new or better quality products. This can also help the country to maximise the benefits from free trade when new CAs are developed for example.

Meridian JC completely missing.



2015 Preliminary Examination II Pre-University 2

H1 ECONOMICS

8819/01

Paper 1

15 September 2015

Additional Materials: Answer Paper

3 hours

READ THESE INSTRUCTIONS FIRST

Write your name and class on all the work you hand in.
Write in dark blue or black pen on both sides of the paper.
You may use a soft pencil for any diagrams or graphs.
Do not use staples, paper clips, highlighters, glue or correction fluid.

Section A

Answer **all** questions.

Section B

Answer **one** question.

You are reminded of the need for clear presentation in your answers.

Start each question on a fresh sheet of paper.

At the end of the examination, fasten your answers to the three questions **separately**.

The number of marks is given in brackets [] at the end of each question or part question.

This question paper consists of 10 printed pages.

[Turn over

Section A**Question 1****Australia's Agriculture Sector****Extract 1: Challenges faced by Australian farmers**

A near-perfect growing season for small farmers in two of Australia's biggest food belt regions - south-east Queensland and Victoria - has produced a bumper crop. But despite a bountiful yield, oversupply has driven down prices. It should be a time for celebration for growers, who have become hardened to a relentless cycle of droughts and floods in recent years. Instead many are complaining that they are being paid less at wholesale markets than the cost of harvesting their crops.

The number of farmers in Australia is shrinking, and it's not just the current domestic oversupply that is hurting the bottom line. The amount of imported fresh produce has reached record levels, and growers are facing unfair competition from overseas imports. Local farmers want prices to be set by the federal government to guarantee a decent return. If not, the sector will continue to contract.

In Queensland's sugar capital, Bundaberg, Mark Presser, a fourth generation cane farmer, enjoyed a record crop last year, and is on course to harvest another reasonable yield this time around. Yet he too feels besieged by falling prices and growing competition from overseas, most notably Brazil and India, where production costs are far less. He also complains about protectionism in Europe and the US.

Source: Adapted from *BBC News*, 31 October 2013

Extract 2: Milk is now cheaper than water

Domestic and international demand for dairy produce (cheese, yoghurt, butter etc) is booming, but the price of Australian milk has declined so far that it is now cheaper than water. In South West Victoria, which produces about a quarter of Australia's milk, net farm incomes fell, with some farms running at an absolute loss. Not surprisingly, milk production is falling as farmers cull their herds and sell their farms (sometimes handing the keys to the bank). Milk processors are already experiencing shortages of supply, and this situation can be expected to worsen. However, even this isn't leading to an increase in the farmgate price (the price paid by milk processors to dairy farmers for raw, unpasteurised milk), with milk processors being locked into long term contracts for cheap milk. As large supermarket chains (Woolworths and Coles) engage in a price war for milk, low domestic prices are driving up demand for fresh milk but there is no supply to satisfy it, meaning that even less is available for export.

What a contrast with the situation in New Zealand – their farmers receive around 50% more per litre for their milk, in an environment with much lower production costs. Milk production has doubled there over the past 10 years, with the result that the lucrative export markets in Asia are being gobbled up by the New Zealanders, while Australia is being left out in the cold. Some plausible explanations include a relative weaker currency that helps boost New Zealand farmers' export competitiveness, the absence of drought compared with Australia, and the less intense competition for land, labour and expertise amongst domestic industries (unlike Australia which draw resources away from dairy towards higher returning industries such as mining during the resources investment boom).

Source: Adapted from *The Guardian*, 17 December 2013

Extract 3: Australia's dairy future is bright

It is true that the Australian dairy industry has been buffeted by the perfect storm in the last decade: severe drought, the global financial crisis, a persistently high Aussie dollar, rising costs for feed and depressed milk prices. It's been rough ride, but the majority of the country's dairy farmers have by and large weathered the tempest by adjusting their businesses to meet these challenges. It is farmers' responsibility to take up the challenge of adopting and adapting new techniques and technologies to ensure they are profitable.

The fact is, the Australian dairy industry remains a A\$13bn manufacturing and export industry that employs 43,000 Australians directly on farms and in milk factories in towns where they are often the economic mainstay. Dairy is also the third largest agricultural industry in Australia and the largest in Victoria. Exports in 2012-13 were worth A\$2.76bn. The world thinks Australian dairy has so much to offer that they want to invest in the industry to supply new markets in Asia. While farm gate price volatility and unpredictable seasonal weather patterns are creating serious challenges for dairy farmers, the overall picture in Australia's dairy community is not doom and gloom, but rather a sense of hope and opportunity.

Source: Adapted from *The Guardian*, 31 December 2013

Extract 4: Tackling greenhouse pollution

All fresh produce; dairy, meat, fruit and vegetables naturally require cooling. But the refrigerant gases are often not natural. These synthetic gases are heavy greenhouse pollutants and they also attract a penalty price. The alternatives are natural gases that don't attract a penalty, because they are not greenhouse polluting.

The association which represents the alternative sector says Australian companies should transfer their cooling systems to natural refrigerant gases. President of the Australian Refrigeration Association, Tim Edwards, says other countries like China, the US and Europe have moved towards cleaner technology within 15 years. "The industry is responsible for more than 11 per cent of national greenhouse gas emissions. The government should support the industry's move in switching to natural refrigerants and discourage firms from using refrigerants containing synthetic gases."

Source: Adapted from *Australian Broadcasting Corporation*, 2 July 2013

Extract 5: Competition in Australia's dairy industry

There is little the average farmer can do about rainfall, but the removal of protectionist measures of Australia's milk markets over the past 30 years has exposed these small businesses to competitive market pressures. Recently, the Abbott government has secured a historic free trade agreement with South Korea, Australia's fourth largest trading partner. Under the deal, tariffs will be eliminated on Australian agricultural exports, including beef, wheat, sugar, dairy, wine, horticulture and seafood, as well as resources, energy and manufactured goods. Trade Minister Andrew Robb cited modelling by the Centre for International Economics that showed the free trade agreement would be worth more than \$5 billion in extra income to Australia between 2015 and 2030.

Such measures have forced farmers to invest more in economies of scale and technology designed to enhance on-farm productivity. Despite such investment, the total number of dairy farms has fallen from a peak of 20,300 in 1982 to its current level. There is also a

correlation between the farm gate price of milk and the attrition rate of family-owned farms. Periods of low farm gate milk prices often increases the flow of farmers leaving the industry.

A modest growth in milk production over the next five years is forecast due to improved herd management and greater economies of scale. However, the total number of farms is expected to fall. Farm management and the application of greater science and technology to herd health, pasture production, feeding and milking systems will be critical to success.

Source: Adapted from *The Conversation* and *The Sydney Morning Herald*, 2013

Table 1: Australian farmgate milk prices

Month	\$/kg
Jan - 11	4.60
Apr - 11	5.00
Jul - 11	5.70
Oct - 11	4.70
Jan - 12	4.90
Apr - 12	5.00
Jul - 12	5.10
Oct - 12	4.70
Jan - 13	4.50
Apr - 13	4.60
Jul - 13	5.30
Oct - 13	5.60
Jan - 14	5.90

Source: Agriculture and Horticulture Development Board Dairy

Questions

- (a) (i) With reference to Table 1, describe the trend in farmgate milk prices in Australia from July 2011 to January 2014. [2]
- (ii) Explain one possible reason for the changes in UK milk prices observed above. [2]
- (b) Explain why farmers “are complaining that they are being paid less” in Extract 1. [4]
- (c) Explain how a weaker New Zealand dollar increases demand for dairy products from New Zealand. [2]
- (d) (i) With reference to Extract 4, explain why market failure occurs in the market for fresh agricultural products. [6]
- (ii) Discuss the extent to which switching to natural refrigerants will help to reduce greenhouse gas emissions. [6]
- (e) Discuss the effects of the removal of protectionist measures in the Australian dairy market. [8]

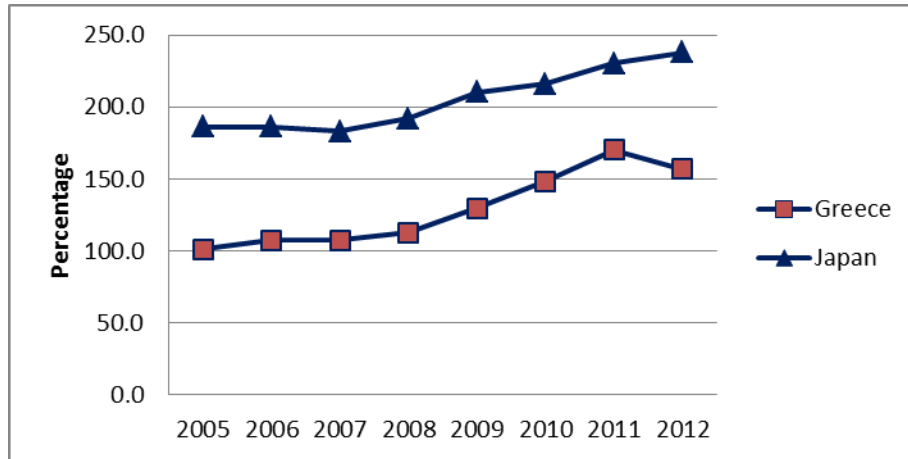
[Total: 30]

[Turn over

Question 2

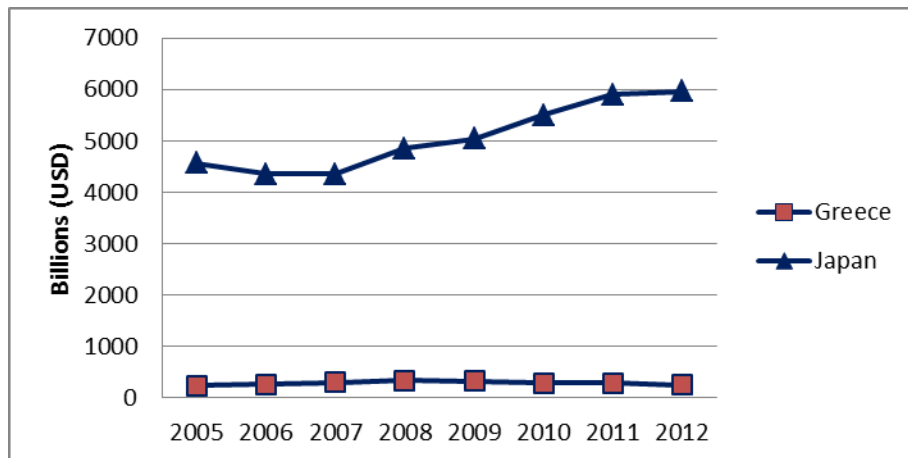
Government Debt Crisis in Greece and Japan

Figure 1: Debt-to-GDP Ratio for selected Economies



Source: IMF World Economic Outlook Database

Figure 2: GDP in current prices (USD) for selected Economies



Source: IMF World Economic Outlook Database

Extract 6: Japan to learn whether Abenomics will live up to pro-growth rhetoric

There are three strands to Abenomics – a more activist monetary policy from the Bank of Japan (BoJ), a fiscal boost from increased spending on public works and structural reforms to make the economy more productive.

In reality, the BoJ will be expected to do most of the heavy lifting. The new government has announced an expansionary budget but fiscal policy is constrained by the dire state of Japan’s public finances. A debt-to-GDP ratio in excess of 200% is the result of more than two decades of sluggish growth and repeated attempts to pump-prime the economy. Meanwhile, structural reforms will take time to work, leaving Japan’s central bank with responsibility for boosting short-term growth.

Despite the need for larger quantities of imported oil after the Fukushima nuclear disaster two years ago, consumer prices have been falling almost continually since the Great recession of 2008-09. The central bank’s challenge is to bring up the rate of inflation to 2%,

so that companies and individuals can take advantage of negative real interest rates – borrowing costs lower than the annual increase in the cost of living – and to drive down the value of the yen.

Source: *The Guardian*, 2 April 2013

Extract 7: Weak Japanese GDP data highlights flaws in Shinzo Abe's three 'arrows'

Problems have emerged with every bit of the three-quiver policy. Firstly, driving down the value of the yen was supposed to boost the Japanese economy by making life easier for its key export sector. But it has also raised the cost of imports, particularly fuel, at a time when domestic energy production remains hampered by the Fukushima nuclear plant. Dearer energy raises business costs and eats into consumers' real incomes. As some analysts noted, Japan is getting higher inflation as planned, but it is the wrong sort of inflation.

A second problem is that doubts are starting to surface about the government's commitment to structural reforms. Japan is an elderly and conservative country where the dynamics of an ageing population make it mightily difficult to raise participation rates in the labour market or reduce subsidies to farmers, even if ministers were prepared to make themselves unpopular.

But the biggest immediate problem for Japanese prime minister Shinzo Abe is that the weak growth has raised doubts about whether he will go ahead with the increase in consumption tax next year, designed to show markets that Tokyo is serious about tackling Japan's public debt, currently 240% of GDP. The increase in sales tax from 5% to 8% is chunky and, with a second increase to 10% planned for 2015, clearly has the capacity to derail economic recovery.

Source: *The Guardian*, 12 August 2013

Extract 8: What is the Greek debt crisis all about?

The first sign of trouble in Greece was when George Papandreou took over as prime minister in October 2009 and found that the government had been understating its public debts for years.

Despite being poor, the Greek government has for decades sought to be generous to its people: the Greek state has tried to soothe its people by creating a big welfare state and generous pay and pensions - including low retirement age and the famous 13th and 14th monthly salaries.

When it came to joining the euro in 2001, it should have been obvious that Greece did not meet the debt conditions. But, by spinning the numbers, Greece gained entry, not just to the single market but to debt markets that allowed it to borrow as though it was as dependable as Germany.

Greece went on a spending spree on infrastructure, services and public sector wages. Meanwhile, the Greeks stopped paying taxes. To Greece's delight, banks and the financial markets filled the gap by lending billions of euros. With the onslaught of the credit crunch, Greece's vast debts were exposed - but so was the exposure of European banks. If Greece went bust, untold damage could be unleashed across Europe and beyond: for a global economy still shattered from the 2008 banking crisis, the prospect of another one was intolerable.

Politicians have been driven by a determination to make Greece pay for its overspending. Mr Papandreou unveiled the first austerity package in January 2010. Meanwhile, Eurozone leaders resolved that despite being called "bailouts" the help would be in the form of loans.

Their other key strategy has been to persuade others to buy the debt - from banks, central banks and governments.

Or, as critics point out, they decided to solve the debt crisis with more debt - and a highly contagious situation with an even more complex web of exposure. In May 2010, leaders unveiled a €110bn (£93bn) bailout with money from the European Union (EU), the European Central Bank (ECB) and the International Monetary Fund (IMF). But the so-called troika set tough conditions in return: the money would be released in 10 tranches and only once Greece had met tough austerity targets of spending cuts, tax rises and structural reforms.

Source: *The Telegraph*, 23 February 2012

Extract 9: Greek Crisis: Is there a solution?

The impact of Greece's financial woes is being felt ever more keenly in European financial markets as fears grow that some kind of debt default may be inevitable. Experts say a default could have a dire impact on other weak economies in the 17-nation Eurozone and fuel doubts about the single currency's viability.

The Greek government is racing against time to fulfil the demands of international lenders and qualify for a new lifeline to avoid default. But even if the Greek parliament adopts the new austerity measures - tax rises, spending cuts and privatisation - necessary to secure a new loan package, it will only bring temporary relief. In the meantime, Greece would need to restructure its economy, boost much-needed tax revenue and eventually return to commercial lenders.

In the event of an outright default by Greece, the consequences would be felt mainly by the big EU economies that have lent to Greece. German and French financial institutions are thought to hold up to 70% of Greek debt and would be severely hit. International investment in the Eurozone would also be hurt significantly.

Source: *BBC News*, 21 June 2011

Questions

- (a) (i) Compare the debt-to-GDP ratios from 2005 to 2012 of Japan and Greece in Figure 1. [2]
- (ii) Explain whether the above data explain the changes in economic growth of Japan and Greece as shown in Figure 2. [4]
- (b) Explain two possible reasons for the increase in government debt in economies like Japan and Greece. [4]
- (c) With reference to Extract 6, explain why bringing up the rate of inflation will cause 'negative real interest rates' and 'drive down the value of the yen'. [4]
- (d) Examine the consequences on Greece and other economies in the Eurozone when the Greek government "sought to be generous to its people". [8]
- (e) Discuss whether Greece should adopt the same approach as Japan in solving its own economic problems. [8]

[Total: 30]

[Turn over

Section B

Answer **one** question from this section

3 (a) Explain why government intervention is advocated in the markets both for public goods and for goods where positive externalities are present. [10]

(b) Public transport is free in the Central Business District of Estonia. However, a fare is charged for travelling on public transport in other areas of Estonia.

Adapted from Eco-innovation Action Plan, 17 June 2013

Assess whether the economic case for these two different approaches is justifiable. [15]

4 (a) Explain the different types of unemployment. [10]

(b) Suppose a country such as Singapore were to experience a significant fall in demand for its exports. This results in a balance of trade deficit and a rise in unemployment.

Discuss the view that supply-side policy is the best policy option in reducing high unemployment in an economy. [15]

End of Paper

2015 Millennia Institute H1 PU2 PE2 Answers

CSQ 1

- (a) (i) **With reference to Table 1, describe the trend in farmgate milk prices in Australia from July 2011 to January 2014.** [2]

Farmgate milk prices fell and then rose [1]
with the minimum price in January 2013. [1]

- (ii) **Explain one possible reason for the changes in Australian milk prices observed above.** [2]

Plausible reasons include

- $\uparrow DD$ – rising Y , lifestyle (taste/preference) or
- $\downarrow SS$ – rising cost of production (higher input prices such as animal feeds)

- (b) **Explain why farmers “are complaining that they are being paid less’ in Extract 1.** [4]

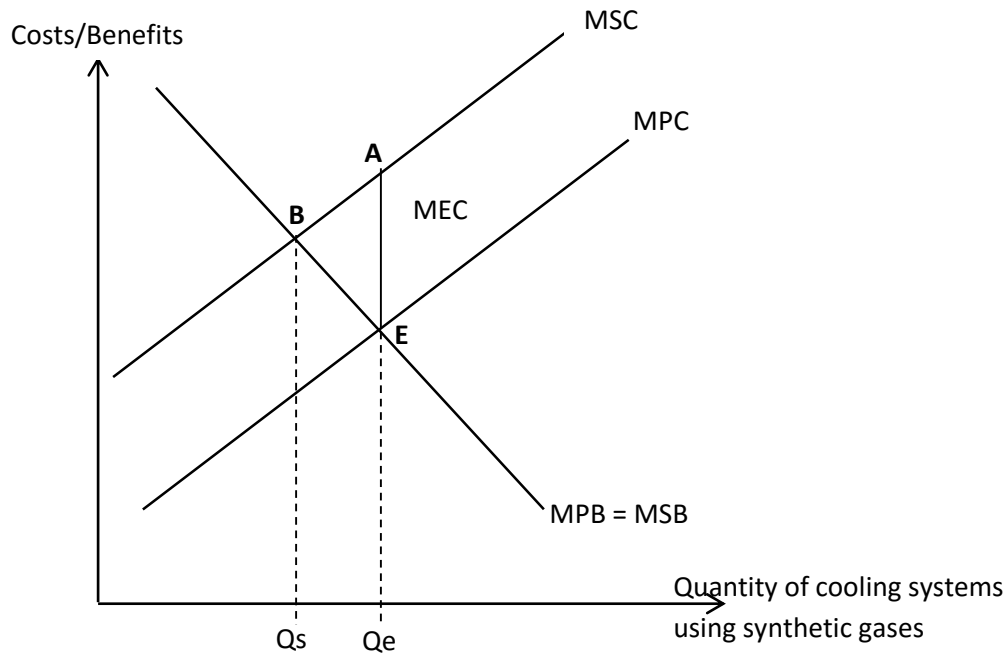
- *Bumper crop \rightarrow oversupply*
- *With $\uparrow SS$, $Pe \downarrow$ & $Qe \uparrow$, ceteris paribus (DD remains constant)*
- *TR received by farmers would \downarrow if DD is price inelastic (as $Qe \uparrow$ by less than proportionate compared to the $Pe \downarrow$)*

- (c) **Explain how a weaker New Zealand dollar increases demand for dairy products from New Zealand.** [2]

- *Weaker New Zealand dollar \rightarrow price of exports in terms of foreign currency is cheaper \rightarrow increase quantity demanded for dairy products from New Zealand*

- (d) (i) **With reference to Extract 4, explain why market failure occurs in the market for fresh agricultural products.** [6]

- *Define market failure: A situation in which the unregulated market is unable to attain social optimal output level where marginal social benefit (MSB) equals marginal social cost (MSC).*
- *In the market for fresh agricultural produce, fresh produce require cooling in the refrigerators. When the companies decide to cool their fresh produce using synthetic refrigerants, they make the decision based on their marginal private benefit (MPB) and marginal private cost (MPC). Thus, the number of cooling systems using synthetic refrigerant gases is at quantity, Q_e .*
- *However, according to extract 4, synthetic gases are heavy greenhouse polluters which will result in global warming. The increase in temperatures will affect crop yield and hence farmers who depend on the weather for their crops may not be able to earn any income due to the reduction in crop yield. Thus, negative externalities are generated as farmers who are not involved in consumption of cooling systems using synthetic gases have to bear the cost of reduction in profits.*
- *Due to the presence of negative externalities, there is a divergence between MSC and MPC . As there is no external benefits incurred, $MSB = MPB$. Hence, at market equilibrium output Q_e , MSC is higher than MSB . This implies that the society values the consumption of cooling systems using synthetic gases less than the cost of consuming them.*
- *The socially efficient output should be where $MSC = MSB$ at output Q_s . Since Q_e is more than Q_s , there is over-consumption of the cooling systems using synthetic gases that generates negative externalities. Due to the over-allocation of resources, there is a deadweight loss to society represented by area AEB .*
- *Thus, market failure occurs due to allocative efficiency in the market of cooling systems of fresh agricultural produce.*
- *Diagram:*



L3	Clear explanation of how use of synthetic gases in cooling systems lead to market failure with well-labelled diagram.	5 – 6
L2	Undeveloped and theoretical explanation of how the presence of negative externalities leads to market failure.	3 – 4
L1	For an answer that has some basic correct facts without further explanation. For example, listing the source of market failure.	1 – 2

(ii) Discuss the extent to which switching to natural refrigerants will help to reduce greenhouse gas emissions. [6]

- Thesis:
 - Since the fresh agricultural produce industry is responsible for more than 11 per cent of greenhouse gas emissions in Australia (Extract 4), switching to natural refrigerants which are not greenhouse polluting will reduce greenhouse emissions.
- Anti-thesis:
 - Not enforceable by law → if no companies want to switch their cooling systems to one that is running on natural refrigerants, greenhouse gases will not be reduced.
 - Other industries, such as the mining industries, also contribute to the emission of greenhouse pollutants. Evidence: other industries are responsible for 89% of greenhouse gas emissions in Australia.
- Alternative policy:
 - Subsidise companies to encourage the use of natural refrigerants for their cooling systems.
- Conclusion:
 - Require a mix of policies to help tackle the issue of greenhouse emissions in the fresh agricultural produce market.
 - Require the co-operation from other industries to ensure that there is greenhouse gas emissions is effectively reduced.

L3	Developed thesis and anti-thesis on how switching to natural refrigerants will be effective in reducing greenhouse emissions and identify that there needs to be co-operation among other industries to effectively reduce greenhouse emissions.	5 – 6
L2	Undeveloped thesis and anti-thesis on how switching to natural refrigerants will be effective in reducing greenhouse emissions	3 – 4

	OR One-sided analysis of how switching to natural refrigerants may or may not be effective in reducing greenhouse emissions.	
L1	For an answer that has some basic correct facts without further explanation. For example, listing the source of market failure.	1 – 2

(e) Discuss the impact of the removal of protectionist measures in the Australian dairy market. [8]

- *Introduction:*
 - *Define protectionist measures and give examples*
 - *Identify that removal of protectionist measures affect both consumers and producers.*
- *Body 1: Positive impact on consumers*
 - *Removal of protectionist measures → freer trade → increase imports → increase variety of products → improve material standard of living*
 - *Removal of protectionist measures → more competitive → lower prices of dairy products → improve material standard of living*
- *Body 2: Positive impact on producers*
 - *Removal of protectionist measures → increase competition in the Australian dairy market. In order to remain competitive, dairy farms need to increase productivity and improve herd management (Extract 5)*
- *Body 3: Negative impact on producers*
 - *Farmers who do not have the ability to engage in R&D to improve productivity and herd management may have to leave the industry in the long-run. Evidence: number of dairy farms in Australia has fallen*
- *Evaluation: In the short-run, there will be structural adjustments in the market and only the firms who are able to improve productivity and management of the farms would be able to survive and continue production. Thus, there will be negative impact on the producers in the short-run. However, in the long-run, consumers will be better off due to lower prices and greater variety of goods and services. At the same time, productivity will improve.*

L3	Well analysed answer that discusses both positive and negative impacts of the removal of protectionist measures on both consumers and producers.	5 – 6
L2	For an answer that analyses only the positive impact of removal of protectionist measures on consumers and producers. OR An answer that analyses the negative impacts on producers and consumers. OR An answer that analyses the positive and negative impacts on either producers or consumers.	3 – 4
L1	For an answer that has some basic facts. E.g. listing of protectionist measures.	1 – 2
E1	For a judgment that is supported by analysis	1 – 2

CSQ 2: Government Debt Crisis in Greece and Japan

(a)(i)	Compare the debt-to-GDP ratio from 2005 to 2012 of Japan and Greece in Figure 1. [2]
	<ul style="list-style-type: none"> • Similarity: The debt-to-GDP ratio of both Greece and Japan has increased from 2005-2012 • Difference: The debt-to-GDP ratio of Japan is always larger than Greece throughout this period. •
<i>Markers' Comment</i>	
(a)(ii)	Explain whether the above data explain the changes in economic growth of Japan and Greece as shown in Figure 2. [4]
	<ul style="list-style-type: none"> • Economic growth in Japan is increasing from 2005-2012 while economic growth in Greece has stagnated, as shown in Figure 2. GDP is a measure of economic growth. <p>Thesis: The data explains the changes in economic growth</p> <ul style="list-style-type: none"> • Increasing debt-to-GDP ratio means that $G > T$, expansionary fiscal impact on the economy. • This is supported by the increase in economic growth as an increase in AD causes increases in national income. <p>Anti-thesis: The data does not explain the changes in economic growth</p> <ul style="list-style-type: none"> • The economic growth in Greece has stagnated despite an expansionary fiscal impact due to $G > T$. <p><u>Possible reasons (any 1):</u></p> <ul style="list-style-type: none"> • This may be due to other internal (C,I) and external shocks (X) to AD causing NY to fall. This is especially so as the government is experiencing a large and unsustainable public debt. • This may also be due to a small multiplier in Greece causing minimal impact on NY. <p>Maximum 3m for one-sided answers.</p>
<i>Markers' Comment</i>	
(b)	Explain two possible reasons for the increase in government debt in economies like Japan and Greece. [4]
	<p><u>Identify and explain lower taxation or higher government spending (any 1)</u></p> <ul style="list-style-type: none"> • Lower tax receipts [1m] due to increased unemployment [1m] • Higher government spending [1m] due to increased unemployment benefits, fiscal stimulus, etc [1m]
<i>Markers' Comment</i>	

(c)	With reference to Extract 4 (Japan to learn...), explain why bringing up the rate of inflation will cause ‘negative real interest rates’ and ‘drive down the value of the yen’. [4]
	<p><u>Negative real interest rates [2m]</u></p> <ul style="list-style-type: none"> • Real interest rates = nominal interest rates – inflation • Assuming that nominal interest rates are low or close to zero, an increase in rate of inflation would mean that real interest rates will become negative. • Interest rate is the cost of borrowing • Intuitively, a higher rate of inflation will reduce the value of money borrowed. If the nominal cost of borrowing is low (nominal interest rate), a high rate of inflation may cause the real value of the loan to be less than the initial value borrowed, even after the nominal interest rate has been accounted for. <p><u>Reduction in the value of the yen [2m]</u></p> <ul style="list-style-type: none"> • When there is inflation, the price of domestic goods and services will be higher than other countries. • This will lead to a fall in exports, and cause the demand for domestic currency to fall. • Therefore, the value of domestic currency (yen) falls. • At the same time, demand for imports will rise since foreign goods are relatively cheaper. • As a result, there will be higher supply of domestic currency as the locals will sell their currency in exchange for foreign currencies to pay for imports. • This causes the value of domestic currency (yen) to fall.
<i>Markers’ Comment</i>	
(d)	Examine the consequences on Greece and other economies in the Eurozone when the Greek government “sought to be generous to its people”. [8]
	<p>“sought to be generous to its people”</p> <ul style="list-style-type: none"> • Greek government increased government spending by creating a welfare state, offering generous pay and pensions, and lowered the retirement age in its economy. • The effect of a sustained budget deficit ($G > T$) caused public debt to spiral out of control. <p>Effect on Greek economy</p> <ul style="list-style-type: none"> • Potential expansionary impact through AD increasing (from increasing C, I and G) • Sustained budget deficit causes public debt, this increases the interest rates government has to pay, creates uncertainty in the economy, affects government provided pensions and jobs. • These have contractionary effects in both AD (in reducing C, I and X) and AS (increase cost of production, lower investments resulting in lower growth of capital/labour quantity and quality) <p>Effect on developed economies like Germany and France</p> <ul style="list-style-type: none"> • “German and French financial institutions are thought to hold up to 70% of Greek debt and would be severely hit” (Extract 8: Greece crisis)

- Investments returns are affected because the financial institutions are unable to recoup their loans.
- If Greece were to default on the loans, these financial institutions may require bail out from their government.
- This will limit government spending and increase taxation in their own countries, resulting in contractionary impacts on the economy

Effect on all economies in the Eurozone

- Lower international investments in the Eurozone [Extract 8: *Greece crisis...*] due to greater uncertainty in the Eurozone and fears of debt contagion.
- Also lower investment due to possibly fluctuations in the value of the Euro currency. This leads to a fall in AD and NY.
- Large public debt will cause the government to pay high interest payments.
- Large public debt also crowds out private investments.
- Lower volume of trade overall amongst the EU countries, since there are contractionary impacts on bigger economies such as Germany and France.

Knowledge, Application, Understanding and Analysis		
L3	A balanced and elaborated discussion that discusses effects on both Greece and other economies in the Eurozone.	5 – 6
L2	An elaborated discussion that discusses effects on either Greece or other economies in the Eurozone. Or A one-sided answer.	3 – 4
L1	Undeveloped answer and/or without economic analysis.	1 – 2
Evaluation		
E1	Evaluative comments with justifications 1m for evaluative comments without justifications	1 – 2

<i>Markers' Comment</i>	
(e)	Discuss whether Greece should adopt the same approach as Japan in solving its own economic problems. [8]
	<p>Policies adopted by Japan</p> <ol style="list-style-type: none"> 1. Expansionary monetary policy 2. Expansionary fiscal policy with SS-side approach through increase in G 3. Structural reforms <p>Expected effects of policies in Japan</p> <ol style="list-style-type: none"> 1. Expansionary monetary policy <ul style="list-style-type: none"> • Lower interest rates should have an expansionary impact on C and I • Lower interest rates will lower the ER, resulting in greater export earnings (assuming Marshal-Lerner condition holds) [Extract (weak Japanese GDP...)] • Both should increase AD, which would cause NY to increase through the multiplier effect 2. Expansionary fiscal policy with SS-side approach

- Increase in fiscal spending should have expansionary impact on G
- Improved infrastructure would cause LRAS to shift outwards as productive capacity of the country improves
- Outward shifts in AD and LRAS resulting in sustained economic growth

3. Structural reforms

- Increase labour participation rates (either by delaying retirement age or encouraging women to work)
- Reduction in subsidies to agriculture would encourage farmers to be more efficient and divert precious resources towards more productive uses
- Overall increase in AS

Thesis: Yes, Greece should adopt the same approach

1. Expansionary monetary policy

- Theoretically, lowering interest rates to boost consumption, investment and exports should work for Greece as it does not require the government to use its limited budget, since its debt is already increasing.
- *However, Greece is not able to lower its interest rate unilaterally as it is in a currency union with other Eurozone economies. The interest rate (and hence monetary policy) is decided by the European Central Bank for all the Eurozone countries
- *Moreover, the effectiveness of interest rate changes depends on the interest elasticity of consumption and investment in the country.

2. Structural reforms

- Greece should also adopt structural reforms focusing not just on the supply-side but also its government spending and taxation policies
- Firstly, it should increase the retirement age in order to increase labour participation rates to increase AS [Extract *what is the Greek debt...*]
- Secondly, it should also cut back government spending on pay and pensions but instead divert it towards developing its capital and human resources.
- Thirdly, it could reform its taxes towards a broader base from income taxes to indirect taxes and enforce more stringent tax collection to ensure there is enough revenue to cover the existing spending.

Anti-thesis: No, Greece should not adopt the same approach

1. Expansionary fiscal policy

- The large public debt in Greece may mean that the government do not have enough resources to finance an increase in spending. It will result in Greece having to pay punitive interest rates to foreign creditors. Moreover, the 'troika' of the EU, ECB and IMF may not allow Greece to spend more than it already has in order to qualify for new loans to help Greece pay for its initial debt
- Increase in government debt may also crowd-out private investments, with the phenomenon known as the 'crowding-out' effect.
- Greece is also not collecting enough taxes in order to pay for additional spending

Evaluation

1. Structural reforms take time to take effect, so Greece would have to suffer from existing economic recession as it is unable to undertake any demand-side policies due to its membership in the single currency (restricting monetary policy) and the huge government debt (restricting fiscal policy).
 - Alternatively, it could consider abandoning the Euro and using its own currency so that it can have more leeway in implementing

expansionary monetary policy. However, this could also have dire impacts on external trade as it also loses its participation in the common EU market.

2. Given the huge economic recession the policies implemented would bring, and the almost complete restrictions on demand-side policies, the Greek government may inadvertently have to rely on other Eurozone countries to lend them money to pay for existing spending, or to forgive their debt either partially or completely. The policy of pushing for debt forgiveness may not necessarily be met with resistance, given the fears of “debt contagion” now that the rest of Europe and large parts of the developed world is exposed to the Greek debt.
3. As the government of Greece is democratically elected, the people of Greece would need to support these policies, or the government may not have the mandate to push through any austerity measures that the people reject.

Knowledge, Application, Understanding and Analysis		
L3	A balanced and well-elaborated discussion that evaluates the suitability of policies implemented by Japan for the Greek economy.	5 – 6
L2	For an undeveloped answer that may not have referred closely to policies implemented by Japan. OR A one-sided answer. Max 3m if student give theoretical answer without application to context of Greece.	3 – 4
L1	Very undeveloped answer and/or without economic analysis.	1 – 2
Evaluation		
E1	Evaluative comments, unexplained.	1-2

Markers' Comment

Millennia Institute 2015 H1 Preliminary Examination 2 Answers (Section B)

- 3 (a) Explain why government intervention is advocated in the markets both for public goods and for goods where positive externalities are present.

[10]

- (b) Public transport is free in the Central Business District of Estonia. However, a fare is charged for travelling on public transport in other areas of Estonia.

Adapted from Eco-innovation Action Plan, 17 June 2013

Assess whether the economic case for these two different approaches is justifiable.

[15]

3(a)

Government is an agency organized to achieve the efficiency in the society. Efficiency refers to allocative and productive efficiency. Production and consumption must be at the social optimum level where making someone better off does not make another person in the society worse off. Public goods and goods yielding positive externalities are not produced at the socially optimum level.

Non-excludability means it is either not economically feasible or not possible to exclude anyone from using the good, once it is provided. It is collectively consumed and it is not possible to assign property rights to only those who pay for the good. For example, when a streetlight is built, the owner cannot exercise private property rights and prevent other people who walk pass from enjoying the light as it is not economically feasible.

Thus, the property of non-excludability could give rise to **free rider problem** where it is possible for a person to consume a public good without having to pay for it. From the demand side of the market, the desire to be a free rider weakens the incentive for consumers to offer to pay for the public good. In the case of streetlight, the passer-by would not want to offer to pay for enjoying the light since it is impossible for the streetlight owner to charge him/her a fee. This would also mean that there is an incentive to refrain from expressing demand in the market. Hence, since there is no expression of demand, it is

impossible to charge a market price for the good. The missing market price would lead to **no provision** of such goods at all if left to the private enterprise.

Non-rivalry in consumption means the consumption of the good /service by one person does not diminish another person's ability to consume the same good/ service. This implies that once the good is produced, additional resource cost to provide for another person benefiting from consuming the good is zero. For instance, while one enjoys the streetlight, others could also enjoy the same amount of streetlight. Thus, there is no additional cost involved when another passer-by walk pass and enjoy the streetlight. This means that **marginal cost is equal to zero**. At social optimal level, MSB should be equal to MSC. Since MSC of streetlight is equal to zero, the **socially ideal price should be \$0**. However, at \$0, there will be **no supply** because producers are profit motivated.

Hence, the characteristics of non-excludability and non-rivalry in consumption explain why there is no provision of public goods in a free market economy. This results in complete market failure as **no resources are allocated to these goods** which are essential and beneficial to the society. In other words, resources are not allocated efficiently.

Let's take the example of positive externality. If an individual makes a decision to take public transport in a congested area, he will receive a private benefit of travelling to his venue. However, at the same time, **positive externality** is being generated as using public transport also benefits the entire community, by creating a cleaner living environment. Since the other consumers do not pay the public transport fare, there is an **external benefit** for them. Thus, from the standpoint of society as a whole, **MSB exceeds MPB** due to the presence of external benefit. This can be illustrated from the diagram below:

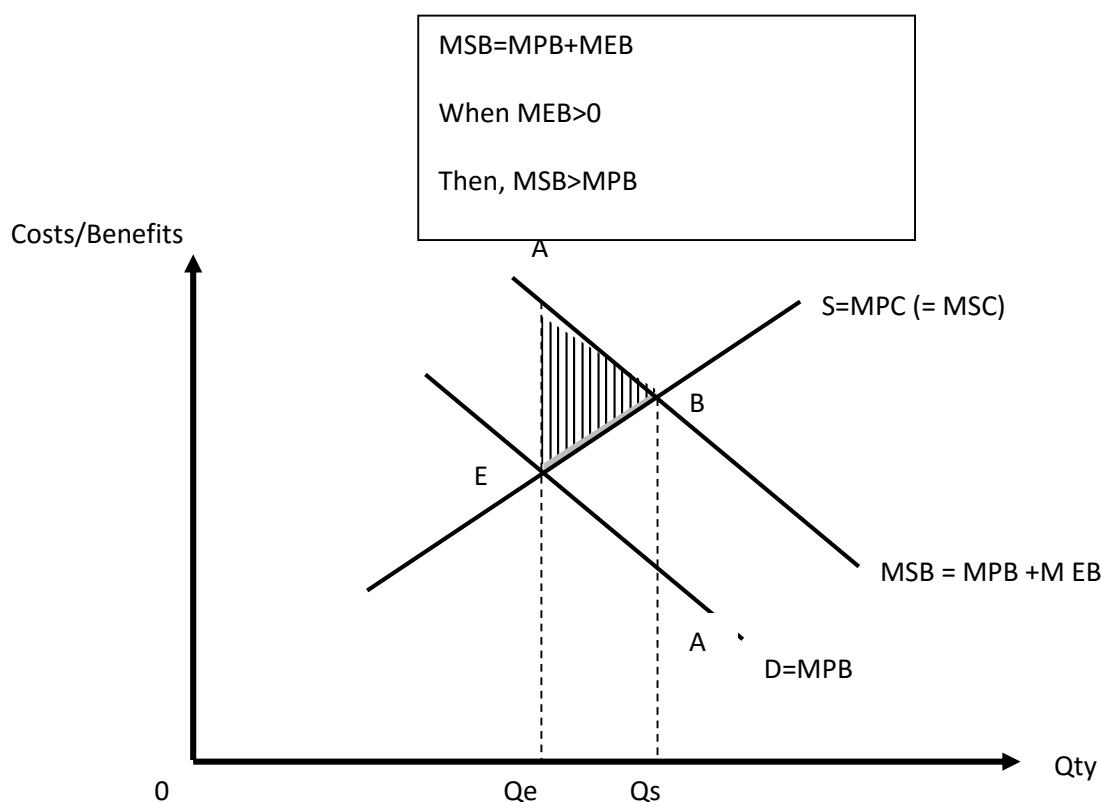


Figure 3.1: Positive Externality from Consumption causing a Divergence between MPB and MSB

In the figure above, the demand curve, D, reflects the MPB of the consumer and it shows the satisfaction/ benefit from each additional unit of public transport usage while the supply curve, S, reflects the MPC which is cost of production of each additional unit of public transport service. The individual consumer will only consider the private costs and benefits, ignoring the positive externalities and will consume up to the point where **MPB = MPC** (private efficiency). As such, **Q_e** is being consumed.

However, the external benefit generated creates a divergence between MPB and MSB, i.e. MSB is higher than MPB. On the other hand, since there is no external cost incurred, $MSC = MPC = S$. Hence, at the market equilibrium output, Q_e, **MSB is greater than MSC**, meaning that the society values an additional/extra unit of good more than what it would cost the society to produce it.

The **socially efficient level** of output should be where $MSC = MSB$, ie., at output **Q_s**. Therefore, the price mechanism has *under-allocated* resources to the consumption of the good since $Q_e < Q_s$, that is, there is an **under-consumption** of the good that generates positive externality. Area EAB represents the **welfare/deadweight loss** to society as a result of this under-allocation of resources. Therefore, the market fails to allocate resources efficiently because it does not take into account the external benefit and market failure arises.

Knowledge, Application, understanding and Analysis		
L3	Clear explanation of how market failure arises in the market for both public goods and for goods with positive externalities.	7-10
L2	Undeveloped explanation for both cases (public goods and goods with positive externalities), OR	5-6

	Developed explanation of only one case.	
L1	For an answer that shows descriptive knowledge of concepts.	1-4

- (b) Public transport is free in the Central Business District of Estonia. However, a fare is charged for travelling on public transport in other areas of Estonia.

Adapted from Eco-innovation Action Plan, 17 June 2013

Assess whether the economic case for these two different approaches is justifiable.

[15]

Public transport exhibits the characteristic of excludability and rivalry in consumption. It is a merit good in the central business district of Estonia. However, in other areas of Estonia, it is not provided for free because it is not considered as a merit good. Merit good is a good that is deemed socially desirable by the government. In this case, public transport in the Central Business District of Estonia is a merit good because of positive externalities. It is deemed to be under-consumed by the government. Market allocation is not allocative efficient.

Prior to the implementation of free fare, there would be a situation of under-consumption of public transport in the central business district of Estonia. There is positive externality in the consumption of public transport in CBD area because of lower congestion and a cleaner living environment. Hence, there is an incentive for the Estonia government to provide free public transport so as to harness the huge external benefits.

By providing free public transport, there would be a huge increase in quantity demanded for public transport in CBD of Estonia. The socially efficient output level could be achieved.

One advantage of such measure is that it could be very effective at encouraging public transport usage since there is no price involved. Some may also argue that it helps to reduce income inequity issue as transport is a basic necessity that should be made available even to the poor.

However, providing free public transport may not be justifiable as it could lead to an over usage of public transport especially for unnecessary travel. As shown in figure 3.2, when public transport is free, quantity consumed is at Q_f which is more than Q_s . Over-usage beyond socially optimal output level would also lead to a deadweight loss (area AEB) on the society. The congestion created on public transport system due to a large spike in passengers may also lead to a situation of negative externalities. Moreover, it could lead to high government expenditure.

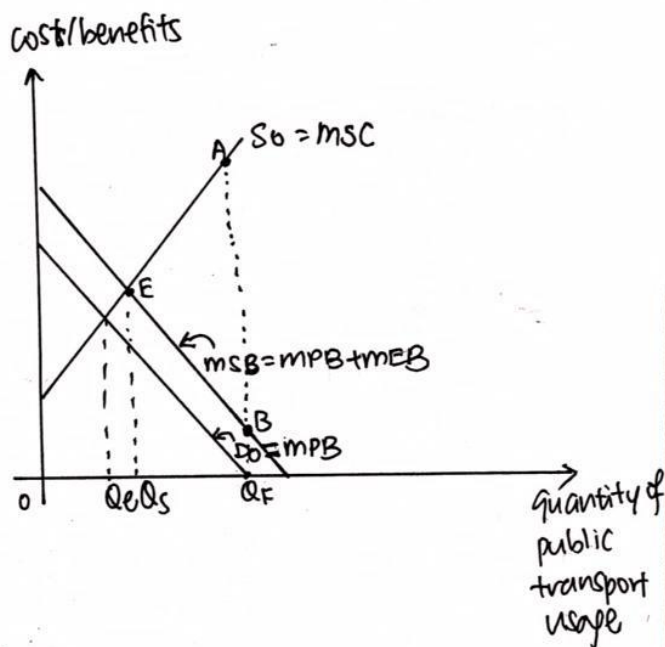


Figure 3.2 Over-Usage of public transport

Public transport is not provided for free in other areas for Estonia since it is not considered as a merit good. In other areas of Estonia, there is no congestion problem arising from the usage of private vehicles. Hence there is no need to encourage usage of public transport.

However, it may be justifiable to encourage usage of public transport if there is external benefit of a cleaner living environment. For example, the government could provide subsidy for public transport (concession rates for residents) in the non-CBD area to increase the demand for public transport. At the new market equilibrium, the usage level would be higher. This method would be more suitable for non-CBD area where there is no need to increase usage by a large amount. Moreover, it would be too costly to provide free public transport in a much large non-CBD region.

One advantage is that subsidy is less costly and could also prevent unnecessary usage of public transport since there is still a required payment by the user. However, one may argue that it is difficult to decide on the amount of subsidy to provide since it is difficult to estimate the MEB.

The different approaches can be credited by the different degree of under-usage and financial manageability found in the two areas. In CBD area, where there is high degree of under usage of public transport and smaller number of commuters, providing it for free is justifiable. However, in other areas where external benefit is lesser, only a small amount of subsidy is required to achieve allocative efficient outcome.

Knowledge, Application, Understanding and Analysis		
L3	Clear and 2-sided elaboration of the both economic cases.	9- 11
L2	Clear 2-sided explanation for 1 economic case, OR Clear 1-sided explanation for both economic cases, OR Undeveloped 2-sided explanation for both economic cases.	5- 8
L1	For an answer that shows descriptive knowledge of concepts.	1- 4
Allow up to 4 marks for Evaluation		
E2	For an evaluative assessment based on economic analysis.	3- 4
E1	For an unexplained assessment, or one that is not supported by analysis.	1- 2

4 (a) Explain the different types of unemployment. [10]

(b) Suppose a country such as Singapore were to experience a significant fall in demand for its exports. This results in a balance of trade deficit and a rise in unemployment.

Discuss the view that supply-side policy is the best policy option in reducing high unemployment in an economy.

[15]

4(a)

Definition of Unemployment: Unemployment is a situation where someone of working age is not able to get a job but would like to be in full employment.

Types of unemployment	
Point: One type of unemployment is Demand-deficient/cyclical unemployment	<p>Explain:</p> <ul style="list-style-type: none"> -rises when real GDP falls (during recession) -not producing as much good (output) due to a fall in aggregate demand - Fall in aggregate demand leads to a more than proportionate fall in national income and employment level through the multiplier process -don't need so many workers (labour is a derived demand) <p>Example/evidence:</p> <ul style="list-style-type: none"> - Reduction in export demand → don't need as many staff as before as firms cut down on their output <p>Link: Demand-deficient unemployment</p>

	could cause higher unemployment
Point: Another type of unemployment is structural unemployment	<p>Explain:</p> <ul style="list-style-type: none"> -changing pattern of demand and supply in individual industry's labour market -workers in a particular declining industry with falling demand may find it difficult to find a new job in another industry because they lack the skills (mismatch of skills to new jobs available) <p>Example/evidence:</p> <ul style="list-style-type: none"> -Decline in manufacturing in SG → production shifts to countries with lower costs of production (such as China)- →workers in manufacturing sector lack skills to work in service sectors→ structural unemployment. <p>Link: Structural unemployment is another type of unemployment.</p>
Point: Frictional unemployment is another type of unemployment.	<p>Explanation:</p> <ul style="list-style-type: none"> -could also be another possibility where imperfect information occurs in the labour market and the unemployed takes some time to find the employment opportunities in the job market. -short term in nature -1-2% of economy's unemployment rate <p>Example/evidence:</p> <ul style="list-style-type: none"> -fresh graduates takes time to find their job <p>Link: Frictional unemployment is another cause of unemployment</p>
Points: Seasonal unemployment is	Explanation:

<p>another type of unemployment.</p>	<p>-caused by relatively regular and anticipated decline in business activity during certain time period of the year.</p> <p>-workers are laid off temporarily because of seasonal changes.</p> <p>Example/evidence:</p> <p>-Industries like tourism are subjected to seasonal decline. During June and December, there would be increase hiring of workers. During the other months, there would be a decline in the level of hiring since there would be a fall in the number of tourists during school terms.</p> <p>Link: Seasonal unemployment is another type of unemployment</p>
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L3	For an analytical answer that explains very well at least three types of unemployment.	7- 10
L2	For an answer that has only explained some of the types of unemployment OR has descriptive explanation on all the types of unemployment.	5-6
L1	For an answer that shows descriptive knowledge of the types of unemployment	1- 4

4(b)

Suggested Answer:

Unemployment means that the economy is operating at a point inside the production possibility frontier. Thus, high level of unemployment would include many people being unable to get a job. This could result in higher incidence of poverty and cause social problems. To reduce unemployment, a government could use supply side policy.

Structural unemployment occurs when the structure of the economy changes because of changing consumer demand and technology. These changes result in certain

industries and skills becoming obsolete. Thus, supply-side policy of retraining and education would be a more appropriate policy as it would help to increase the ability of the workforce to easily switch from one industry to another. This policy of retraining and education is a supply-side policy. Workers pick up relevant skills and allow themselves to be reemployed in growing industries. For example in the early 1990s, Singapore had many workers employed in the manufacturing and electronics sector. In the mid-1990s, both of these sectors went on a decline and there was massive retrenchment of workers. Many of these workers had to undergo retraining in areas such as services and IT skills to enable themselves to be employed in the growing service and IT-based industries.

Moreover, supply-side policy that promotes investment in research and technology or government spending on infrastructure is also able to reduce the unit cost of production in the long-run. Better technology and infrastructure would enhance the efficiency of production. The long-run supply curve shifts to the right as shown in figure 4.1 and cost-push inflation falls. There would be a fall in general price level from P_0 to P_1 . If the cause of the falling export demand stems from declining of export competitiveness because of higher cost of production, such supply side policy may help Singapore regain her export competitiveness and increase export revenue in the long run. Supply-side policy could also help to reduce demand-deficient unemployment in the long run.

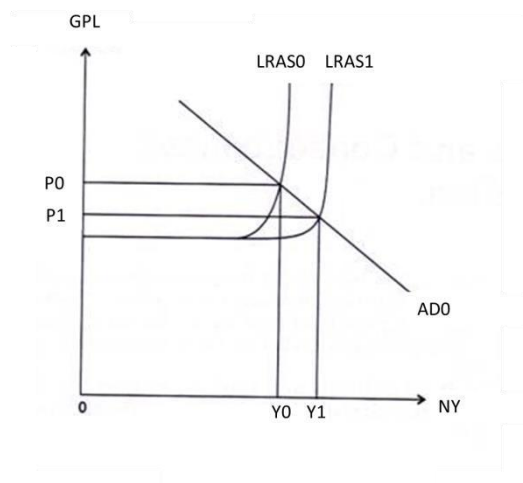


Fig. 4.1: Supply-side policy and the increase in LRAS

However, supply-side policy may not always be the best policy to reduce unemployment. Supply-side policy itself has certain limitations such as high expenditure and also it takes time for workers to learn new skills. It also takes time to develop new technology and infrastructure.

Most importantly, the government should consider the cause of unemployment in the country. If there is cyclical unemployment/demand-deficient unemployment, it would be more appropriate for the government to use fiscal and monetary policies as these would help to stimulate the aggregate demand. This is because deficient in aggregate demand is the main cause of cyclical unemployment. On the other hand, if there is structural unemployment, the more appropriate policy would be to increase labour mobility through retraining and education. In the preamble, it is suggested that Singapore has experienced a significant fall in demand in its export hence resulting in the rising unemployment. If falling aggregate

demand is the cause of unemployment, fiscal and monetary policies would be more appropriate.

An expansionary fiscal policy refers to the use of increased government spending and/or reducing taxes. By increasing government spending, it could directly increase aggregate demand, shifting the aggregate demand curve rightwards, leading to a rise in national income and employment through the multiplier process. Additionally, the government could reduce the both direct and indirect tax to increase consumption and investment in the economy. By reducing taxes, consumers and firms would have higher disposable income for consumption and investment which could result in higher aggregate supply as well. Thus, reducing the tax could also shift the aggregate demand curve rightwards from AD0 to AD1 as shown in figure 4.2 and increase national income more than proportionately from Y0 to Y1 through the multiplier process. Employment increases since labour is a derived demand. Hence demand-deficient unemployment falls.

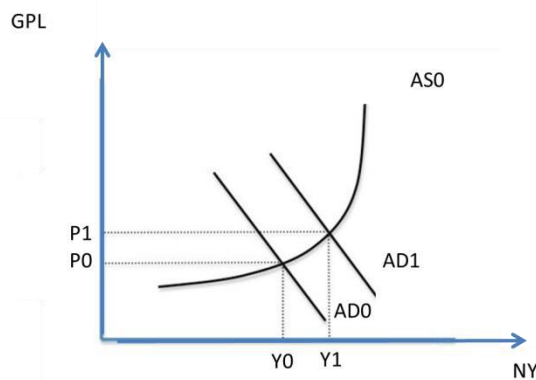


Figure 4.2: Expansionary Fiscal Policy and Increase in AD

However, the effectiveness of this fiscal policy depends on the size of the multiplier in the country. This is because the impact on employment could be constrained by the size of the multiplier. For example, in the case of Singapore's economy where the multiplier is relatively small due to its small population size, the effect of the increased government spending and/or higher disposable income on employment is limited. Additionally, an expansionary fiscal policy may lead to crowding out effects. This is because the government would need to finance its spending by borrowing. Thus, it may compete with the private sector for funds from the banks, leading to a higher interest rate. This higher interest rate in turn increases the cost of borrowing for households and firms, crowding out consumption and investment and leads to lower aggregate demand. As such, the effectiveness of the expansionary fiscal policy to increase aggregate demand and reduce unemployment will be greatly reduced. Moreover, the implementation of this policy could lead to demand pull inflation.

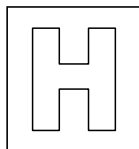
Furthermore, fiscal policy may not be only policy which a government could use. A government could also employ expansionary monetary policy by increasing its money supply

to lower interest rate. However, Singapore does not use conventional monetary policy because our economy is small and open and hence we have limited control over our interest rate. Instead, we use exchange-rate based monetary policy. To increase the demand for exports, we would conduct a policy of devaluation to decrease the price of our exports in terms of foreign currency. Assuming that the Marshall-Lerner condition holds, devaluation would lead to an improvement in the trade balance. Net export would increase and this would lead to an increase in aggregate demand. This would lead to an increase in the national income and employment through the multiplier process.

However, devaluation has its limitation. The price of our imports in terms of Singapore dollars would become more expensive. This would lead to a rise in our cost of production since most of our factors of production are imported.

To conclude, supply side policy may not be the best option since different types of unemployment require different policies to resolve. The best policy to use would depend on the root cause of the unemployment. For example, supply-side policy may not be suitable to use in the case of demand-deficient unemployment as it does not help to solve the problem of low aggregate demand. However, if the root cause of the falling export demand stems from declining export competitiveness arising from higher costs of production, supply side policy to enhance productivity and lower per unit costs of production may help Singapore regain her export competitiveness and increase export revenue in the long run.

L3 (9-11)	<p>For an answer that</p> <ul style="list-style-type: none"> • Has a <u>balanced response</u> on the effectiveness of the different policies at tackling the different types of unemployment in the context of Singapore
L2 (6-8)	<ul style="list-style-type: none"> • Lacks either scope or depth in coverage • Lop-sided analysis: <ul style="list-style-type: none"> o Consider only how supply-side policy helps to solve unemployment OR o Lack of consideration of the different types of unemployment OR o No refer to Singapore's context
L1 (1-5)	<ul style="list-style-type: none"> • Descriptive answers of some concepts (such as the different types of unemployment) without explaining how the policies help to reduce unemployment) • Descriptive answers of some concepts (such as supply-side policy without explanation of how it solves unemployment) • Smattering of points • Conceptual errors
E2 (3-4)	<ul style="list-style-type: none"> • For an evaluative judgement based on economic analysis
E1 (1-2)	<ul style="list-style-type: none"> • For an unexplained judgment, or one that is not supported by analysis.



2015 Preliminary Examination 2
Pre-University 3

ECONOMICS

9732/01

Paper 1: Case Study

15 September 2015

Additional Materials: Answer Paper

2 hours 15 minutes

READ THESE INSTRUCTIONS FIRST

Write your name and class on all the work you hand in.
Write in dark blue or black pen on both sides of the paper.
You may use a soft pencil for any diagrams or graphs.
Do not use staples, paper clips, highlighters, glue or correction fluid.

Answer all questions.

Begin your answer to Question 2 on a fresh sheet of writing paper.

At the end of the examination, hand in your answers to the 2 questions **separately**.

The number of marks is given in brackets [] at the end of each question or part question.

This question paper consists of 7 printed pages and 1 blank page.

[Turn over

Answer all questions.

Question 1

Australian Agriculture Sector

Extract 1: Challenges faced by Australian farmers

A near-perfect growing season for small farmers in two of Australia's biggest food belt regions - south-east Queensland and Victoria - has produced a bumper crop. But despite a bountiful yield, oversupply has driven down prices. It should be a time for celebration for growers, who have become hardened to a relentless cycle of droughts and floods in recent years. Instead many are complaining that they are being paid less at wholesale markets than the cost of harvesting their crops.

The number of farmers in Australia is shrinking, and it's not just the current domestic oversupply that is hurting the bottom line. The amount of imported fresh produce has reached record levels, and growers are facing unfair competition from overseas imports. Local farmers want prices to be set by the federal government to guarantee a decent return. If not, the sector will continue to contract.

In contrast, Tasmania produced large crops of apples and many other crops. Artisan farming has blossomed on the island state in recent years, where small enterprises labour away making high-value, niche specialities, including hand-ground spelt and rye flour along with boutique jams and relishes. Tasmanian farmers are also leading the way on exporting extensively. But Tasmania's optimism gives way to a sense of gloom in other parts of Australia.

In Queensland's sugar capital, Bundaberg, Mark Presser, a fourth generation cane farmer, enjoyed a record crop last year, and is on course to harvest another reasonable yield this time around. Yet he too feels besieged by falling prices and growing competition from overseas, most notably Brazil and India, where production costs are far less.

Source: *BBC News*, 31 October 2013

Extract 2: Australian dairy industry

The Australian dairy industry starts with some 6,686 registered dairy farms. Most of the dairy farms in Australia are family owned and operated small businesses that produce fresh milk on a daily basis. Only about 2% of dairy farms are corporates. As a community of small businesses the bargaining power of the dairy farmers is generally low. Key factors that impact on their farm's profitability are the domestic price of milk at the farm gate, the demand for milk, and the price of key inputs such as electricity and animal feeds. The impact of drought can also play a significant role. Over the years, small-scale farmers are exposed to competitive market pressures. This has forced them to invest more in technology designed to enhance on-farm productivity. A modest growth in milk production over the next five years is forecast due to improved herd management and greater economies of scale. However, the total number of farms is expected to fall. Farm management and the application of greater science and technology to herd health, pasture production, feeding and milking systems will be critical to success.

Downstream from the farmers are the milk processors and dairy product manufacturers who control both the farm gate price and the export and domestic market distribution channels. Dairy product manufacturing is capital intensive and requires large scale and scope in

operations to be economically viable. Today the Australian milk processing and manufacturing sector is dominated by a handful of large firms.

Traditionally farmer-owned co-operatives dominated Australian dairy processing sector. However, today it is dominated by foreign companies. Foreign ownership of Australian dairy manufacturing and export is not inherently bad. However, for the thousands of small, family-owned dairy farms, the lack of bargaining power in the market may be a cause of concern. Dairy co-operatives serve the interests of the small family farm businesses, for instance co-operatives such as Dairy Australia engage in investment projects to achieve internationally competitive farming systems that cannot be done efficiently by individual member farmers. Unlike foreign ownership that needs to pay substantial returns to shareholders, a co-operative serves to improve the relative competitiveness of their members by taking all the milk its members wish to supply in order to help them grow their own farm businesses. The existence of large co-operative in a dairy market generally helps to keep prices stable at the farm gate. Yet no co-operative farmers are forced to be price takers.

Source: *The Conversation*, 24 November 2013

Extract 3: Australia blocks GrainCorp takeover bid from ADM

Rising global food demand has seen agriculture firms become takeover targets. Australia has blocked US conglomerate Archer Daniels Midland's (ADM) A\$3.4bn (\$3.1bn; £1.9bn) takeover of Australian-owned GrainCorp - its biggest grain merchant. The grain business has evolved to be an industry dominated by foreign grain giants like Cargill, Viterra and Agrium in an open market.

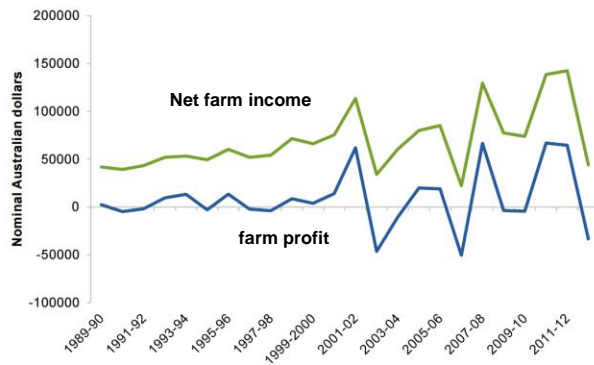
Australia is one of the world's largest exporters of wheat. ADM's (the world's biggest processor of corn) bid to fully acquire GrainCorp had been opposed by some farm groups, who raised concerns over the impact of such a move on competition in the sector.

"Many industry participants, particularly growers in eastern Australia, have expressed concern that the proposed acquisition could reduce competition and impede growers' ability to access the grain storage, logistics and distribution network (including port facilities) which GrainCorp originally owns," Treasurer Joe Hockey said. However industry analysts believe there's no reason for ADM to keep ports and receival sites close if the takeover materialises. After all, 'it's a matter of making money', and allowing as many growers as possible to use their facilities.

Patricia Woertz, chief executive of ADM, said "We are confident that our acquisition of GrainCorp would have created value for shareholders of ADM and GrainCorp, as well as grain growers and the Australian economy." Growers and industry analysts hope that the takeover can result in rail freight improvements, equal access to ports and injection of much needed funds into assets like grain storage facilities.

Sources: *ABC News*, 2 May 2013 and *BBC News*, 29 November 2013

Figure 1: Australia net dairy farm income and farm profit
Average per farm, 1989-90 to 2012-13



Source: Productivity Commission, *Relative Costs of Doing Business in Australia, Dairy Product Manufacturing*

Questions

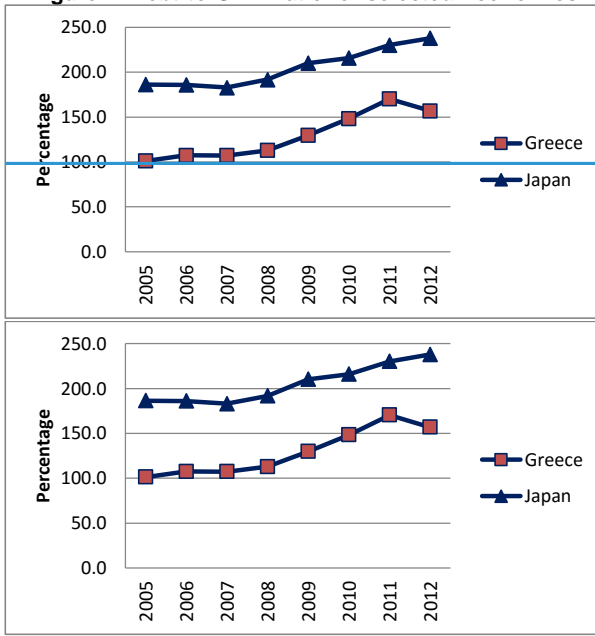
- (a) With reference to Figure 1,
 - (i) describe the changes in farm profit from 1989 to 2012. [2]
 - (ii) account for the falling number of farms. [2]
- (b) (i) Using demand and supply analysis, explain how factors identified in Extract 1 might affect the market for fresh produce in Australia. [5]
- (ii) Given the above analysis, explain how the price elasticity of demand (PED) of fresh produce might affect the income of fresh produce farmers in Australia. [3]
- (c) To what extent can small Australian farmers maintain their profits in the dairy industry? [8]
- (d) Discuss whether the domination of large foreign firms in the Australian agriculture sector is beneficial to the Australian consumers and producers. [10]

[Total: 30]

Question 2

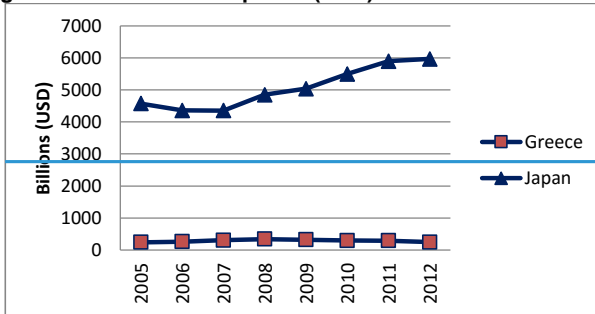
Government Debt Crisis in Greece and Japan

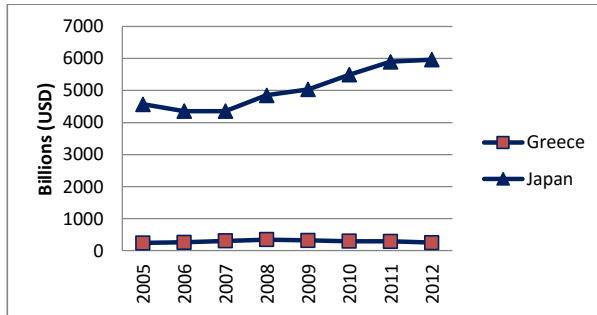
Figure 2: Debt-to-GDP Ratio for selected Economies



Source: IMF World Economic Outlook Database

Figure 3: GDP in current prices (USD) for selected Economies





Source: IMF World Economic Outlook Database

Extract 4: Japan to learn whether Abenomics will live up to pro-growth rhetoric

There are three strands to Abenomics – a more activist monetary policy from the Bank of Japan (BoJ), a fiscal boost from increased spending on public works and structural reform to make the economy more productive.

In reality, the BoJ will be expected to do most of the heavy lifting. The new government has announced an expansionary budget but fiscal policy is constrained by the dire state of Japan’s public finances. A debt-to-GDP ratio in excess of 200% is the result of more than two decades of sluggish growth and repeated attempts to pump-prime the economy. Meanwhile, structural reforms will take time to work, leaving Japan’s central bank with responsibility for boosting short-term growth.

Despite the need for larger quantities of imported oil after the Fukushima nuclear disaster two years ago, consumer prices have been falling almost continually since the Great recession of 2008-09. The central bank’s challenge is to bring up the rate of inflation to 2%, so that companies and individuals can take advantage of negative real interest rates – borrowing costs lower than the annual increase in the cost of living – and to drive down the value of the yen.

Source: *The Guardian*, 2 Apr 2013

Extract 5: Weak Japanese GDP data highlights flaws in Shinzo Abe’s three ‘arrows’

Problems have emerged with every bit of the three-quiver policy. Firstly, driving down the value of the yen was supposed to boost the Japanese economy by making life easier for its key export sector. But it has also raised the cost of imports, particularly fuel, at a time when domestic energy production remains hampered by the Fukushima nuclear plant. Dearer energy raises business costs and eats into consumers’ real incomes. As some analysts noted, Japan is getting higher inflation as planned, but it is the wrong sort of inflation.

A second problem is that doubts are starting to surface about the government’s commitment to structural reform. Japan is an elderly and conservative country where the dynamics of an ageing population make it mightily difficult to raise participation rates in the labour market or reduce subsidies to farmers, even if ministers were prepared to make themselves unpopular.

But the biggest immediate problem for Japanese Premier Shinzo Abe is that the weak growth has raised doubts about whether he will go ahead with the increase in consumption tax next year, designed to show markets that Tokyo is serious about tackling Japan’s public debt, currently 240% of GDP. The increase in sales tax from 5% to 8% is chunky and, with a second increase to 10% planned for 2015, clearly has the capacity to derail economic recovery.

Source: *The Guardian*, 12 August 2013

Extract 6: What is the Greek debt crisis all about?

The first sign of trouble in Greece was when George Papandreou took over as prime minister in October 2009 and found that the government had been understating its public debts for years.

Despite being poor, the Greek government has for decades sought to be generous to its people: the Greek state has tried to soothe its people by creating a big welfare state and generous pay and pensions - including low retirement age and the famous 13th and 14th monthly salaries.

When it came to joining the euro in 2001, it should have been obvious that Greece did not meet the debt conditions. But, by spinning the numbers, Greece gained entry, not just to the single market but to debt markets that allowed it to borrow as though it was as dependable as Germany.

Greece went on a spending spree on infrastructure, services and public sector wages. Meanwhile, the Greeks stopped paying taxes. To Greece's delight, banks and the financial markets filled the gap by lending billions of euros. With the onslaught of the credit crunch, Greece's vast debts were exposed - but so was the exposure of European banks. If Greece went bust, untold damage could be unleashed across Europe and beyond: for a global economy still shattered from the 2008 banking crisis, the prospect of another one was intolerable.

Politicians have been driven by a determination to make Greece pay for its overspending. Mr Papandreou unveiled the first austerity package in January 2010. Meanwhile, Eurozone leaders resolved that despite being called "bailouts" the help would be in the form of loans. Their other key strategy has been to persuade others to buy the debt - from banks, central banks and governments.

Or, as critics point out, they decided to solve the debt crisis with more debt - and a highly contagious situation with an even more complex web of exposure. In May 2010, leaders unveiled a €110bn (£93bn) bailout with money from the European Union (EU), the European Central Bank (ECB) and the International Monetary Fund (IMF). But the so-called troika set tough conditions in return: the money would be released in 10 tranches and only once Greece had met tough austerity targets of spending cuts, tax rises and structural reforms.

Source: *The Telegraph*, 23 Feb 2012

Extract 7: Greece Crisis: Is there a solution?

The impact of Greece's financial woes is being felt ever more keenly in European financial markets as fears grow that some kind of debt default may be inevitable. Experts say a default could have a dire impact on other weak economies in the 17-nation Eurozone and fuel doubts about the single currency's viability.

The Greek government is racing against time to fulfil the demands of international lenders and qualify for a new lifeline to avoid default. But even if the Greek parliament adopts the new austerity measures - tax rises, spending cuts and privatisation - necessary to secure a new loan package, it will only bring temporary relief. In the meantime, Greece would need to restructure its economy, boost much-needed tax revenue and eventually return to commercial lenders.

In the event of an outright default by Greece, the consequences would be felt mainly by the big EU economies that have lent to Greece. German and French financial institutions are thought to hold up to 70% of Greek debt and would be severely hit. International investment in the Eurozone would also be hurt significantly.

Source: *BBC News*, 21 June 2011

Questions

- (a) (i) Compare the debt-to-GDP ratio from 2005 to 2012 of Japan and Greece in Figure 2. [2]
- (ii) Explain whether the above data explain the changes in economic growth of Japan and Greece as shown in Figure 3. [4]
- (b) Explain one possible reason for the increase in government debt in economies like Japan and Greece. [2]
- (c) With reference to Extract 4, explain why bringing up the rate of inflation will cause 'negative real interest rates' and 'drive down the value of the yen'. [4]
- (d) Examine the consequences on Greece and other economies in the Eurozone when the Greek government "sought to be generous to its people". [8]
- (e) Discuss whether Greece should adopt the same approach as Japan in solving its own economic problems. [10]

[Total: 30]

End of paper

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Suggested answers

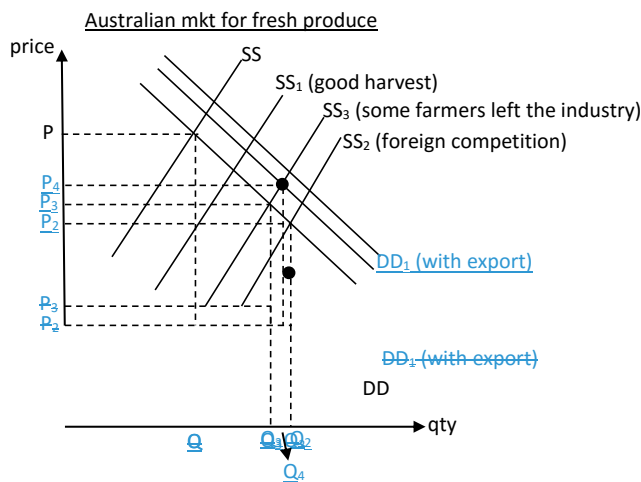
CSQ1: Australian Agriculture Sector

- (a) **With reference to Figure 1,**
- (i) **describe the changes in farm profit from 1989 to 2012.** _____ [2]
General – Fluctuations over the period 1989 to 2012 [1]
Refinement – Increase in magnitude of fluctuation after 2000 [1]
- Marker's
Comments
- (ii) **account for the falling number of farms?** _____ [2]
- *Vertical distance between the income and profit lines is the (total) cost. Cost seemed to remain fairly stable (vertical distance over the period seemed to be fairly consistent). Thus income/revenue affects the profit to a large extent.*
 - *With volatile income and hence unstable profits, there were periods when profits fell below zero ie negative/subnormal profits.* [1]
 - *With such volatility (with periods of high supernormal profits and subnormal profits), some farms, especially the small farmers*

could not cope (with the subnormal profit) and therefore chose to leave the industry. This could account for the falling number of farms. [1]

Marker's
Comments

- (b) (i) Using demand and supply analysis, explain how factors identified in Extract 1 might affect the market for fresh produce in Australia. [5]
- Within the country, local farmers enjoyed a bumper crop ie good harvest, hence domestic supply of fresh produce increased. (SS to SS₁ in diagram below)
 - Externally, foreign producers were entering the Australian market, hence the total mkt supply of fresh produce in Australia was further raised. (SS₁ to SS₂ in diagram below)
 - Together, the large increase in mkt ss caused the mkt price of fresh produce to fall to a large extent, ceteris paribus. (P to P₂)
 - This substantial fall in mkt price caused farmers to earn lesser (falling) revenue. If cost remains constant (ceteris paribus), profits would fall and if subnormal profits were earned, some farmers would choose to leave the industry.
 - Even if some farmers left the industry (SS₂ to SS₃), the total mkt ss would still be larger than the original situation (before good harvest and foreign producers entering the mkt, SS₃ compared to SS), hence the final mkt eqm price would still be relatively lower (P₃, lower than P) with higher eqm qty (Q₃, higher than Q).



- On the other hand, if farmers were able to create external demand (ie export to overseas markets like what Tasmanian farmers are doing), then the total (mkt) DD for Australian fresh produce may increase (DD to DD₁ in diagram). [optional response]
- With both DD & SS increasing and SS curve shifting more than the shift in DD curve (the rise in DD from overseas mkt would be limited as there is more competition and only Tasmanian fresh produce enjoy a rising DD), the final price would still be lower than the original price (P₄ < P) and the eqm qty would be larger than the original one (Q₄ > Q).

2 adequately-elaborated SS/DD reasons would suffice (to gain the 4m). 1m for extent of shift and final eqm.

Marker's
Comments

(b) (ii) **Given the above analysis, explain how the price elasticity of demand (PED) of fresh produce might affect the income of fresh produce farmers in Australia.** [3]

- DD for fresh produce tends to be inelastic given they are basic necessity (food). [1]
- With inelastic DD, increase in SS would lead to a relatively larger fall in price and a less than proportionate increase in eqm qty. Thus revenue or income of farmers would fall. (Hence in Ext. 1, farmers are 'complaining that they are being paid less at wholesale markets than the cost of harvesting') [2]
- However, for the case of Tasmanian farmers, their successful effort in product differentiation, making DD for such specialised category of fresh produce even more inelastic (compared to the 'normal' fresh produce which is subjected to foreign competition). With small-scale production on such specialty fresh produce ie restricted SS, price is rising and TR is increasing too (as overseas DD for specialty fresh produce from Tasmania increases). [optional response]

Marker's
Comments

(c) **To what extent can small Australian farmers maintain their profits in the dairy industry?** [8]

- Thesis – small dairy farmers could maintain their profits
 - Small dairy farmers strive to remain cost efficient. According to Extract 2,
 - o input prices can affect their profits. Yet small farmers may not be able to engage in bulk purchase to reap marketing EOS.
 - o unless through the efforts of co-operative to engage in bulk purchase and/or integrate vertically to control input prices, then these small farmers, can lower AC, and profits can be maintained (ceteris paribus).
 - Small dairy farmers could try to boost/maintain their individual DD/AR
 - o learn from their fresh produce counterpart to differentiate their products to make their individual DD curve more price & income inelastic and increasing their individual DD to secure profits
 - o as overseas (especially Asia) DD for milk increase, small farmers could consider supplying milk to these overseas mkts to increase revenue. (this could also help small farmers to enjoy EOS as they increase production)

- *Anti-Thesis – small dairy farmers could not maintain their profits*
 - *Milk processors/dairy product manufacturers control farm gate milk prices and distribution channels. Such firms with monopoly power down the supply chain would erode the profits of small dairy farmers.*
 - *Small-scale farmers may not be able to afford the expensive capital to boost productivity and lower AC.*
 - *Unpredictable drought (unfavourable weather conditions) could lower the milk production and limit farmers' ability to maintain revenue*
- *Evaluation – given the above challenges, only the cost efficient small farmers can maintain decent (normal) profits to remain in the industry. Unless these small farmers are exploited by the larger firms that control the distribution channels, govt would continue to let mkt forces prevail (ie govt would not consider regulating).*

L3 [5 – 6]	A balanced discussion with good attempt to apply correct content knowledge with elaboration, and to use data to substantiate the discussion.
L2 [3 – 4]	A one-sided discussion with some attempt to apply relevant content knowledge. The explanations may have gaps/errors, with limited use of data.
L1 [1 – 2]	A brief and/or limited relevant discussion with no use of data.
E1 [1 – 2]	An attempt to arrive at a reasoned/explained conclusion.

Marker's
Comments

(d) **Discuss whether the domination of large foreign firms in the Australian agriculture sector is beneficial to the Australian consumers and producers.** [10]

- *Thesis: domination of large foreign firms is beneficial*
 - *(internal) EOS, can benefit consumers. As large firms engage in large-scale production, it is hoped that these large firms can reap (perhaps) technical, marketing and (even) financial EOS. With lower AC, it is desirable if such cost savings can benefit consumers as lower prices.*
 - *Boost X competitiveness (as Australia is one of the world producers for grains), and therefore promote growth & employment. When foreign large firms expand the production in Australia to cater to overseas emerging markets, they would be employing more capital and labour which can boost overall employment and AD (via an increase in investment and export). Through the multiplier effect, national income could increase significantly (assuming Australia's multiplier, k, is substantial). These positive impacts would benefit both Australian consumers and producers.*
 - *If after the takeover, ADM injects funds to improve existing facilities, previously owned by GrainCorp, then (small) farmers who access these facilities can benefit.*
- *Anti-thesis: domination of large foreign firms is not beneficial*
 - *(Mkt failure) mkt dominance by ADM, impact on other firms in industry & consumers. As ADM would takeover the ownership of the logistic and distribution network previously owned by GrainCorp, this*

can be exploited by ADM to earn higher profits, especially at the expense of small local grain growers (restrict access to port facilities and levying a high surcharge for usage by small local farmers). The case is similar in the dairy industry where large milk processors/dairy product manufacturers control the farm gate price of milk (paying a lower price for the raw milk produced by small local dairy farmers) and controlling the distribution network, preventing the small local dairy farmers to maintain decent (normal) profits.

- Theoretically, large firms could also experience internal diseconomies of scale. Moreover, being large and able to control some logistic facilities (in the case of ADM taking over Graincorp), hence the ability to establish some barriers to entry, the monopoly power enjoyed by these large firms may not motivate them to carry out cost-cutting exercises. Thus there could be a possibility that X-inefficiency and dynamic inefficiency may occur.
- (Mkt failure) inequity, as profits are accrued to shareholders only (at the expense of consumers and small producers)
- Evaluation: the fact that Australia govt blocked the takeover bid suggests that the costs could outweigh benefits. Small local farmers need to assess the short-term investment gains against their long term interest.

L3 [5 – 6]	A balanced discussion with good attempt to apply correct content knowledge with elaboration, and to use data to substantiate the discussion.
L2 [3 – 4]	A one-sided discussion with some attempt to apply relevant content knowledge. The explanations may have gaps/errors, with limited use of data.
L1 [1 – 2]	A brief and/or limited relevant discussion with no use of data.
E2 [3 – 4]	An attempt to arrive at a reasoned/explained conclusion.
E1 [1 – 2]	An unexplained judgement

Marker's
Comments

CSQ 2: Government Debt Crisis in Greece and Japan

(a)(i)	Compare the debt-to-GDP ratio from 2005 to 2012 of Japan and Greece in Figure 2. [2]
	<ul style="list-style-type: none"> • Similarity: The debt-to-GDP ratio of both Greece and Japan has increased from 2005-2012 • Difference: The debt-to-GDP ratio of Japan is always larger than Greece throughout this period.
Markers' Comment	
(a)(ii)	Explain whether the above data explain the changes in economic growth of Japan and Greece as shown in Figure 3. [4]

	<ul style="list-style-type: none"> Economic growth in Japan is increasing from 2005-2012 while economic growth in Greece has stagnated, as shown in Figure 2. GDP is a measure of economic growth. <p>The data explains the changes in economic growth in Japan. [2m]</p> <ul style="list-style-type: none"> Increasing debt-to-GDP ratio means that $G > T$, expansionary fiscal impact on the economy. This is supported by the increase in economic growth as an increase in AD causes increases in national income. <p>The data does not explain the changes in economic growth in Greece. [2m]</p> <ul style="list-style-type: none"> The economic growth in Greece has stagnated despite an expansionary fiscal impact due to $G > T$. <p>Possible reasons (any 1):</p> <ul style="list-style-type: none"> This may be due to other internal (C,I) and external shocks (X) to AD causing NY to fall. This is especially so as the government is experiencing a large and unsustainable public debt. This may also be due to a small multiplier in Greece causing minimal impact on NY.
<p>Markers' Comment</p>	
<p>(b)</p>	<p>Explain one possible reason for the increase in government debt in economies like Japan and Greece. [2]</p>
	<p>Identify and explain lower taxation or higher government spending (any 1)</p> <ul style="list-style-type: none"> Lower tax receipts [1m] due to increased unemployment [1m] OR Higher government spending [1m] due to increased unemployment benefits, fiscal stimulus, etc [1m] Other alternative reasons: E.g. The country is currently in debt and the government wants to continue with expansionary fiscal policy (leading to continued $G > T$) / investors lose confidence in the economy and NY falls (leading to fall in tax receipts)
<p>Markers' Comment</p>	
<p>(c)</p>	<p>With reference to Extract 4 (Japan to learn...), explain why bringing up the rate of inflation will cause 'negative real interest rates' and 'drive down the value of the yen'. [4]</p>
	<p>Negative real interest rates [2m]</p> <ul style="list-style-type: none"> Real interest rates = nominal interest rates – inflation Assuming that nominal interest rates are low or close to zero, an increase in rate of inflation would mean that real interest rates will become negative. <ul style="list-style-type: none"> Interest rate is the cost of borrowing Intuitively, a higher rate of inflation will reduce the value of money borrowed. If the nominal cost of borrowing is low (nominal interest rate), a high rate of

	<p>inflation may cause the real value of the loan to be less than the initial value borrowed, even after the nominal interest rate has been accounted for.</p> <p><u>Reduction in the value of the yen [2m]</u></p> <ul style="list-style-type: none"> • When there is inflation, the price of domestic goods and services will be higher than other countries. • This will lead to a fall in exports, and cause the demand for domestic currency to fall. • Therefore, the value of domestic currency (yen) falls. • At the same time, demand for imports will rise since foreign goods are relatively cheaper. • As a result, there will be higher supply of domestic currency as the locals will sell their currency in exchange for foreign currencies to pay for imports. • This causes the value of domestic currency (yen) to fall.
<p>Markers' Comment</p>	
<p>(d)</p>	<p>Examine the consequences on Greece and other economies in the Eurozone when the Greek government "sought to be generous to its people". [8]</p>
	<p>"sought to be generous to its people"</p> <ul style="list-style-type: none"> • Greek government increased government spending by creating a welfare state, offering generous pay and pensions, and lowered the retirement age in its economy. • The effect of a sustained budget deficit ($G > T$) caused public debt to spiral out of control. <p>Effect on Greek economy</p> <ul style="list-style-type: none"> • Potential expansionary impact through AD increasing (from increasing C, I and G) • Sustained budget deficit causes public debt, this increases the interest rates government has to pay, creates uncertainty in the economy, affects government provided pensions and jobs. • These have contractionary effects in both AD (in reducing C, I and X) and AS (increase cost of production, lower investments resulting in lower growth of capital/labour quantity and quality) <p>Effect on developed economies like Germany and France</p> <ul style="list-style-type: none"> • "German and French financial institutions are thought to hold up to 70% of Greek debt and would be severely hit" (Extract 8: Greece crisis) • Investments returns are affected because the financial institutions are unable to recoup their loans. • If Greece were to default on the loans, these financial institutions may require bail out from their government. • This will limit government spending and increase taxation in their own countries, resulting in contractionary impacts on the economy <p>Effect on all economies in the Eurozone</p> <ul style="list-style-type: none"> • Lower international investments in the Eurozone [Extract 8: Greece crisis...] due to greater uncertainty in the Eurozone and fears of debt contagion. • Also lower investment due to possibly fluctuations in the value of the Euro currency. This leads to a fall in AD and NY. • Large public debt will cause the government to pay high interest payments.

	<ul style="list-style-type: none"> Large public debt also crowds out private investments. Lower volume of trade overall amongst the EU countries, since there are contractionary impacts on bigger economies such as Germany and France. <table border="1"> <tr> <td colspan="3">Knowledge, Application, Understanding and Analysis</td> </tr> <tr> <td>L2L3</td> <td>A balanced and elaborated discussion <u>that discusses effects on both Greece and other economies in the Eurozone.</u></td> <td>45 – 6</td> </tr> <tr> <td>L2</td> <td>An elaborated discussion that discusses effects on either Greece or other economies in the Eurozone.</td> <td>3 – 4</td> </tr> <tr> <td>L2</td> <td>An elaborated discussion <u>that discusses effects on either Greece or other economies in the Eurozone.</u></td> <td>3 – 4</td> </tr> <tr> <td>L1</td> <td>undeveloped <u>Undeveloped</u> answer and/or without economic analysis.</td> <td>1 – 32</td> </tr> <tr> <td colspan="3">Evaluation</td> </tr> <tr> <td>E1</td> <td>Evaluative comments, unexplained. <u>with justifications</u> <u>1m for evaluative comments without justifications</u></td> <td>1 – 2</td> </tr> </table>	Knowledge, Application, Understanding and Analysis			L2L3	A balanced and elaborated discussion <u>that discusses effects on both Greece and other economies in the Eurozone.</u>	45 – 6	L2	An elaborated discussion that discusses effects on either Greece or other economies in the Eurozone.	3 – 4	L2	An elaborated discussion <u>that discusses effects on either Greece or other economies in the Eurozone.</u>	3 – 4	L1	undeveloped <u>Undeveloped</u> answer and/or without economic analysis.	1 – 32	Evaluation			E1	Evaluative comments, unexplained. <u>with justifications</u> <u>1m for evaluative comments without justifications</u>	1 – 2
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Markers' Comment																						
(e)	Discuss whether Greece should adopt the same approach as Japan in solving its own economic problems. [10]																					
	<p>Policies adopted by Japan</p> <ol style="list-style-type: none"> Expansionary monetary policy Expansionary fiscal policy with SS-side approach through increase in G Structural reforms <p>Expected effects of policies in Japan</p> <ol style="list-style-type: none"> Expansionary monetary policy <ul style="list-style-type: none"> Lower interest rates should have an expansionary impact on C and I Lower interest rates will lower the ER, resulting in greater export earnings (assuming Marshal-Lerner condition holds) [Extract (weak Japanese GDP...)] Both should increase AD, which would cause NY to increase through the multiplier effect Expansionary fiscal policy with SS-side approach <ul style="list-style-type: none"> Increase in fiscal spending should have expansionary impact on G Improved infrastructure would cause LRAS to shift outwards as productive capacity of the country improves Outward shifts in AD and LRAS resulting in sustained economic growth Structural reforms <ul style="list-style-type: none"> Increase labour participation rates (either by delaying retirement age or encouraging women to work) Reduction in subsidies to agriculture would encourage farmers to be more efficient and divert precious resources towards more productive uses Overall increase in AS <p>Thesis: Yes, Greece should adopt the same approach</p> <ol style="list-style-type: none"> Structural reforms 																					

- Greece should also adopt structural reforms focusing not just on the supply-side but also its government spending and taxation policies
- Firstly, it should increase the retirement age in order to increase labour participation rates to increase AS [Extract *what is the Greek debt...*]
- Secondly, it should also cut back government spending on pay and pensions but instead divert it towards developing its capital and human resources.
- Thirdly, it could reform its taxes towards a broader base from income taxes to indirect taxes and enforce more stringent tax collection to ensure there is enough revenue to cover the existing spending.

Anti-thesis: No, Greece should not adopt the same approach

1. Expansionary fiscal policy

- The large public debt in Greece may mean that the government do not have enough resources to finance an increase in spending. It will result in Greece having to pay punitive interest rates to foreign creditors. Moreover, the 'troika' of the EU, ECB and IMF may not allow Greece to spend more than it already has in order to qualify for new loans to help Greece pay for its initial debt
- Increase in government debt may also crowd-out private investments, with the phenomenon known as the 'crowding-out' effect.
- Greece is also not collecting enough taxes in order to pay for additional spending

2. Expansionary monetary policy

- Theoretically, lowering interest rates to boost consumption, investment and exports should work for Greece as it does not require the government to use its limited budget, since its debt is already increasing.
- At the same time, lowering the interest rates will cause the ER of a country to fall, leading to an improvement in BOP, assuming Marshall-Lerner condition holds.
- *However, Greece is not able to lower its interest rate unilaterally as it is in a currency union with other Eurozone economies. The interest rate (and hence monetary policy) is decided by the European Central Bank for all the Eurozone countries
- *Moreover, the effectiveness of interest rate changes depends on the interest elasticity of consumption and investment in the country.

Evaluation

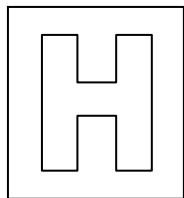
1. Structural reforms take time to take effect, so Greece would have to suffer from existing economic recession as it is unable to undertake any demand-side policies due to its membership in the single currency (restricting monetary policy) and the huge government debt (restricting fiscal policy).
 - Alternatively, it could consider abandoning the Euro and using its own currency so that it can have more leeway in implementing expansionary monetary policy. However, this could also have dire impacts on external trade as it also loses its participation in the common EU market.
2. Given the huge economic recession the policies implemented would bring, and the almost complete restrictions on demand-side policies, the Greek government may inadvertently have to rely on other Eurozone countries to lend them money to pay for existing spending, or to forgive their debt either partially or completely. The policy of pushing for debt forgiveness may not necessary be met with resistance, given the fears of "debt contagion" now

that the rest of Europe and large parts of the developed world is exposed to the Greek debt.

3. As the government of Greece is democratically elected, the people of Greece would need to support these policies, or the government may not have the mandate to push through any austerity measures that the people reject.

Knowledge, Application, Understanding and Analysis		
L3	A balanced and <u>well-elaborated</u> discussion <u>that evaluates the suitability of policies implemented by Japan for the Greek economy.</u>	5 – 6
L2	For an undeveloped/ imbalanced answer <u>that may not have referred closely to policies implemented by Japan.</u> <u>OR</u> <u>A one-sided answer.</u>	3 – 4
L1	Very undeveloped answer and/or without economic analysis.	1 – 2
Evaluation		
E2	Evaluative comments, with justification.	3-4
E1	Evaluative comments, unexplained.	1-2

Markers' Comment



2015 Preliminary Examination 2
Pre-University 3

ECONOMICS

9732/02

Paper 2: Essay Questions

18 September 2015

Additional Materials: Answer Paper

2 hours 15 minutes

READ THESE INSTRUCTIONS FIRST

Write your name and class on all the work you hand in.
Write in dark blue or black pen on both sides of the paper.
You may use a soft pencil for any diagrams or graphs.
Do not use staples, paper clips, highlighters, glue or correction fluid.

Answer **three** questions in total, of which **one** must be from Section A, **one** from Section B and **one** from **either** Section A or Section B.

At the end of the examination, hand in your answers to the 2 sections together.

The number of marks is given in brackets [] at the end of each question or part question.

This question paper consists of **3** printed pages and **1** blank page.

[Turn over

Answer **three** questions in total.

Section A

One or two of your three chosen questions must be from this section.

- 1 The government has raised the tax on alcohol and liquor in Indonesia. This spells bad news for both sellers and buyers of alcohol and liquor. At the same time, the economy is experiencing a downturn. The impact on different buyers – social drinkers and heavy drinkers - is different.
 - a) Using elasticity concepts, explain which party bears the greater burden of the tax increase. [10]
 - b) Discuss the effects of the tax rise and the economic downturn on the market of alcohol and liquor for both social and heavy drinkers. [15]

- 2 In theory, firms are assumed to be motivated by the profit maximising objective in its decision making process. However, in reality, this assumption about the behaviour of firms may not be totally true. Discuss. [25]

- 3 Under Singapore's Bus Service Enhancement Programme (BSEP), over 248 new buses were added to beef up 111 existing services. With more buses, more bus routes and greater frequency, bus travel in Singapore is going to be a more comfortable and convenient way to get around.
 - a) Explain why there is a need for governments to invest more in managing road usage. [10]
 - b) Assess whether the development of a more comprehensive public transport network is the best approach towards managing road usage in Singapore. [15]

Section B

One or two of your three chosen questions must be from this section.

- 4 Economic slowdown and rising unemployment has caused many governments to implement protectionist measures such as tariffs to help shield struggling sectors from growing competition from foreign firms.

Explain the types of unemployment in an economy and discuss whether protectionism can help governments solve these different types of unemployment.

[25]

- 5 Prices in an economy can be affected by external factors as well as by domestic factors. Similarly, prices will affect the domestic and external sectors of the economy.

a) Explain how changes in the external value of a currency can affect the domestic price level.

[10]

b) Discuss whether an increase in the general price level will affect the domestic sector more than the external sector.

[15]

- 6 The trend in business and trade in recent years is towards globalisation.

a) Explain the trend towards globalisation.

[10]

b) Globalisation and openness to the outside world have brought many benefits to the Singapore economy. Discuss.

[15]

End of paper

2015 PU3 H2 Econs PE 2

1 The government has raised the tax on alcohol and liquor in Indonesia. This spells bad news for both sellers and buyers of alcohol and liquor. At the same time, the economy is experiencing a downturn. The impact on different buyers – social drinkers and heavy drinkers - is different.

c) Using elasticity concepts, explain which party bears the greater burden of the tax increase. [10]

d) Discuss the effects of the tax rise and the economic downturn on the market of alcohol and liquor for both social and heavy drinkers. [15]

Part (a) answer scheme

Tax is usually imposed on seller which will increase COP → SS ↓ ie SS curve will shift leftwards → $P_e \uparrow$ & $Q_e \downarrow$

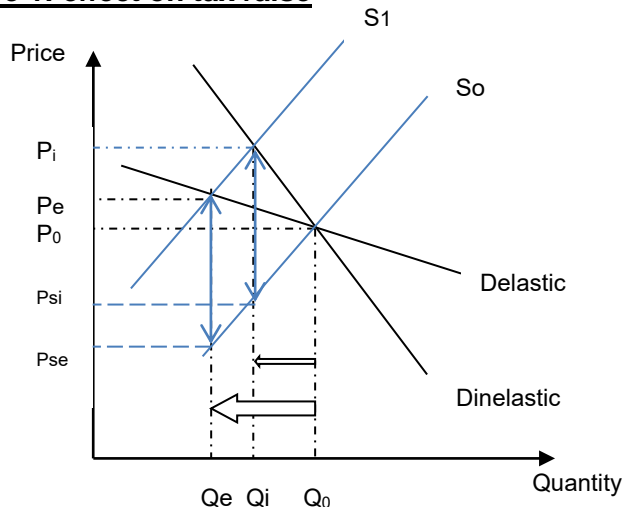
The extent of $P_e \uparrow$ & $Q_e \downarrow$ will dp on PED. With inelastic demand, the price increase is greater than elastic demand, thus the burden of the tax is absorbed more by the buyer if demand is more inelastic. In the figure 1 below, the unit tax is shown by the arrows, when $PED > 1$, unit tax is $P_i P_{se}$, price increase is $P_o P_e$ (tax born by buyers), so sellers bear the remaining tax which is $P_o P_{se}$

When $PED < 1$, unit tax is $P_i P_{si}$ (same as $P_e P_{se}$), price increase is $P_o P_i$ (tax born by buyers), sellers bear the remaining tax which is $P_o P_{si}$.

It can be seen that the price increase is greater for the inelastic demand ie buyers bear the greater burden of the tax.

Heavy drinkers or those addicted to alcohol will bear the greater burden because they are dependent on the need to drink and thus, they will pay the price increase due to the tax. Social drinkers are those with little need to drink and thus, a slight price increase is likely to make them reduce their consumption by a greater amount, thus the price increase cannot be very high.

Figure 1: effect on tax raise

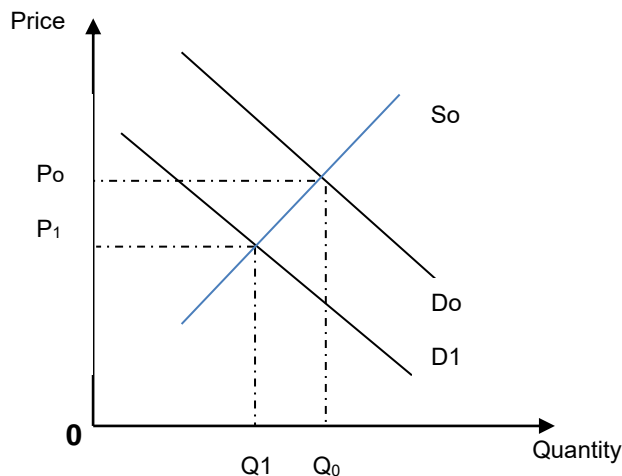


Knowledge, Application, Understanding, Analysis		
L1	<i>Basic understanding of concept but intent of question not understood.</i>	1 – 3
L2	<i>Addresses the question, concepts applied correctly, but answer lacks depth such as failure to look at different sub markets, fail to include diagrams.</i>	4 - 7
L3	<i>Good analysis and sound judgment of whether the demand is price elastic or not. Shows ability to analyze the different submarkets and examine the implications on elasticity.</i>	8 - 10

Part (b) answer

With the economic downturn, people's income would fall. This will reduce people's demand on goods and services including alcohol consumption. When dd falls, P_e & Q_e will \downarrow . In figure 2, dd shifts leftwards from D_0 to D_1 and price falls from OP_0 to OP_1 and equilibrium output falls from OQ_0 to OQ_1

Figure 2: effect of economic downturn



Combined effect

Tax is imposed on seller $\rightarrow SS \downarrow \rightarrow P_e \uparrow$ & $Q_e \downarrow$

Income falls $\rightarrow DD \downarrow \rightarrow P_e \downarrow$ & $Q_e \downarrow$

So combined effect : Q_e will fall but P_e depends on whether $SS \downarrow$ is greater than $DD \downarrow$ ie whether the tax effect on ss is greater than the fall in income due to the economic downturn. If $SS \downarrow$ is greater than $DD \downarrow$, then the P_e will \uparrow and vice versa.

For heavy drinkers, YED is likely to be <1 ie the fall in demand is likely to be slight. So in this market, $SS \downarrow$ is greater than $DD \downarrow$, then the P_e will \uparrow but for the social drinkers' market, YED is likely to be >1 ie the dd fall is likely to be great since social drinkers are not dependent on alcohol and can cut back on demand with the fall in income.

As seen in part (a), $PED < 1$ for heavy drinkers will lead them to be willing to pay for the high price and the slight fall in Q_e when tax is imposed. Thus for this market of heavy drinkers, the impact of both tax and fall in income will have lesser effect on Q_e and P is likely to increase.

Knowledge, Application, Understanding, Analysis		
L3	<i>A balanced, in depth analysis showing clear understanding of how demand & supply analysis affects the markets for both types of drinkers.</i>	9 - 11

L2	<i>Shows understanding of what question requires, but analysis lacks depth, points are not developed. Candidate does not show awareness of limitations</i>	5 – 8
L1	<i>Basic understanding of concept but intent of question not understood.</i>	1 – 4
Evaluation		
E2	<i>Evaluative assessment supported by economic analysis → Substantiation of an evaluative comment and/or conclusion</i>	3 - 4
E1	<i>An unexplained judgement → An unexplained evaluative conclusion/comment</i>	1 – 2

- 2 In theory, firms are assumed to be motivated by the profit maximising objective in its decision making process. However, in reality, this assumption about the behaviour of firms may not be totally true. Discuss. [25]

Answer Scheme

Thesis: Traditional objective of firms

Profit maximization

Traditionally, it has been thought that a firm will seek to achieve as high a level of profit as possible. Profit is the difference between the total revenue received from selling the good and the total cost of producing the good.

The producer thus needs to know

- (i) costs incurred for the various levels of output produced.
- (ii) revenue he can earn for the various levels of output produced.

He will then be able to choose the level of output that maximises profits.

A firm will maximize its profit if it produces where marginal cost equals marginal revenue (i.e. $MC=MR$).

Marginal cost (MC) is the additional cost incurred to produce an additional unit of output.

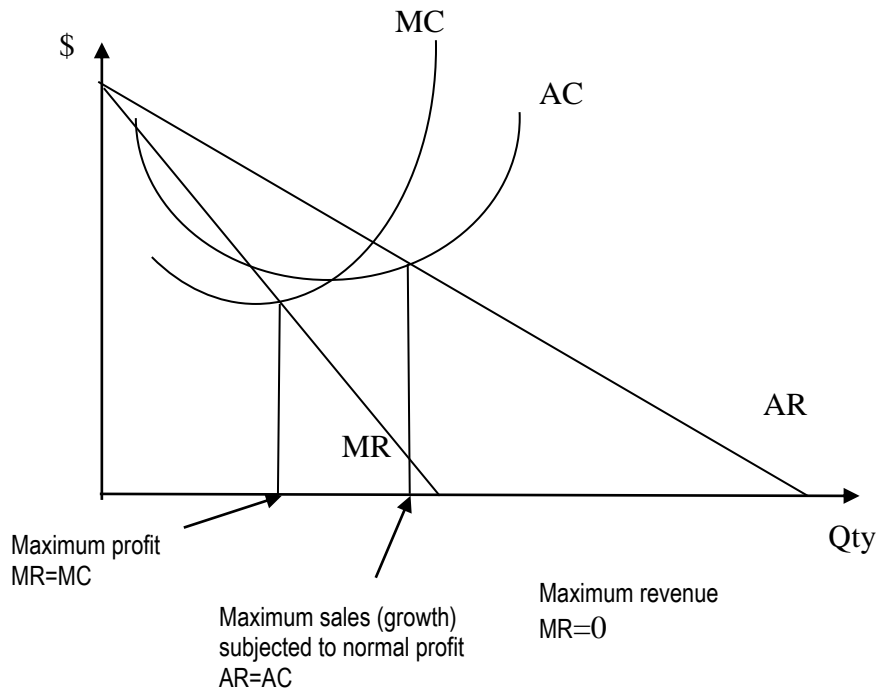
Marginal revenue (MR) is the additional revenue from the sale of an additional unit of output.

As long as the MR of a particular unit of output is $>$ its MC, that unit of output will be produced. Thus the firm will continue producing its output until $MR = MC$. This is the firm's equilibrium.

Problems with traditional theory

Some economists claim that it can be difficult for firms to calculate marginal cost and marginal revenue and so to calculate the profit maximizing price and output. (In practice, many firms estimate their long run average cost and then add a profit margin). However, this does not invalidate the profit maximization theory if firms are still seeking to earn as much profit as possible and are moving towards the output where $MC=MR$ (by finding the output where TR and TC are furthest apart). The main difficulty here however, is a lack of information. Firms may well use accountants' cost concepts not based on opportunity cost. If it were thereby impossible to measure profits, a firm would not be able to maximize profits, except by chance.

Figure 1



Anti-thesis : other objectives of firms

Many large companies are owned by shareholders and run by managers, including chief executives. Shareholders are interested in high profits while managers may have other objectives e.g. obtaining status, prestige which is often more closely linked to the size of the firm than its profitability. High profits can also attract unwanted attention from the government, concerned that the firm may be exploiting consumers, or from other firms keen to acquire profitable assets.

Sales maximization (Growth maximization)

Managers may be more interested in maximizing sales rather than profits i.e to sell greater quantity and dominate the market. However, they are unlikely to be indifferent to profits even when pursuing sales maximization because they will not usually increase output beyond a point where average cost equals average revenue. As shown in Figure 1, a sales maximizing firm will produce at OQ3.

Sales maximization and profit maximization and the interests of managers and shareholders may conflict, especially in the short run. To increase sales a firm may spend a large amount on advertising and/or cut prices, which may initially lower profits. Shareholders are likely to want a high proportion of profits distributed as dividends, whereas managers, concerned about growing the firm, will want to reinvest most of the profits in equipment and buildings. However, in the long run the two objectives may be compatible and both shareholders and managers may be happy if the actions taken in pursuit of sales maximization increase market share and raise long run profits.

Sales revenue maximization

Managers' actions may also be influenced by the level of sales revenue. High sales

revenue can make it easier for a firm to raise loans from bank.

If a firm is aiming to achieve **sales revenue maximization** it should produce **where marginal revenue is zero since at this point total revenue will be highest**. As shown in Figure 1, the sales maximizing firm will produce output OQ2. The level of output is likely to be beyond the profit maximization point, but whether the firm earns supernormal or normal profit or makes a loss will depend on the relationship between total revenue and total cost at this point..

Profit satisficing

Studies of firms' activities have suggested that rather than trying to maximize profits, managers aim for a profit level that will keep shareholders happy. This may be because they are reluctant to accept the increased risks and pressures associated with fiercely competitive policies, or because they are seeking to satisfy not only shareholders but also other **stakeholders** in the firm. Stakeholders are people with a direct interest in the actions of the firm, including (in addition to managers and shareholders) workers, consumers, suppliers, the local community and environmentalists. These groups may have different objectives: consumers want low prices and high quality; workers want high wages, job satisfaction and security; suppliers want a high price; the local community want employment but an absence of congestion; and environmental groups want a clean environment and the conservation of flora and fauna.

Some of the objectives that may appear to conflict in the short run may be compatible in the long run. For example, showing concern for the environment, say by not selling genetically modified food or diverting a pipeline away from an area of natural beauty, is likely to raise a firm's costs. However, it may also provide it with good publicity and may increase demand for its products. In the long run revenue may rise by more than costs and so profit may increase. Similarly, raising workers' wages will increase costs in the short run but may reduce labour costs in the long run if the higher wages increase labour productivity and reduce labour turnover.

Some claim that seeking to please all the stakeholders can distract a firm from its main function of providing profits for shareholders. Others argue that firms have a responsibility to pursue not only profits but also high labour, environmental and ethical standards. If the public perceives that a firm is not following ethical policies, its sales and profits can suffer. For e.g., profits could be adversely affected by a consumer boycott to protest about the firm's unethical acts.

Conclusion:

Despite needing a minimum level of profit to survive in the real world firms may not always seek profit maximization as its primary behavior. Yet its other objectives may not be in conflict with the primary profit maximizing objective.

Evaluation: Whether the behaviour of firms is determined by the need to maximise profits depends on

- Characteristics of the firms
- Time period
- Contestability of the markets.
- Sustainability of the barriers to entry.

Knowledge, Application, Understanding and Analysis		
L3	For a thorough and well-balanced answer that provides good analytical structure to assess whether in reality, behaviour of	16 – 21

	firms is determined by the need to maximize profits.	
L2	For a balanced but limited and undeveloped answer that has some analysis.	8 – 15
L1	For an answer that is largely descriptive and lacks a clear structure. Simple reasons for firms' price and non-price behavior with no reference to real world examples.	1 – 7
Evaluation		
E2	Judgment is based on economic analysis and adequately substantiated	3 – 4
E1	For an unexplained assessment, or one that is not supported by economic analysis.	1 – 2

3 Under Singapore's Bus Service Enhancement Programme (BSEP), over 248 new buses were added to beef up 111 existing services. With more buses, more bus routes and greater frequency, bus travel in Singapore is going to be a more comfortable and convenient way to get around.

a) Explain why there is a need for governments to invest more in managing road usage. [10]

b) Assess whether the development of a more comprehensive public transport network is the best approach towards managing road usage in Singapore. [15]

(a) Suggested Answer:

- Governments usually intervene in selected markets for goods and services when the market itself failed to allocate resources efficiently. In the case of road usage, many developed countries are experiencing excessive usage of roads that lead to serious congestion issues that would lead to substantial costs to the economy as a whole.
- When a driver enters a road space, he receives some benefit (the mobility provided by the road) and faces some cost (the expense of driving, including time cost). What he doesn't have to bear is the cost of the congestion he creates by driving, which is borne by every other driver on the road. That's a negative externality; it means that too many drivers will use a road and cause it to become congested.
- The additional travelling time on the roads as a result of congestion would have an impact on the entire economy as employers take a longer time to arrive at their workplaces. Delivery costs would also rise pushing for the need to incur additional costs of production by purchasing more delivery vehicles, etc
- Diagram to illustrate mkt failure in the usage of roads (to be inserted)
- As shown in figure 2, assuming there is no external benefit in consumption, $MPB = MSB$.
- The **market equilibrium output is at Q_m** occurs where $MPC = MPB$ with price at P_m .
- However, at Q_m , the **MSC exceeds the MSB**.
- The **society does not value an additional unit of the good as much as the additional cost needed to produce the good. Over consumption of road usage occurs.**
- The **socially optimal** level of output occurs where **$MSB = MSC$** is at Q_e with a higher price of P_e .
- There is a **deadweight loss**.

- The market outcome is **not allocative efficient**. Market price is lower than the true price that takes into account the negative externalities in production.
- **A case of market failure**. Thus, justify the need for the government to invest into the intervention of road usage

Knowledge, Application, Understanding, Analysis		
L1	For an answer that shows some knowledge of road congestion as a potential source of market failure	1 – 3
L2	For an underdeveloped explanation why road congestion is a source of market failure	4 - 7
L3	For a good analytical explanation of why road congestion is a source of market failure and therefore becomes a strong rationale for the government to intervene/invest in the management of road usage.	8 - 10

Markers' Comments

- (b) Comparison of at least 3 road usage management policies including the improving public transport system.

Making public transport network more comprehensive (Demand Management policy):

- Provide a **strong and attractive alternative** to using roads by private transport.

Strengths:

- To develop a comprehensive public transport system that presents a viable substitute to private transport. A more efficient mode of travelling on the road. The BSEP is a key initiative by the government to ensure waiting time for buses is reduced and the interconnectedness between key locations is enhanced. Commuters would then be incentivised to choose public transport over private transport

Limitations:

- However, due to scarcity of land, there is a limit to the number of buses and bus routes we could add. Having too many buses and too many bus routes may exacerbate the road congestion issue rather than alleviating it.

Evaluative Comparison:

- Improving the public transport system help to alleviate the road congestion issue by targeting the alternatives to private transport whereas the other two policies achieve the same objective by targeting different aspects of the demand of private transport

COE (Quota bidding system):

- Control the **ownership** of private cars by setting a quota on the availability of certificate of entitlement (COE)
- Effective in controlling the car population in Singapore
- However, due to rising affluence of Singaporeans and the high sunken costs of the COE, owners of cars has a higher tendency to use the car more often. This would then contribute to more road usage and therefore indirectly worsen the road congestion issue. It is also a blunt management as compared to the other polices as it applies to all car owners and not only to those who contribute more to the road congestion.

Electronic Road Pricing (Road Usage Taxation)

- THE logic behind the Electronic Road Pricing, a form of **congestion pricing**, is to **tax road usage** to maintain free-flowing traffic conditions. The tax is set to be equivalent to the external costs of road usage at the societal equilibrium level of output.
- It is a more precise management tool than the COE policy as road users now have a choice whether they wish to pay the ERP charges.
- However, the ERP approach worsens equity as road users who are price sensitive are usually the middle to lower income group. The demand for road usage for these two groups of road users are price elastic since the costs of road usage tends to make up a larger proportion of their income. The rich are less likely to feel the pinch of paying the ERP charges and the one who would enjoy the most of a less congested road. The price sensitive road users have to sacrifice by choosing to use the road during off peak periods, take an alternative longer route to reach their destination or might even not use the road all together.
- [Evaluative Comparison]: The ERP targets directly the road usage component.

[Weighted overall Evaluation]

A combination of all three policies is required to manage road usage as each policy targets a different aspect of road usage. The COE system addresses ownership of cars and ensures a sustainable the growth of car population in Singapore. The ERP is a targeted approach to manage road usage at congested areas during peak hours while a comprehensive public transport network provide a strong alternative for road users who are deterred from road usage as a private commuter due to the first 2 policies.

Level	Descriptor	Marks
L3	For a good analytic comparison on the effectiveness and limitations of each of the road usage management policies to alleviate the road congestion issue.	9 – 11
L2	For an underdeveloped comparison of the road usage management policies OR A one-sided answer (only covers effectiveness or limitations) OR Lack in scope of coverage (only cover 1 to 2 policies)	5 – 8
L1	For an answer that shows lack of knowledge on the policies	1 – 4
E2	Weighted judgement on the choice of policies upon evaluative comparison	3 – 4
E1	Judgement without evaluative comparison	1 – 2

Markers' Comments

Section B

- 4 Economic slowdown and rising unemployment has caused many governments to implement protectionist measures such as tariffs to help shield struggling sectors from growing competition from foreign firms.

Explain the types of unemployment in an economy and discuss whether protectionism can help governments solve these different types of unemployment.

[25]

Suggested Answer

Introduction

Define unemployment.

Unemployment is commonly defined as the situation in which people who are willing and able to work are unable to find work at the prevailing wage rate.

Development (1st Part)

Identify and explain the main types of unemployment – demand-deficient, structural and frictional.

Demand-Deficient Unemployment

Demand-deficient unemployment is also known as Cyclical or Keynesian unemployment. Such unemployment rises during periods when real GDP falls (or grows at a slower-than normal rate) and decreases when real GDP grows rapidly. During periods of falling GDP, i.e. recession, firms find that they are unable to sell their current level of output. With the accumulation of unsold goods overtime, they will cut back on production and hence the number of workers they employ. Demand-deficient unemployment is a major cause of unemployment in Singapore because Singapore is a small and open economy and is heavily dependent upon exports for economic growth. When demand for exports falls due to negative external economic conditions, eg. in the 2008 Global Financial Crisis, Singapore's AD will fall and shift to the left, lowering national output and income via the multiplier process, while increasing demand-deficient unemployment.

Structural Unemployment

Structural unemployment is caused by the changing pattern of demand and/or supply in the economy. This results in a situation where the demand for labour is less than the supply of labour in an individual labour market in the economy. Adjustments to the equilibrium are not fast enough because of the difficulty and inability of workers with specific skills to find alternative employment. In short, there is a mismatch between the skills available and the requirements of new job opportunities. Hence structural unemployment arises due to occupational immobility. With globalisation, restructuring occurs in an economy due to its changing comparative advantage and structural unemployment arises. Employment in 'sunrise' industries will expand while those in 'sunset' industries will contract. For instance, Singapore has recently moved into the biomedical and R&D (Research and Development) industries and thus workers who can only work in the lower end manufacturing industries might find themselves unemployed since mass production work can be outsourced to India and China.

Frictional Unemployment

Frictional unemployment is also known as search unemployment. Such unemployment is due to poor information available in the labour market. Hence, there is time lag before people can find suitable jobs. This happens because employers are not fully informed about the type of labour that is available and workers are not informed about what jobs are available. Therefore, the more imperfect the information is, the longer the search time will be. This type of unemployment is inevitable but is short-term in nature. Thus, frictional unemployment does not present a serious unemployment problem. Such unemployment would normally account for about 1-2% of the economy's unemployment rate.

Development (2nd Part)

Define Protectionism

Protectionism is a policy of sheltering the domestic industries from foreign competition through the imposition of trade barriers on foreign goods and services. Tariffs and quotas are the most common forms of trade barriers.

Thesis: Yes, protectionism can help governments solve the different types of unemployment

Increases AD and Reduces Demand-deficient Unemployment

When there is an economic slowdown and a general depression in world trade, countries seek to boost domestic demand and tend to place restrictions on imports in order to ensure that income is spent on domestic goods, thus maintaining, if not raising, the level of employment in the home countries. Through protectionist measures like the imposition of tariffs on imported goods, prices of imported goods increase and this makes the domestic goods relatively cheaper. If the demand for imports is price elastic, the higher price of imports will lead to a more than proportionate fall in quantity demanded of imports, thereby reducing import expenditure. Net exports rise, ceteris paribus, leading to a rise in AD. At the same time, domestic consumers and firms are induced to switch their expenditure to the relatively cheaper domestic consumer and capital goods. The increase in consumption of domestic goods will raise the AD. Through the multiplier process, the real national income of the country will rise assuming the economy operates below full employment and more factors such as labour are needed to produce more good and services. Thus, demand for labour rises and demand-deficient unemployment rate falls. (AD-AS Diagram)

Evaluation

The success of protectionism depends on the price elasticity of demand for imports. If the demand for exports is price inelastic, an increase in the price of imports will lead to a less than proportionate decrease in the quantity demanded of exports. As such, import expenditure will increase instead and worsen the net exports leading to a reverse multiplier effect, worsening demand-deficient unemployment.

Protectionism measures also reduce the extent of withdrawal and make expansionary demand-side policies more effective in boosting domestic spending. Tariffs and quotas make imports more expensive and reduce the amount of imports available respectively. Thus, these protectionistic measures reduce the value of MPM and increase the size of multiplier (since $k=1/MPW$ and $MPW = MPS + MPT + MPM$). This means that households tend to spend a smaller proportion of additional income on imports. With a smaller MPM value, this lowers the amount of withdrawals and thus raises the size of the multiplier. When AD increases, it thus increases GDP by a greater extent. Hence, protectionism stimulates economic growth through expediting the success of government's expansionary fiscal and monetary policies.

Evaluation

However, raising AD is more appropriate for reducing cyclical unemployment rather than structural or frictional unemployment. Creating more jobs will not increase employment for those who lack the necessary education and skills. It will also be less effective in a country with low k (e.g. S'pore) than in USA.

Reduces Impact of Changes in Comparative Advantage and Structural Unemployment

Comparative advantages are constantly changing. A country could have lost its comparative advantage in certain industries because relative costs of production across countries have changed. This means that there are always some declining industries. If resources are mobile, they would move smoothly from the contracting industries to those in which the country now has a comparative advantage in. However, workers might not possess the relevant skills in industries with job opportunities. If the declining industries contract and start to retrench workers, structural unemployment will rise. Protection would allow the 'sunset' industry to decline gradually by maintaining the demand for its goods, thus allowing the workers sufficient time to be retrained and move to the 'sunrise' industries, reducing the problem of structural unemployment.

Evaluation

Temporary protection may be warranted to allow the mobility of resources to new industries.

Less vulnerable to external shocks -> greater growth stability and hence employment stability

International trade may make a country vulnerable to sudden changes in demand or supply. For example, if Malaysia specializes and trades only in rubber, massive unemployment will result when there is a fall in world demand. Protectionism will reduce the vulnerability of the economy to external shocks leading to greater growth stability and hence employment stability.

Anti-Thesis: No, protectionism cannot help governments solve different types of unemployment

Retaliation

Protectionism may trigger retaliation by the other trading partners hence minimizing its effects in promoting higher growth and employment. E.g. when US impose tariffs against its textile imports, its trading partners may respond by imposing tariffs on US exports. Retaliation often results in a fall in net exports as the fall in exports may be greater than the fall in imports. Protected industries such as textile industry in US may have already declined and can no longer compete on equal terms with China and other LDCs that have cheaper labour and better access to high grade raw materials. The protected industries will also not have incentives to improve efficiency. If US producers or consumers do not buy from China and other LDCs, they would not be able to buy US goods. Hence when US imposed protectionism on China's textile, US retailers will source for imported textile from other parts of the world such as Vietnam and Indonesia. Hence, jobs may not be maintained in the protected industries and at the same time, jobs are lost in the export industries, structural unemployment cannot be solved and demand-deficient unemployment is aggravated.

Evaluation

Protectionism has done little or nothing about the underlying causes of the loss in comparative advantage. Although jobs are maintained in the short-run, the root of the problem is still unresolved and ultimately in the long-run, the domestic jobs cannot be protected. Thus, a more effective policy to address this problem of structural unemployment is definitely not protectionism but supply-side policy to equip the unemployed workers with the relevant skills to take up jobs in these new industries. Hence, the government should work closely with the new industries and set up training centres to retrain the workers and encourage the new industries to take up these unemployed workers after their training stint. This would be a better policy as the economy will be allocating its scarce resources efficiently by focussing on its industries with comparative advantage rather than preserve those industries which have lost its comparative advantage artificially through protectionism.

Beggar-Thy-Neighbour Effect

In addition to retaliation, protectionism may also bring about beggar-thy-neighbour effect whereby it makes the trading partners poorer with a fall in their export earnings and thus AD. This will cause a fall in national income via the reverse multiplier process. Hence the trading partners (e.g. China) will have a lower purchasing power to buy the exports from the country that imposes protectionism (e.g. US). US's export earnings will fall, causing a drop in AD and national income and hence unemployment rises, contrary to the intent of the policy.

Solving Frictional Unemployment Requires Other Policies

To deal with frictional unemployment, policies focussing on improving labour market information to help improve efficiency in the labour market are needed. For example, job fairs are organised by the government to bring together employers of the same industries to hold a mass recruitments. Employment agencies and job-matching websites are set up to

collate potential employees' details and match them to the needs of prospective recruitment exercise where workers can seek out their most suitable jobs.

Conclusion

Whether protectionism can reduce unemployment depends on the type of unemployment. It may be used to address cyclical unemployment but it may not be so helpful for reducing unemployment caused by a loss of comparative advantage or deterioration of the quality of exports. Protectionism could be used as a stop-gap measure to prevent unemployment from worsening while giving the government time put in place other more appropriate policies like expansionary demand management policies to raise AD or supply side measures to develop a new comparative advantage. Once it is able to develop comparative advantage in a new area, the protectionist measures can then be gradually lifted. However, in practice, protectionist measures once implemented are hard to remove.

The effectiveness of protectionism in solving unemployment also depends on the characteristics of the economy. Protectionism has harmful effects on an economy that is highly dependent on trade. For example, given the nature the Singapore economy, which is export and import dependent. Both the export revenue and import expenditure are more than 300% of real GDP. The higher import prices via protectionism would only serve to increase the cost of production for domestic producers. These producers in turn will raise their prices for their goods to maintain their profit margin. This increases the price of the final good and lowers the export competitiveness of Singaporean exports. This will further reduce the value of export earnings and worsen unemployment situation.

All in all, the notion of protectionism goes against the Theory of Comparative Advantage and the benefits accrued from free trade. While there may be possible benefits from protectionism in the context of a global economic downturn, in reality the costs outweigh the benefits both in the short and long run. Therefore, before imposing protectionist measures, a country should take into consideration the impact on economic stability, any unintended consequences, the times period under consideration and the nature of the economy.

Mark Scheme

Level	Descriptor	Marks
L3	For a thorough explanation of at least 2 different types of unemployment and a well-developed and balanced discussion of whether protectionism can solve the different types of unemployment	15 – 21
L2	For a good explanation of at least 2 different types of unemployment and a good discussion of whether protectionism can solve the different types of unemployment or an excellent one-sided answer on whether protectionism can solve unemployment.	10– 14
L1	For an answer that shows some knowledge about the different types of unemployment and whether they can be solved with protectionism. OR Excellent explanation of the different types of unemployment only.	1 – 9
E2	For an evaluative discussion based on economic analysis.	3 – 4
E1	For an unexplained judgment, or one that is not supported by	1 – 2

	analysis.	
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5 Prices in an economy can be affected by external factors as well as by domestic factors. Similarly, prices will affect the domestic and external sectors of the economy.

a) Explain how changes in the external value of a currency can affect the domestic price level. [10]

(b) Discuss whether an increase in the general price level will affect the domestic sector more than the external sector. [15]

Part (a)

The external value a currency refers to the exchange rate of the currency ie the price of on the domestic currency in terms of another currency. A change in this external value of currency can be either a depreciation or appreciation of the currency. Depreciation means the country can exchange a given amount of local currency for a lesser amount of foreign currency ie the external value of the currency has fallen.

Suppose there is a depreciation of a currency. This will lead to a fall in the price of exports in terms of foreign currency and a rise in the price of imports in terms of domestic currency. If the Marshall Lerner condition holds, $P_x \downarrow$ leads to $Q_x \uparrow$ more than proportionately and $P_m \uparrow$ will lead to a more than proportionate fall in Q_m . The combined effect is an increase in net exports which represents an injection or increase in AD, resulting in increase in income and employment, through the multiplier. This is if there is the economy has yet to reach Y_f .

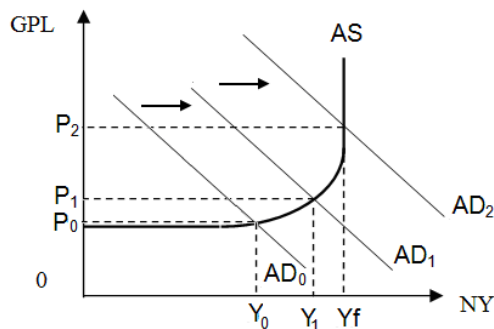


Figure: Effect of depreciation on NY and GPL

Referring to the figure above, if $AD \uparrow$ from AD_0 to AD_1 , then NY will \uparrow from $0Y_0$ to $0Y_1$ ie there is an increase in national income and employment via the multiplier effect.

However, if Y_f is reached, it will lead to inflation in the economy. In the figure above, if $AD \uparrow$ further from AD_1 to AD_2 , then the GPL will rise to $0P_2$ ie inflation results because the economy has reached full employment ie output cannot increase and the general price level will rise. So a fall in the external value of the currency can lead to demand-pull inflation and the domestic price level rises.

A depreciation of currency can also lead to imported inflation if country has high dependence on imports. High import dependence, like Singapore is likely to experience a higher inflation rate if its currency depreciates. This is because the domestic producers who need to import raw materials will pass on the increased costs of production to the consumers. Thus, if PED for imports is inelastic, the country can end up with imported cost-

push inflation. Thus, a fall in the external value of a currency can cause the domestic price level to rise.

Similarly, an appreciation can lead to higher export prices and lower import prices. This may help to lower demand-pull inflation in the country ie lower the domestic price level when the ML condition holds. If PED of imports is inelastic, it can regulate imported inflation and is thus helpful to keep prices stable in such an economy like Singapore.

	Marks	
L3	Thorough explanation of the relationship between exchange rate and domestic price level with in-depth analysis	8-10
L2	Adequate explanation of the relationship between exchange rate and domestic price level but without clear analysis	4-7
L1	Some knowledge of concepts but cannot show relationship between exchange rate and domestic price level	1-3

(b) Discuss whether an increase in the general price level will affect the domestic sector more than the external sector. [15]

Inflation is a sustained increase in the general price level leading to a fall in the purchasing power of money. It causes problems for both domestic and external sectors of the economy, especially if it's high inflation.

Effects on the domestic sector

1. Desirable effects:

- Mild inflation eg 2% might stimulate investment and expansion of firms who benefit if prices rise by more than costs leading to increase in profits. If rise in general price level is caused by increasing AD, firms will feel optimistic about the future. This might stimulate investment and expansion of firms and thus leading to NY increase ie economic growth for the economy.
- Inflation may also stimulate consumption if interest rate does not rise in tandem because real interest rates may be low or negative. Debt burdens fall and people may be encouraged to spend more eg those who borrowed money to buy houses may experience a fall in mortgage interest payments in real terms. At the same time, prices of their houses will be likely to rise more than inflation. Thus they feel better off and so may spend more on C.

2. Undesirable effects:

- Inflation discourages people from holding money because inflation reduces the value of money. Opportunity cost of holding money becomes great at very high nominal interest rates that occur when inflation is high. People will buy necessities now if inflation is expected to go even higher. Money becomes a poor store of value as people will not want to keep money since purchasing power falls.
- People are reluctant to undertake investment that would expand the country's productive capacity because of uncertainty about future economic growth due to high inflation. This would greatly impact the economy as prices are distorted and investors/businessmen fear the effects on their production. The general

consumers who are salaried workers will end up buying less goods and services as real income falls.

- Redistribution of income will result in some to gain and others to lose. Borrowers tend to gain and lenders to lose because nominal interest rates usually rise more slowly than inflation rate → real interest rates fall with inflation. Those with fixed incomes will also lose out.
- The wage-price spiral will cause greater inflation. When workers experience higher prices of goods and services, they will demand higher wages to maintain their purchasing power. This will lead to even higher GPL and uncertainty about the future.
- Misallocation of resources - Prices are very important in allocating resources in market economies. Inflation may inhibit the ability of prices to act as reliable signals in the process, leading to wastage of resources eg producers seeing the price of their goods rising may increase output when this higher price is a result of inflation rather than increased demand.

Effects on the external sector

1. Undesirable effects:
 - BOP problems in the current account as inflation makes a country's goods less competitive. Consumers at home and abroad may switch away from buying the country's goods and services, which may cause deficit to arise in the current account of the BOP
 - Uncertainty that arises from inflation may also discourage capital investment in the country ie there may be an outflow of FDIs as the cost of investment is not desirable in this economy.
 - Lower exchange rate due to fall in demand for country's goods and services and reduction in inflow of investment from abroad. With lower exchange rate, export price competitiveness is restored initially. However danger of import prices rising leading to cost-push inflation and then further fall in the exchange rate.
2. Desirable effects: However, if inflation rates are below those of its main competitors, the goods and services will become more competitive.

Take a stand: Whether inflation will affect the domestic sector more than the external sector depends on the nature of the economy. Inflation will affect the external sector more than the internal sector for Singapore as it is heavily dependent on international trade. As a small and open economy which is heavily dependent on imports for her economy to grow, one concern is imported inflation. Her main cause of inflation is imported inflation as she needs to buy foodstuffs and raw materials from others. As there is high import content in her exports, inflation is harmful for her export trade as well. It is also dependent on exports and foreign investment for economic growth, thus Singapore cannot afford to lose its export competitiveness and thus regulating prices and the inflation level is a big concern for the government of Singapore.

Conclusion: Inflation is detrimental to economic growth. An environment of low inflation, in comparison is essential for sustainable economic growth. However, inflation is not the only important factor influencing the internal and external sectors. Other factors that can affect EG of a country even with inflation include the quality of the products of the country and whether the country has good strategies for attracting FDIs eg a country may be able to sustain its output and sales at home and abroad if the quality of goods and services is rising and marketing strategies are successful.

	Marks	
L3	Thorough explanation of both the internal & external effects of inflation on an economy.	9-11
L2	Adequate explanation of both the internal & external effects	5-8

	OR Thorough explanation of either internal or external effects	
L1	Limited explanation of the effects	1-4
E2	Judgment is based on economic analysis and adequately substantiated	3-4
E1	For an unexplained assessment, or one that is not supported by economic analysis.	1-2

6 The trend in business and trade in recent years is towards globalisation.

a) Explain the trend towards globalisation. [10]

b) Globalisation and openness to the outside world have brought many benefits to the Singapore economy. Discuss. [15]

Part (a)

Globalisation refers to the development of an increasingly integrated global economy marked by free trade, free flow of capital and international movement of labour. The trend towards globalization occurs because of :

- a. Improved communication:** Advances in information and computer technology are increasing the ease with which consumers can find out about and buy products from other countries and the ease with which producers can coordinate production throughout the world. This leads to trade between countries, even countries that were considered too far and 'unknown' previously.
- b. Reduced transport cost:** Transport costs have been falling over time with the development of containerisation and the increasing use of larger ships and planes, facilitating the movement of goods & services between countries. Thus it is cheaper and faster to transport goods across continents. Besides trade, it also allows for greater labour mobility as costs of travelling is reduced and coupled with ease of communication, people are more willing to work outside their own country.
- c. Trade liberalisation:** Since World War II, there are decreased barriers to the free movement of goods, services and capital. With trade liberalisation and openness to FDI, the whole product chain is now globalized.

- d. **Rise in skill levels throughout the world:** Increased productivity enables MNCs to assemble products and parts of products not only in industrialised countries but also in developing countries; for example, R&D for Apple products is developed in USA, the component parts comes from various parts of the world and the product is assembled in China.

	Marks	
L3	Thorough explanation of the reasons for globalisation	8-10
L2	Adequate explanation of the reasons for globalisation	4-7
L1	Some knowledge of globalization	1-3

- b) Globalisation and openness to the outside world have brought many benefits to the Singapore economy. Discuss. [15]

Globalisation has both positive and negative impacts for a small and open economy like Singapore.

Effects on Trade

Trade refers to imports and exports of a country; both in terms of raw materials and final products.

Benefits/Positive Effects

Rise in Trade Volume/Rise in Economic Growth

Being a small economy with little natural resources and a small market, the increasing trend towards globalisation has led to the rising trade volume. Such increase in trade is beneficial to our economy. Furthermore, Singapore, through IE Singapore, can gain access to markets further away geographically which will increase exports. With higher net export, AD increases and through the multiplier effect, increases NY and employment ie stimulates *economic growth*.

Greater variety of goods and service

Countries are also able to enjoy greater variety of goods and service. Further, due to lack of natural resources, small economies such as Singapore benefit much from the increased trade due to globalisation as it depends heavily on imported raw materials for survival. Globalisation allows Singapore to access the world market for resources that are needed for its manufacturing industries. This will lower COP in the economy.

Change in Pattern of Trade

Globalisation has also led to the change in the pattern of trade as the one based on the theory of comparative advantage. Due to globalisation, different countries can now *specialize* in the production of different parts of the goods and trade to benefit from the lower cost. For example, in the production of computers, the metal casing could be produced at a *lower cost* in an economy with abundance low-skilled workers while the electronic chips in Singapore with its capital-intensive industries and highly skilled workers. These parts can then be shipped to another country with abundant supply of cheap labour for assembly. The completed computer will then be exported to the global market. Thus, globalisation has made offshoring possible. Local firms can now outsource part of their production process to foreign firms which are able to produce at a cheaper cost. This cost savings can then be passed on to the consumers who benefits from cheaper goods.

Negative Effects/Challenges

Due to the higher volume of trade, there is now *greater interdependence* among countries. Changes in aggregate demand in one country can send ripples throughout the global economy. For example, the fall in aggregate demand by the US due to the financial crisis has reduced the exports and national income of many Asian economies including Singapore. The process whereby changes in trade by one country affect the national income in other countries is known as the international trade multiplier. The more open an economy, the more vulnerable it will be to changes in the level of economic activity in the rest of the world. This problem will be particularly acute if a country is heavily dependent on trade with other nations. This also explained why Singapore was the first Asian country to declare a recession due to the current financial crisis.

Effects on Capital Flow

Capital flows refer to foreign direct investment, portfolio investment (equity and debt securities), financial derivatives and other investments (including cross-border bank lending).

Benefits/Positive Effects

As multinational corporations are being set up in a country, the country gains capital inflow, known as foreign direct investments (FDIs). FDI in a country measures the amount of investment by foreign investors in the country's affiliates. FDIs allowed *knowledge and technological transfer* to take place. Inwards FDIs *increases both aggregate demand and aggregate supply*, leading to *higher economic growth and lower unemployment level*. Further, such inflow of capital *improves the balance of payment position* via the capital account in a country. Thus, the economies with the largest share of foreign investment stand to gain most. This explains why numerous countries, including Singapore, are granting free access to MNCs to set up factories and other forms of investment in their domestic market.

Often, in the bid to attract these investments, the government provides a wide range of fiscal incentives and infrastructure facilities to edge out competitors. The ability to attract and retain FDI depends on the economic and political climate in the country. Important factors include the country's overall policy framework, economic conditions such as cost or market size, governance, and the quality and competitiveness of the producers, and institutional infrastructure, factors which are attractive in Singapore to FDI.

Singapore's economic development over the decades has been directly related to the international economic integration through free trade policies to attract multinational corporations (MNC).

Direct investment outflows enable local firms to increase their productivity at home by relocating some tasks to other countries where they can be accomplished more efficiently.

Negative Effect

However, in the long run, countries that attract FDI may expect an outflow of remittances from profit repatriation. As such, the country may end up suffering from a balance of payment deficit via the capital account if the account is not being offset by the growth in export revenue.

Additionally, globalisation may also give rise to large flow of short-term financial capital across countries, known as hot money. These are investments that seek for highest return within the shortest time period. Examples are investments in stocks and bonds. These investments will flow into countries with the highest interest rate for better payoff. But since interest rate is very volatile, there are often large inflows and outflows of short-term financial capital across countries. This may, in turn, cause the exchange rates of countries to fluctuate, affecting their trade and investment negatively. This is especially true for small and open economies such as Singapore which is vulnerable to external shocks.

Effect on International Movement of Labour

The rise of globalisation has also given way to the movement of labour across countries. Labour mobility across countries has increased over the years as people become more educated and aware of foreign labour market conditions and travelling and communication between countries become more convenient.

Benefits/Positive Effects

The Singapore government has been attracting foreign talents to make up for the shortage in the domestic labour market, seeing foreign talent as a means to economic growth. Foreign talents would bring in skills and experience which benefits the economy without

having to bear the cost of raising this workforce to adulthood. Thus, the inflow of foreign talents will help a country's productivity to rise and move into higher value-added industries due to their expertise. This will, in turn, promote potential economic growth in Singapore and raise its standard of living.

Additionally, the declining population growth rate in many developed economies has also contributed to the liberalization of immigration policies. This is especially true for Singapore which is experiencing a declining birth rate. The inflow of not only the foreign talents but also foreign workers helps to increase our labour force and build up our pool of talent and entrepreneurs. Countries will usually allow inflow of low-skilled labour to fill the relatively low-paid jobs which their own citizens do not wish to do.

Negative Effects

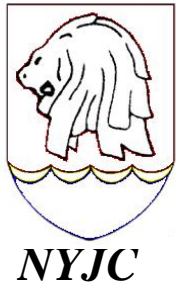
The international movement of labour may actually worsen income disparity in Singapore. This is because the local low skilled workers such as cleaners are being replaced by cheaper foreign workers. In order to compete with the foreign workers for jobs, the local workers will lower their wages as well. On the other hand, the establishment of MNCs not only increases the job opportunities for the highly skilled workers but also increases their job benefits. This is because to compete for the pool of highly skilled workers, both the MNCs and local firms will increase the employment benefits to attract them. As such, the highly skilled workers earn higher wages while the low skilled workers earn lower wages due to the rising international movement of labour, resulting in a worsen income disparity.

Additionally, globalisation can also cause structural unemployment. This is because globalisation brings in new machines and methods that make old skills obsolete. Since developed economies would have to stay competitive through the use of technological advanced production methods, there is a need for workers to be equipped with the relevant skills and in a timely manner is essential to remain employable. Thus, the inability to match up with the current skills required in a timely manner would result in structural unemployment.

Lastly, globalisation which gives rise to international trade has led to the influx of cheaper imports that compete directly with domestic producers. This may cause local producers to cut down on production or to close down, causing unemployment in the country.

Knowledge, Application, Understanding and Analysis		
L3	For a comprehensive and detailed answer that provides a balanced discussion on benefits and costs to the Singapore economy as a result of globalization.	9-11
L2	For an answer that provides a balanced but undeveloped discussion on benefits and costs to the Singapore economy as a result of globalization. OR For an answer that provides a one-sided but developed discussion on benefits / costs to the Singapore economy as a result of globalization.	5-8
L1	For an answer that is mostly descriptive, with some inaccuracies and is not in context.	1-4
Allow up to 4 additional marks for Evaluation		
E2	For a judgement based on economic analysis and is adequately substantiated.	3-4
E1	For an unexplained judgement, or one that is not supported by economic analysis	1 -2

Raffles Institution completely missing

	PRELIMINARY EXAM 2015
	Economics JC2 H1 (8819/01)

PAPER 1

Monday

14 September 2015

08:00 – 11:00

TIME : 3 hours 00 mins

INSTRUCTIONS TO CANDIDATES

Do not open this paper until you are told to do so.

Write your name, class and name of economics tutor in the space provided on the writing paper.

Do not use staples, paper clips, glue or correction fluid/tape.

Answer **all** questions in **Section A** and **one** question in **Section B**. The number of marks is given in the brackets at the end of each question. Write your answers on the writing papers provided. If you use more than one sheet of paper, fasten the sheets together.

You are advised to spend several minutes per question reading through the data and questions before you begin writing your answers.

There are 9 printed pages including this cover page

Answer all questions.

Question 1

The Automobile Industries in India and Thailand

Figure 1: Population Growth in India

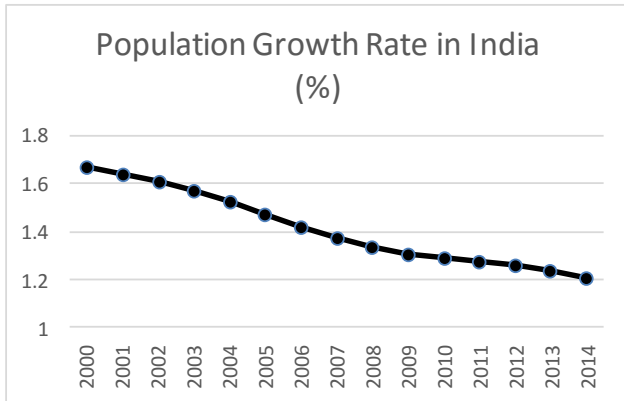
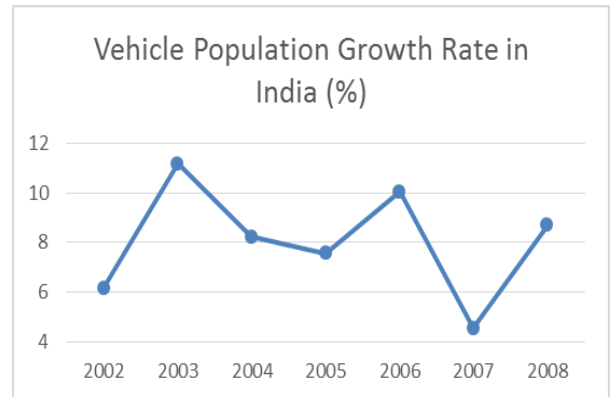


Figure 2: Vehicle Population Growth in India



Source: The World Bank

Extract 1: Traffic congestion and productivity losses

With growing prosperity in India, an increasing number of people can now afford their own private vehicles. Public transport is becoming an inferior good for many of them. They prefer travelling by their own cars to save time, to avoid the hassles of coordination in case of car-pooling, and to increase their comfort while travelling. The states with the highest number of motor vehicles per 100 people are Goa, Delhi, Tamil Nadu, Gujarat and Haryana. Delhi has the highest number of cars per 1,000 people (262). It also has the highest number of vehicles per km of road length, which thus increases the likelihood of congestion on roads. Often, because of this, states like Delhi face crippling traffic bottlenecks leading to a standstill in peak hours.

Poor road infrastructure, traffic mismanagement, lack of efficient public transport—the reasons can be numerous, but at the end of the day, all of this is resulting in an increase in congestion on roads leading to traffic chaos and ultimately huge loss of time and hence productivity of the nation. So, the increase in the prosperity of the nation is actually turning into economic losses for the nation. Also, there are environmental losses with the increase in air pollution, losses due to increase in accident rates on roads, increase in maintenance expenditure of road infrastructure, losses due to delays and lost opportunities which collectively cost millions to the nation each day. This will eventually hamper India's ability to reach its potential.

Source: Adapted from The Indian Express, Oct 27, 2012

Extract 2: When it Comes to Reducing Car Congestion, India's Cities Can Learn from its Businesses

City governments in India are still focused on investing in road expansions and overpass construction projects rather than curbing car dependence and improving public transport services. Instead of waiting for local governments to act, a handful of Indian businesses are taking the initiative to implement transport demand management (TDM) strategies, improving the productivity of their employees and reducing the social costs of car congestion.

Employer-initiated TDM strategies have been especially common in the information technology (IT) sector, because most IT employees in India use private cars to commute to and from work. These strategies have been relatively easy to implement given the availability of information—such as employees' origins and destinations, duration, and frequency of trips—for designing optimal transit and carpool routes.

Some initiatives have included providing employees with commuter subsidies for public transport or carpooling. Other businesses have experimented with company buses that transport workers from nearby metro stations to offices, providing much-needed “last-mile connectivity.” These programs have successfully shifted 30-50 percent of the targeted employees from cars to public transport, resulting in reduced travel times and significant cost savings for employers. Not only are employees more productive from shorter commutes, bus and other public transit subsidies are much cheaper compared to private company buses.

For example, Wipro worked with the Bangalore Metropolitan Transport Corporation on specific routes designed to move workers more comfortably and efficiently. This initiative encouraged employees to commute by bus rather than private vehicle and is credited with reducing employee carbon footprint by almost 16 percent in the first year of implementation.

Source: Adapted from World Resources Institute, [Anjali Mahendra](#) and [Pawan Mulukutla](#),
June 03, 2015

Extract 3: India Threatens Thai Automobile Industry's “Detroit of the East” Title

As if things were not bad enough already for Thailand's prestigious automotive sector a report by Standard Chartered Bank (SCB) shows that the country's claim as the “Detroit of the East” could be lost in less than five years. In the first seven months of 2014 the Thai automobile industry produced 1.1 million vehicles, a 28.5 per cent drop on the same period last year.

In 2009 India became Asia's fourth largest exporter of passenger vehicles behind Japan, South Korea and Thailand and in 2011 became the sixth largest passenger vehicle exporter in the world, exporting more than 3.9 million vehicles.

While the two countries are presently not direct competitors in the global market yet, they go head-to-head in several Asean markets. The report notes that several automotive manufacturers serving the Asean market are increasingly sourcing their engines from India. The Thai automobile industry has been particularly hard hit due to the political upheavals in 2013 and 2014, with violent anti-government protests, sand-bagged fortress barricades and

daily street marches aimed at strangling Bangkok. These events cast a pessimistic shadow over the Thai economy. Even the most optimistic prediction for full year Thailand 2014 GDP forecasts a maximum growth of just 2 per cent – 60.78 per cent below the 5.1 per cent in 2014.

Moreover, It has also suffered from a lack of skilled workers as well as low productivity of about 3.69 vehicles per employee, compared with 11-12 vehicles per employee in Japan. The Federation of Thai Industries (FTI) said the number of skilled workers available to feed the rapidly expanding Thailand automotive industry is an ongoing concern and developing highly skilled and knowledgeable workers is crucial.

Source: Adapted from The Establishment Post, John Le Fevre, September 16, 2014

Questions

- (a) Compare the trends in population and vehicle population figures in India from 2002 to 2008. [2]
- (b) Explain why public transport is considered an 'inferior good' in India. [2]
- (c) Suggest a possible reason for the difference in productivity between the Thai and Japanese automobile industry. [2]
- (d) (i) Explain what is meant by the term third party costs. [2]
- (ii) "Instead of waiting for local governments to act, a handful of Indian businesses are taking the initiative to implement transport demand management (TDM) strategies."
- Explain why private companies in India would take the initiative to implement TDM strategies. [6]
- (e) Assess whether the subsidy for public transport is the most effective policy in addressing the congestion problem in the Indian cities. [8]
- (f) "In the first seven months of 2014 the Thai automobile industry produced 1.1 million vehicles, a 28.5 per cent drop on the same period last year."
- To what extent is the rise of the Indian automobile industry the main reason for the above development in the Thai automobile industry? [8]

[Total: 30]

Question 2

US economic recovery and its impact on Asia

Extract 4: What Fed's tapering means

The Quantitative Easing (QE) program which began after the financial crisis in 2008 has led to a growing momentum of US economic recovery. QE kept interest rates low and this had a major impact on investments and consumption in the US.

The US Central Bank (Fed) has repeatedly linked the QE program with the labour market and inflation condition. With a stable and improving labour market, there is anticipation for the Fed to initiate a tapering of the QE program in the near future. The tapering of the QE, which in general means a reduction in the monthly bond purchase program, may result in a reduction of liquidity in the market and perhaps a hike in interest rate.

If that is so, corporate borrowing cost may increase with higher interest rate and this can hurt corporate earnings in the US. With higher interest rates, there is likelihood of USD to appreciate in the medium term.

Source: Adopted from "What the Fed's tapering means for Singapore", 6 June 2013

Extract 5: US economic recovery finally taking hold in 2014

The latest government data shows the economy has bounced back sharply in 2014, and that momentum is expected to carry into next year. There are signs that the 2013 growth slide has finally given way to what economists call a "virtuous cycle," in which improvement in one part of the economy feeds into the others, creating a self-sustaining expansion.

America is recovering for a few reasons. While many governments are tightening belts, America's is not: for the first time in five years, public spending as a proportion of GDP rose in 2014. American shoppers are flush with cheap credit. Lower oil prices also help, since America is still a net importer of the stuff.

The pace of the US growth of course, depends on when the Federal Reserve will decide to begin raising interest rates all the way back to more "normal" levels, and how quickly those rates begin to rise.

And while the U.S. seems to be back on its feet, the economy in the rest of the world is stumbling again. China's once red hot growth pace has slowed, and long-running efforts to revive growth in Europe and Japan continue to come up short. That—along with a stronger dollar—could hurt demand for U.S. exports. But for now, it looks like much of the U.S. economic recovery is solidly on track.

Source: CNBC, www.cnbc.com, 25 Dec 2014

Extract 6: When US interest rates rise: Singapore wins, Hong Kong loses

Economists at Bank of America (BofA) forecast that the Fed to hike interest rate at every other meeting in 2015 and 2016, bringing the funds rate to average 3.5% in the long run. But what would such an increase mean for Asia and its companies?

“Asian exports and growth typically strengthened during the past three episodes of US Fed rate hike cycles” That’s because rate increases are associated with stronger GDP growth in the US. For at least one market, Hong Kong, the implication is clear. Its banks will have to increase interest rates as well, because the Hong Kong dollar is pegged to the US dollar. So the cost of doing business is going to go up, particularly for enterprises with large bank borrowings. For other economies, the impact is more mixed. The winners, according to the Bank of America economists, would be the “Asian exporters,” which include Korea, Malaysia, Singapore and Taiwan, and the manufacturing companies that sell into the US.

But the GDP improvement in the Asian exporters may not be as strong this time around. Asia’s sensitivity to US GDP growth “appears to have fallen compared to the past,” says Bank of America.

One reason is the fall in the US share of the global economy, from 33% in 2001 to about 23% last year. At the same time, China’s share has climbed to about 12%. So even if US GDP growth improves – Bank of America forecasts 3.3% expansion in 2015, a full percentage point higher than its 2.3% forecast this year – the impact on the exporters may be more muted because of China’s economic slowdown.

Table 1: BofA estimation on the impact on Asia’s Growth due 1% expansion in the US and a 1% contraction in China.

	Overall impact	Impact of +1% US growth	Impact of -1% China growth
Singapore	1.1	1.7	-0.6
Taiwan	0.7	1.25	-0.6
Malaysia	0.3	0.75	-0.5
Korea	0.2	0.45	-0.3
Hong Kong	0.2	1.25	-1.1
Thailand	0.1	0.60	-0.5
Indonesia	-0.1	0.25	-0.3
India	-0.2	0.05	-0.2

Source: BofA Merrill Lynch Global Research estimates

The net impact of the divergent US-China growth may be beneficial for Singapore, Taiwan and Malaysia because they are electronics exporters, but negative for commodity exporters Indonesia (coal, palm oil) Thailand (rubber, food), and to some extent Malaysia (palm oil).

“The positive impact from firmer US growth (which benefits manufacturing exporters) [could be] *partly* negated by weaker China growth (which hurts commodity exporters),” reckons Bank of America. The main mode of transmission would be import demand for goods in the US and for commodities in China.

“How Asia fares will largely depend on how strong the US economic recovery will be in the coming years, as the Fed normalize interest rates,” Bank of America sums up.

Source: www.cfoinnovation.com, 13 Oct 2014

Table 2: Trade of Hong Kong and Singapore

Hong Kong Exports To		Singapore Exports To	
China	47%	China	14%
ASEAN	5.8%	Malaysia	12%
Malaysia	3.3%	Indonesia	12%
United States	3.2%	Hong Kong	7.2%
India	3.1%	Australia	6%
Hong Kong Imports From		Singapore Imports From	
China	50%	China	12%
Japan	7.2%	Malaysia	10%
United States	5.7%	South Korea	8.4%
South Korea	5.7%	United States	7.3%
Singapore	3.7%	Japan	6.1%

Source: www.aseanbriefing.com, 2015

Table 3: Summary of the US economy

	2011	2012	2013	2014
GDP growth (%)	1.6	2.3	2.2	2.4
Unemployment	8.3%	8%	6.6%	5.7%
Inflation	2.93%	1.59%	1.58%	-0.09%
US Government Budget (%GDP)	-10.7	-9.3	-6.4	-5.8
US Government Budget balance (US\$bn)	- 1299	- 1100	- 680	- 492

Source: Various

Questions

- (a) (i) Describe the trend in the US government budget balance between 2011 and 2014. [2]
- (ii) Explain how the trend in the US government budget balance is expected to affect the US inflation rate. [2]
- (b) With the use of a diagram, explain how the “Fed’s tapering” may cause an appreciation of the US dollar. [4]
- (c) Extract 5 explains that the 2013 growth slide has given way to what economists call a “virtuous cycle”.
Using the concept of the circular flow of income, explain how such a change will affect the equilibrium level of national income in 2014. [6]
- (d) With reference to the data, discuss whether economic growth in US is expected to improve from 2014 and beyond. [8]
- (e) Assess the likely impact of an increase in interest rates in the US and divergent US-China growth on the balance of payments of Singapore and Hong Kong. [8]

[Total: 30]

Section B

Answer **one** question from this section.

- 3 "The financial crisis in 2007 – 2009 dispelled the myth that competitive markets and self-interested individuals alone are sufficient to ensure efficient outcomes. The crisis emphatically demonstrated how unregulated markets can fail in ways that undermine even the most advanced economies.

Adapted from source: Low, D; & Wu;
June 2011; Civil Service College.

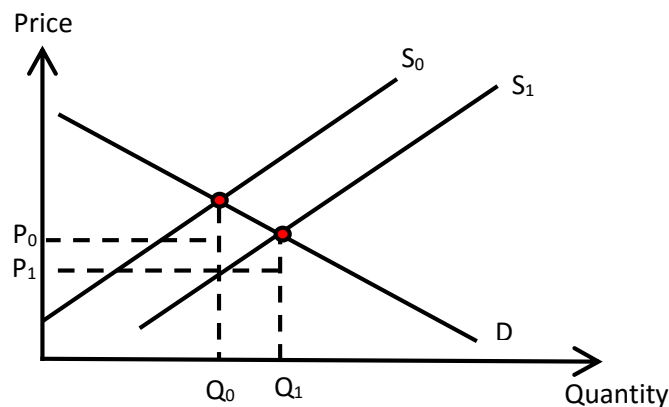
- (a) Explain how the free market ensures efficient outcomes. [10]
- (b) Explain and evaluate one method that a government might use to bring about a more efficient allocation of resources when, for some reason, there is market failure. [15]
- 4 (a) Explain the possible causes of an appreciation of a country's currency. [10]
- (b) Discuss whether domestic or international factors are more likely to affect the balance of payments of Singapore. [15]

2015 Prelim (CSQ #1) H1 & H2

Mark Scheme

a.	Compare the trends in population and vehicle population figures in India from 2002 to 2008.	2m
	<ul style="list-style-type: none"> • Similarity: Both population and vehicle population figures are increasing (1) • Difference: <ul style="list-style-type: none"> - Vehicle population is growing much faster than human population. OR - Population figures are increasing at a decreasing rate, but vehicle population are increasing at an increasing rate (1) 	
b.	Explain why public transport is considered an 'inferior good' in India.	2m
	<ul style="list-style-type: none"> • Incomes are rising, growing prosperity leads to falling demand for public transport → YED is negative (expected for H2, not for H1) (1) • Either: Longer travel time, Or: Poorer comfort levels (1) 	
c.	Suggest a possible reason for the difference in productivity between the Thai and Japanese automobile industry.	2m
	<p>Identify the difference:</p> <ul style="list-style-type: none"> • The Thai automobile industry is less productive than the Japanese automobile industry <p>Suggest a possible reason:</p> <ul style="list-style-type: none"> • Either: The quality of labour is are likely to be higher as they are generally more well educated. • Or: Japan may possess more capital goods. Moreover, these capital goods may be of higher quality and technology level compared to what Thailand has. 	
d. (i)	Explain what is meant by the term third party costs.	2m
	<p>Third party costs are:</p> <ul style="list-style-type: none"> • Costs arising from an economic activity that falls on parties not directly involved in the transaction (1) • And are not taken into account by those who directly participate in the economic activity (1) 	
(ii)	<p>"Instead of waiting for local governments to act, a handful of Indian businesses are taking the initiative to implement transport demand management (TDM) strategies."</p> <p>Explain why private companies in India would take the initiative to implement TDM strategies.</p>	4m (H1 6m)
	<ul style="list-style-type: none"> - Identify that the firms are part of the 3rd party costs. (1m) H1 (1m) - Explain how TDM reduces these costs. (1m) H1 (3m) - (use framework) (2m) H1 (2m) <ul style="list-style-type: none"> • The third party costs incurred due to congestion includes the time wasted sitting in traffic. This results in a loss of productivity. • Private companies are the third parties that bear the costs due to time wastage and productivity. The cost of production face by private producers is higher than what it could be if the congestion problem is alleviated. • TDM strategies will be able to improve the productivity of the private firms, thereby reducing their cost of production. 	

- From the private firm's perspective, the objective is to maximise profits. If the benefits of implementing TDM due to the lowered cost of production are greater than the costs, then the firms should take the initiative to provide the TDM.
- Examples of benefits and costs
 - Benefits: Workers more likely to get to work on time and less tired out by traffic → increase in number of hours worked, increased productivity
 - Costs: Rental of company buses and hiring bus drivers
- Increased productivity due to the TDM would shift the firms' supply curve rightwards from S_0 to S_1 , resulting in a fall in equilibrium price from P_0 to P_1 and equilibrium quantity from Q_0 to Q_1
- Assuming that the demand for the goods of these firms is price elastic, a fall in price due to the increase in supply would result in an increase in TR.
- Assuming that the increase in TC due to TDM is less than the increase in TR, firms will take the initiative to implement TDM.



e. Assess whether the subsidy for public transport is the most effective policy in addressing the congestion problem in the Indian cities. 8m

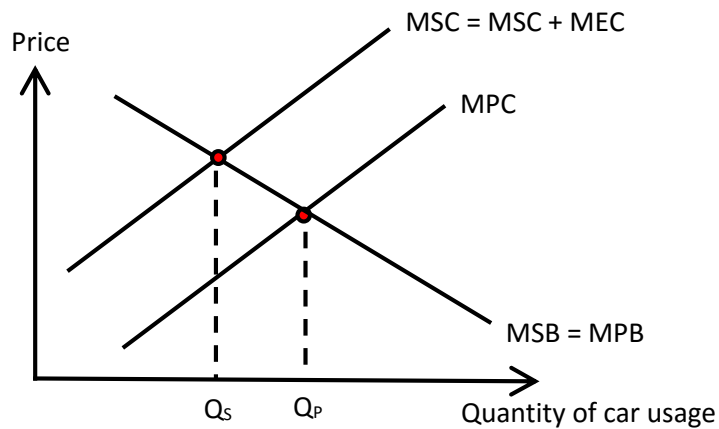
(Note: Students can interpret the subsidy for public transport as either a subsidy to producers of public transport, or a subsidy to consumers of public transport)

Introduction:

- A subsidy on public transport could encourage Indian consumers to use more public transport and reduce the usage of private vehicles. This could result in fewer vehicles on the roads, and therefore, alleviate the problem of congestion.
- However, this policy might not be very effective as it does not directly reduce the number of cars on the roads. Moreover, imposing a subsidy also have other limitations.

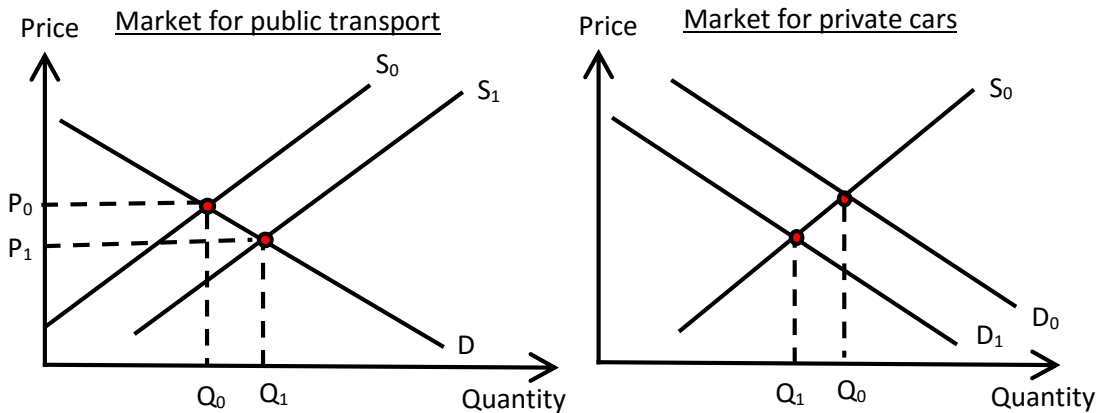
Body 1: Explaining the negative externality

- Congestion is a negative externality that arises due to the overconsumption of private vehicles. Consumers aim to maximise their net private benefit. Thus, in deciding the amount of car usage to consume, they will equate MPC and MPB, and consume at point Q_p . At Q_p , the net private benefits are maximised.
- However, the negative externality that results from car usage causes a divergence between MSC and MPC. At Q_p , the MSC is higher than MPC, resulting in a deadweight loss.
- From society's point of view, the social optimum consumption level is at Q_s , where $MSC = MSB$. This point maximises society's net benefit.

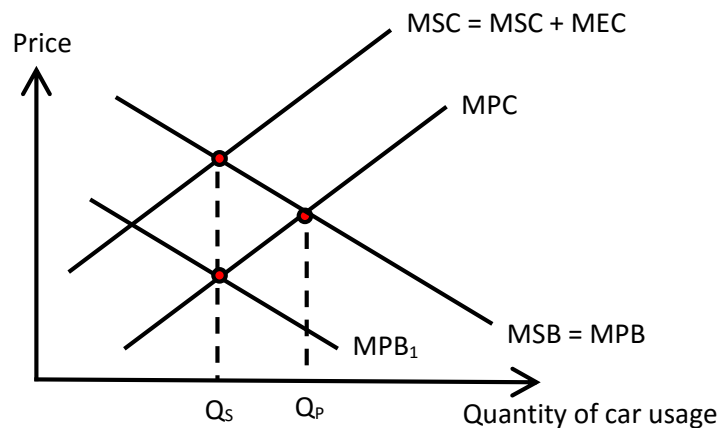


Body 2 (Thesis): Subsidising provision of public transport can address congestion

- Giving a subsidy to the producers of public transport would allow them to reduce their cost of production. Thus, the supply for public transport will increase from S_0 to S_1 . Thus, the eqm price for public transport will fall from P_0 to P_1 , and equilibrium quantity will increase from Q_0 to Q_1 . This implies that, after the subsidy, public transport is cheaper and easily available.
- Since public transport and cars are substitute goods, a decrease in price of public transport due to the subsidy will result in the decrease in demand for cars from D_0 to D_1 .



- As public transport is cheaper and easily available, the relative MPB for car usage will be lowered from MPB to MPB_1 .

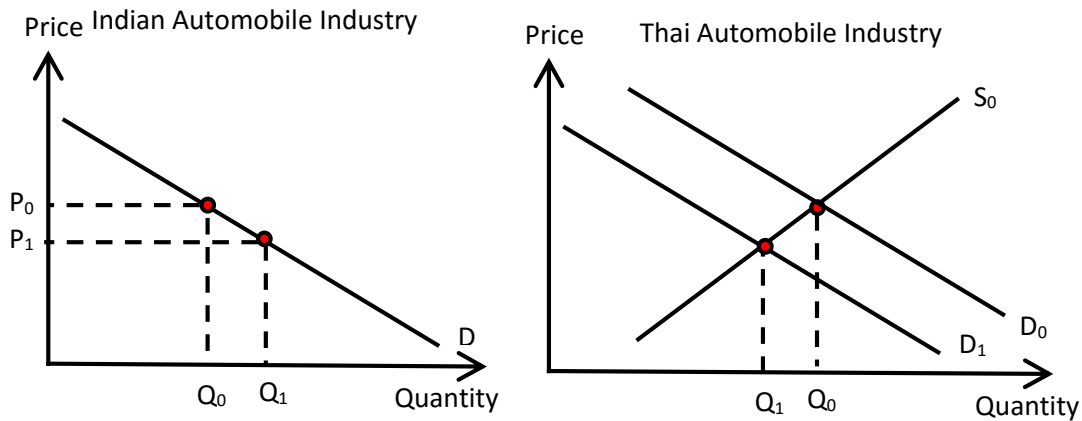


- As public transport is cheaper and easily available, the relative MPB for car usage will be lowered from MPB to MPB_1 . Consumers will now consume that $MPB_1 = MPC$, which results in the output level to be at Q_s . This coincides with the social optimum level of car usage.

	<p>Body 3 (Anti-thesis 1): Limitations of subsidising provision of public transport</p> <ul style="list-style-type: none"> It attempts to address the problem of over-consumption of cars through improvement of public transport. In a way, the policy is not directly addressing the root cause of the problem. The effectiveness of the subsidy depends on how strong a substitute consumers regard public transport is compared to cars. <p>Body 4 (Anti-thesis 2): Alternative measures</p> <ul style="list-style-type: none"> Tax on the ownership and usage of cars Quantity restriction on the number of cars that can used on the roads <p>Conclusion: Stand and justification</p> <ul style="list-style-type: none"> A subsidy on public transport may not be the most effective solution to address the market failure due to car usage. Firstly, it does not directly address the problem. An alternative policy that directly addresses the problem, like a tax on car usage, should be more effective. Moreover, in India, consumers do not consider public transport to be a good substitute to cars as the quality and reliability of the public transport is very low. <table border="1"> <tr> <td>L1</td> <td>One-sided answer that shows basic knowledge of either subsidies or an alternative policy</td> <td>1-3m</td> </tr> <tr> <td rowspan="2">L2</td> <td>Well- explained but one-sided argument (e.g. only explained why subsidy is / is not the best policy, without any consideration of alternatives.)</td> <td>Max 4m</td> </tr> <tr> <td>Two-sided argument that explained how a subsidy on public transport and an alternative policy might work to solve the congestion, with reference to extracts and context of India.</td> <td>4-6m</td> </tr> <tr> <td>E</td> <td>Shows evaluation through a comparison of the policies, and arrive at a justified conclusion.</td> <td>1-2m</td> </tr> </table>	L1	One-sided answer that shows basic knowledge of either subsidies or an alternative policy	1-3m	L2	Well- explained but one-sided argument (e.g. only explained why subsidy is / is not the best policy, without any consideration of alternatives.)	Max 4m	Two-sided argument that explained how a subsidy on public transport and an alternative policy might work to solve the congestion, with reference to extracts and context of India.	4-6m	E	Shows evaluation through a comparison of the policies, and arrive at a justified conclusion.	1-2m	
L1	One-sided answer that shows basic knowledge of either subsidies or an alternative policy	1-3m											
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E	Shows evaluation through a comparison of the policies, and arrive at a justified conclusion.	1-2m											
f.	<p>“In the first seven months of 2014 the Thai automobile industry produced 1.1 million vehicles, a 28.5 per cent drop on the same period last year.”</p> <p>To what extent is the rise of the Indian automobile industry the main reason for the above development in the Thai automobile industry?</p>	<p>10m (H1 8m)</p>											
	<p>Introduction:</p> <ul style="list-style-type: none"> Automobiles produced in India and Thailand are close substitutes of each other. Therefore, it is possible that the rise of the Indian automobile industry could lead to the worsening of the Thai automobile industry. However, there are also internal reasons for the decline in the Thai automobile industry. <p>Thesis: Rise in Indian Auto industry caused the 28.5% drop in Thai auto industry.</p> <ul style="list-style-type: none"> Rise of the Indian automobile industry provided a decent alternative to the Thai vehicles in the global automobile market. This resulted in some consumers 												

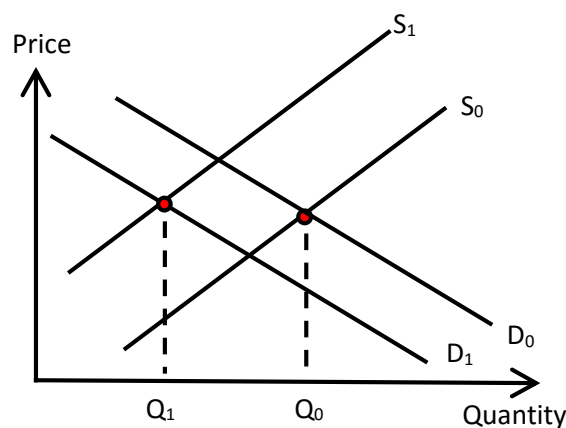
switching to Indian automobile firms due to the lower prices offered by India, ie "several automotive manufacturers serving the Asean market are increasingly sourcing their engines from India"

- The rise in Indian automobile industry could have led to the a reduce in demand for Thai automobiles. Demand for Thai automobiles fall from D_0 to D_1 . Consequently, there is a decrease in equilibrium quantity of Thai cars from Q_0 to Q_1



Anti-thesis: Rise in Indian Auto industry did not cause the 28.5% drop.

- The Thai automobile industry could have declined due to domestic problems like political upheavals and lack of skilled workers.
- Political upheavals could have resulted in a fall in consumer confidence. Thus, consumers will reduce their consumption of big ticket items like cars. Demand for Thai automobiles decreases from D_0 to D_1 .
- Political upheavals also caused road blockages and decrease in productivity. These could cause an increase in cost of production. Thus, supply of Thai automobiles will decrease.
- Lack of skilled workers also causes a decrease in productivity. Taken together, supply decreases from S_0 to S_1 .
- As a result, equilibrium quantity for Thai automobiles dropped significantly from Q_0 to Q_1 .



Conclusion:

- It is likely that domestic concerns are the main reasons for the 28% drop in the Thai automobile industry.
- The rise of India only exerted a minimal effect as India and Thailand are only directly competing in the ASEAN market, which is not big in global terms.
- Moreover, the domestic concerns in Thailand are very severe and longstanding. For eg, the political upheavals were frequent in the last decade, and could last several months at a time.

		H2	H1
L1	Shows superficial knowledge of how the rise of Indian automobile industry may have affected the Thai automobile industry.	1-3m	1-3m
L2	Well- explained but one-sided argument, explaining how the rise of Indian automobile industry is / is not the main factor that led to the =OR= Underdeveloped two-sided argument that explained how the rise of Indian automobile industry and the domestic factors (ie. political upheavals, lack of skilled labour) in Thailand might be the main factor that led to the fall in the Thai automobile industry.	4-6m	
L3	A two-sided argument, with a complete explanation and accurate application of the economic framework, on how the rise of Indian automobile industry and the domestic factors in Thailand might be the main reason that led to the fall in the Thai automobile industry.	7-8m	4-6m
E	Able to arrive at a justified conclusion on which factor is the main reason affecting the Thai automobile industry.	1-2m	1-2m

Question 2

a	i.	Describe the trend in the government budget balance in the US between 2011 and 2014.	[2]
		There was a deficit in the US government budget from 2012 to 2014	1m
		The deficit showed a falling trend.	1m
	ii	Explain how the trend in the US's government budget balance is expected to affect the US inflation rate.	[2]
		Since the government budget is made up of government expenditure and tax revenue, a falling deficit would imply a contractionary measure	1m
		Hence with falling budget deficit, AD is expected to fall and hence inflation rates are expected to fall.	1m
b		With the use of a diagram, explain how "Fed's tapering" may cause an appreciation of the US dollar. [4]	[4]
		Fed's tapering refers to reduction in the monthly bond purchase program, may result in a reduction of liquidity in the market and perhaps a hike in interest rate.	1m
		With higher interest rates, there is likelihood of USD to appreciate in the medium term due to increase in "hot money" inflows or decrease in "hot money" outflows	1m
		Increase in demand for US dollar or decrease in supply of US dollar	1m
		Diagram	1m
c		Extract 5 explains that the 2013 growth slide has given way to what economists call a "virtuous cycle".	[4]
		Using the concept of the circular flow of income, explain how such a change, will affect the equilibrium level of national income in 2014.	
		A "virtuous cycle," comes about when "improvement in one part of the economy feeds into the others".	
		The circular flow of income explains the flow of income between firms, households, the government and the foreign sector.	1m
		For example, an increase in government expenditure on infrastructure, will lead to firms undertaking the production of the infrastructure. In order to produce the goods, firms require the resources such as land and labour from the households. The provides these resources in return for factor payments such as rents and wages.	5m
		The rising factor incomes, induces households to consume goods from various industries such as food and beverages, airline etc., save as well as purchase imports and pay income tax.	
		The rising expenditure in these industries leads to firms in these industries to produce more goods. Once again the firms will require more resources from households and this leads to more factor income to households. With rising factor incomes, households consume more goods and from a wider range of industries. The process continues hence "one part of the economy feeds into the others".	

d	<p>With reference to the data, discuss whether economic growth in US is expected to improve from 2014 and beyond.</p>	[8]
	<p>Thesis: EG is expected to increase in US</p> <p>i. <u>Explain how AD will increase in the US</u></p> <ul style="list-style-type: none"> • Ext 5 para 2: American shoppers are flush with cheap credit → Loans with low interest rate → COB is lower → C will increase • Extract 5 para 2: Public spending as a proportion of GDP rose in 2014 → Increase in G on G & S • Increase in G & C → AD will increase → RNY increase → Actual growth <p>ii. <u>Explain how SRAS will increase in the US</u></p> <ul style="list-style-type: none"> • Ext 5 para 2: lower imported oil prices → COP fall → SARS will increase → RNY increase → Actual growth 	
	<p>Anti-thesis: EG may fall or increase at a slower rate.</p> <p>i. <u>Explain how Increase in interest rates will have contractionary effects on the US economy.</u></p> <ul style="list-style-type: none"> • Ext 5 para 3: Pace of the US growth depends on when the Federal Reserve will decide to begin raising interest rates • Increase in i/r → COB increase, Reward for Savings increase → I & C falls → AD falls → RNY falls → Fall in Actual Growth • Increase in i/r → Appreciation of the US dollar → Hurt US export competitiveness → X falls → AD falls → RNY falls → Fall in Actual Growth <p>ii. <u>Explain how external events can affect US economic growth</u></p> <ul style="list-style-type: none"> • Ext 5 para 4 :China's once red hot growth pace has slowed,- running efforts to revive growth in Europe and Japan continue to come up short • China's economic slowdown and slow economic recovery in the EU & Japan will mean that US's trade & investment in these countries will be negatively affected. • E.g. Slowdown in income growth of the Chinese households → DD less of foreign goods from the US → US's X will fall → AD will fall → RNY falls → Fall in Actual Growth • E.g. US firms which are doing business in China could also be hit → Earn less sales & profits → Fall in factor income from abroad → Fall in GNP 	
	<p>Judgment Take a stand whether US's economy is expected to improve. Provide justification for the stand. Use data to support the stand.</p>	
	Level Descriptors	

	L1	Mere listing of points with lack of evidence	1-3m	
	L2	Well- explained but one-sided argument (e.g. US economic growth will increase) or balanced argument but under developed explanation - Max 4m Well developed and balanced explanation(US economic growth may either increase or slow down) with reference to extracts and context of the US economy,	4-6m	
	E1	Able to make reasoned conclusion	1-2 m	
e		Assess the likely impact of an increase in interest rates in the US and divergent US-China growth on the balance of payments of Singapore and Hong Kong.		[8]
	i.	<p><u>Explain how increase in interest rates in US will affect Singapore and Hong Kong in terms of BOP (current & capital account)</u></p> <p>Singapore</p> <ul style="list-style-type: none"> • Ext 6 para 2:“Asian exporters which include Singapore will be the winners” • Increase in interest rates → Appreciation of US dollar → Singapore exports are relatively cheaper, Imports from US are relatively more expensive→ (X-M) should increase → Improve current account • Singapore follow world interest rates, including US’s interest rates→ Increase in interest rates→ Hot Money inflow→ Improve capital account <p>Hong Kong</p> <ul style="list-style-type: none"> • Ext 6 para 2: “Hong Kong dollar is pegged to the US dollar” → Appreciation of the HKD → Hong Kong exports are relatively more expensive, Imports are relatively cheaper→ (X-M) should fall→ Worsen current account • Extract 6 para 2: Banks in Hong Kong will have to “increase interest rates” → Hot Money inflow→ Improve capital account 		
	ii.	<p><u>Explain how the divergent US-China growth will affect Hong Kong and Singapore in terms of BOP (current & capital account)</u></p> <p>Singapore</p> <ul style="list-style-type: none"> • Table 1 shows that divergent US-China growth will lead to overall 1.1% increase in Singapore’s economic growth rate → Such data suggests that impacts of stronger growth in US (↑ in Y & PP in the US→ ↑ in DD for Sg’s X) will outweighs slowdown of China’s economy(↓ in Y & PP in the US→↓ in DD for Sg’s X) → Singapore will continue to enjoy overall strong export growth, thus leading to 1.1% increase in economic growth → Singapore’s current account is expected to improve <p>Hong Kong</p> <ul style="list-style-type: none"> • Table 1 shows that divergent US-China growth will lead to 		

	<p>overall 0.2% increase in Hong Kong's economic growth rate → Such data suggests that Hong Kong may still experience growth in exports, thus leading to increase in 0.2% economic growth → Hong Kong's current account is expected to improve</p> <p>iii. <u>Compare the extent of impact of 2 events on Singapore and Hong Kong's BOP(current & capital account)</u></p> <ul style="list-style-type: none"> • Hong Kong is likely to experience a more negative impact than Singapore in terms of BOP(current account) • This is due to China being Hong Kong's biggest trading partner in terms of export destination (Table 2: Hong Kong export 47% to China out of its total trade), compared with Singapore, who only export 12 % of its total trade to China. 													
	<p>Level Descriptors</p> <table border="1"> <tr> <td>L1</td> <td>Superficial answers that explain some effects on Singapore and Hong kong in terms of BOP</td> <td>1-3m</td> </tr> <tr> <td>L2</td> <td>Answers that explain clearly both the events and the impact on Singapore and Hong kong and in terms of both current account and capital account.</td> <td>4-6m</td> </tr> <tr> <td></td> <td>Answers that explain clearly both the events and the impact on Singapore and Hong kong but in terms of only either current account or capital account.</td> <td>Max 4</td> </tr> <tr> <td>E</td> <td>Judgment based on analysis; good effort at substantiation, e.g which country benefits/loses more</td> <td>1-2 m</td> </tr> </table>	L1	Superficial answers that explain some effects on Singapore and Hong kong in terms of BOP	1-3m	L2	Answers that explain clearly both the events and the impact on Singapore and Hong kong and in terms of both current account and capital account.	4-6m		Answers that explain clearly both the events and the impact on Singapore and Hong kong but in terms of only either current account or capital account.	Max 4	E	Judgment based on analysis; good effort at substantiation, e.g which country benefits/loses more	1-2 m	
L1	Superficial answers that explain some effects on Singapore and Hong kong in terms of BOP	1-3m												
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E	Judgment based on analysis; good effort at substantiation, e.g which country benefits/loses more	1-2 m												

- 3 ""The financial crisis in 2007 – 2009 dispelled the myth that competitive markets and self-interested individuals alone are sufficient to ensure efficient outcomes. The crisis emphatically demonstrated how unregulated markets can fail in ways that undermine even the most advanced economies.

Adapted from source: Low, D; & Wu; June 2011; Civil Service College.

- (a) Explain how the free market ensures efficient outcomes. [10]
 (b) Explain and evaluate one method that a government might use to bring about a more efficient allocation of resources when, for some reason, there is market failure. [15]

Interpretation of Question – Part (a)		
(a)	Explain how the free market ensures efficient outcomes.	
What is the command cue? (What are the skills required for the question?) “Explain how” – using the relevant economic concepts illustrate the process in detail supported by examples	What are the content cues? (What are the concepts required to answer the question?) “free market” – a market where the decisions by the parties involved are not regulated by the government “efficient outcomes” – allocative efficient market outcomes where the agreed price for exchange is at equilibrium – no shortages or surpluses; total (consumer & producer) surpluses are maximised	What are the contextual cues? (What is the context for the question?) No specific context – can use any product market as an example
<p>Schematic Plan:</p> <ol style="list-style-type: none"> 1. Explain the implications of a “free market” 2. Explain the meaning of “efficient outcomes” = “efficient resource allocation” 3. Explain the adjustment to achieve a new equilibrium price and quantity when there is a <u>shortage</u> and how this new equilibrium reflects an efficient outcome. 4. Explain the adjustment to achieve a new equilibrium price and quantity when there is a <u>surplus</u> and how this new equilibrium reflects an efficient outcome. 5. Conclusion: Comment that for the free market to achieve efficient outcomes, certain facilitating market conditions must exist (eg. consumption of a private good emitting no externality, with perfect factor mobility & perfect information). However, goods that benefits society are not only private goods (eg. public goods) and market conditions are often far from ideal (presence of externality & market imperfections). As such, the new equilibrium outcomes achieved when the unregulated markets adjusts may not necessary result in efficient outcomes. Hence, government intervention may be necessary to achieve a more efficient resource allocation. 		

Part (a) Mark Scheme:

L 1	Mere listing of the characteristics of a free market and an efficient outcome.	1 - 4
L 2	Able to provide a detailed description of the market adjustments process involving a surplus or shortage leading to an efficient allocation of resources well-supported by examples. OR Able to provide a superficial description of the market adjustments process involving a surplus and shortage leading to an efficient allocation of resources not well-supported by examples in both cases.	5 - 6
L 3	Able to provide a detailed description of the market adjustments process involving a surplus and shortage leading to an efficient allocation of resources well-supported by examples.	7 - 10

Interpretation of Question – Part (b)		
(b)	Explain and evaluate one method that a government might use to bring about a more efficient allocation of resources when, for some reason, there is market failure.	[15]
<p>What is the command cue? (What are the skills required for the question?)</p> <p>“Explain and evaluate” – using the relevant economic concepts illustrate the process in detail supported by examples and provide an assessment of its strengths and limitations</p>	<p>What are the content cues? (What are the concepts required to answer the question?)</p> <p>“one method that the government might use” – a possible procedure or approach that may be used to address an undesirable market outcome</p> <p>“more efficient allocation of resources” – outcome of government intervention that leads to a no or smaller welfare loss</p> <p>“market failure” – the sources that contributes to the operation of the market resulting in less than efficient outcomes</p>	<p>What are the contextual cues? (What is the context for the question?)</p> <p>No specific context – can use any market and source of market failure as an example</p>

Schematic Plan:

1. Explain the meaning of “market failure”
2. Explain the meaning of “more efficient allocation of resources”
3. Identify a source of market failure and illustrate how it results in inefficient resource allocation. Eg. Negative externality of car usage leading to congestion
4. Suggest one method/measure/approach that the government can use to bring about a more efficient resource allocation
 - (i) **Market-based** policies (to correct over-usage of cars/congestion):
 - Providing incentive & disincentives so that private parties (ie. consumers and producers) solve the problem on their own
 - Egs of measures include: ERP, petrol taxes, road taxes; allocating ownership of the limited COEs via bidding; etc.
 - (ii) **Command and Control** policies (to correct over-usage of cars/congestion):
 - Direct means to correct market failure (via rules and regulations) to control/regulate the quantity consumed or supply provided and the price consumers have to pay for consuming the product
 - Egs of measures include: Bus lanes are exclusively for buses during specific times; daily period of non-usage of Off-Peak (red-plated) cars; no. of COEs to be issued to control vehicle population growth.
5. Highlight the strengths and limitations of the method/approach towards correcting the specific market failure
6. Conclusion: some methods require a combination (policy mix) of the 2 (market based & Command and Control) policies to correct the congestion market failure like the Vehicle Quota System where the fixed amount of COEs (Command and Control policy) are each allocated to individuals who value them most via bidding (Market-based policy).

Part (b) Mark Scheme:

L 1	Identified the source of market failure, without examples and a brief description of the method that the government might use to achieve allocative efficiency without evaluation of the method.	1 - 5
L 2	Unbalanced response - detailed explanation of the source of market failure with supported examples but a superficial description of the method the government might use to achieve allocative efficiency without evaluation of the method. OR Balanced response - detailed explanation of the source of market failure and description of the method the government might use to achieve allocative efficiency with supported examples but without evaluation of the method.	6 - 8
	Comprehensive response - detailed explanation of the source of market failure and description of the method the government might use to achieve allocative efficiency with supported examples and detailed evaluation of the method.	9 - 11
E1	Judgment on the issue without elaboration on the reasons for stand.	1 - 2
E2	Judgment on the issue with adequate elaboration of supporting reasons for stand.	3 - 4

2015 JC1 H1 Econs Prelim Paper Section B: Suggested answers for question 4

- 4 (a) Explain the possible causes of an appreciation of a country's currency. [10]
- (b) Discuss whether domestic or international factors are more likely to affect the balance of payments of Singapore. [15]

Command Word: Explain

Content: Appreciation

Context: No particular country. Use examples to explain the answers where applicable.

Take note that appreciation is not a revaluation of the currency. Hence, students should not be focusing on the deliberate attempt by the government to manipulate the value of the currency

Introduction:

- Define appreciation: Increase in the value of a country's currency in terms of another currency
- Changes in the foreign exchange rate are caused by changes in demand and supply conditions of foreign exchange
- Appreciation of a currency can be caused by a rise in the demand of the currency and/or decrease in the supply of the domestic country's currency.

Body:

1. **Demand for the domestic country's currency increase:**

- Rise in trading partners' national income → Increase in purchasing power → foreigners will increase their demand for imports (domestic country's exports)
- Inflation experienced in foreign countries and hence they may switch to buying relatively cheaper imports (domestic country's exports)
- Increase in confidence of the domestic country's economic outlook → Attracts FDI
- Gain in CA of the goods and services that are exported → Lower prices of exports → Increase in quantity demanded by foreigners

2. **Supply of the domestic country's currency decrease:**

- Inflation in foreign countries → prices of imports in domestic currency will increase → domestic consumers will purchase less imports
- Domestic country's RNI falls, consumers' income fall and purchasing power will fall → Demand for imports will fall
- Domestic's interest rate rise, hot money flows in (Demand for domestic currency will rise) → less outflow of hot money → supply of domestic currency will fall

Conclusion:

- In summary → rise in demand and/or fall in supply of domestic currency will lead to an appreciation of a country's currency
- An appreciation of a country's currency has several impacts (positive and negative) on the country's balance of payments (current and capital and financial accounts).

Marking Scheme		
L1	For an answer that shows some knowledge of the factors which will affect the exchange rate level but lack economic analysis.	1-4
L2	For an answer that attempts to explain the factors which results in an appreciation of a country's currency but lacks detailed economic analysis. Good one-sided explanation will be awarded a maximum of 6 marks.	5-6
L3	A well-developed answer with in-depth explanation of the factors (both demand and supply, price and non-price factors) that will result in an appreciation of a country's currency. Students who explained only one demand and one supply factor but with well-developed answers will score a maximum of 7 marks.	7-10

(b)	Discuss whether domestic or international factors are more likely to affect the balance of payments of Singapore.	[15]
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Intro:

- Balance of Payments (BOP) is a comprehensive record of international receipts and international payments between the residents and government of a country and the rest of the world over a period of time usually a calendar year.
- Two main parts of BOP → Current Account, Capital and Financial Account
- Current Account → Visible Trade Account (Goods), Invisible Trade Account (Services), Unilateral Transfers and Income flows
- Capital and Financial Account → Short-term capital flows (hot money) and long-term capital flows (FDI and portfolio investments)

Body:

I. How domestic factors can affect S'pore's BoP.

A. Explain how domestic factors affect CA:

- Visible Trade Account:
 - Effectiveness of government policies to keep inflation low and maintain export competitiveness:
- Invisible Trade Account:
 - Effectiveness of government policies to promote Singapore as a tourist attraction and as an international financial hub

B. Explain how domestic factors affect KA:

- Long-term capital flows (FDI):
 - Attractive tax regime:
 - Singapore is renowned as a transportation hub.

II. How international factors can affect S'pore's BoP

A. Explain how international factors affect CA

- Visible Trade Account:
 - Global inflation; Competition arising from trading partners and emerging economies.
- Invisible Trade Account:

Competition from other countries for tourist; Global economic situations such as global recession

B. Explain how international factors affect KA

- Long-term capital flows (FDI):
 - Competition from other countries for similar
- Short-term capital flows (Hot money):
 - Singapore is a price-taker when it comes to interest rate due to the nature of the economy

III. Circumstances that determine the relative importance of domestic vs international factors.


- Relative size of the domestic economy. $[(C+I_{dom})/NY \text{ vs } (X+M)/NY]$
- Magnitude of the shocks (domestic vs international)
- Willingness to 'protect' the domestic economy (protectionist barriers)

These circumstances should be related to Singapore in the assessment of the relative influence of domestic and international factors on Singapore's BoP

Conclusion & Evaluation:

A summary of the main points supporting the overall judgement.

Marking Scheme		
L1	For an answer that shows some knowledge of how domestic and international factors may affect BOP of Singapore with mere listing of factors.	1-5
L2	For an answer that shows undeveloped explanation of how domestic and international factors may affect BOP of Singapore. Max of 6 marks for students who provide well-developed answers of how domestic and international factors affect the current account or capital and financial Account . Max of 6 marks for students who provide well-developed answers of how domestic or international factors affect the BOP of Singapore.	6-8
L3	For an excellent and well-developed answer that explains how domestic and international factors may affect BOP (both current and capital and financial account) of Singapore with good use of examples.	9-11
E1	Many unexplained judgement on whether domestic or international factors are more likely to affect the BOP of Singapore.	1-2
E2	Judgement based on sound economic analysis on whether domestic or international factors are more likely to affect the BOP of Singapore.	3-4

	PRELIMINARY EXAM 2015
	Economics JC2 H2 (9732/01)

PAPER 1

Monday

14 September 2015

08:00 – 10:15

TIME : 2 hours 15 mins

INSTRUCTIONS TO CANDIDATES

Do not open this paper until you are told to do so.

Write your name, class and name of economics tutor in the space provided on the writing paper.

Do not use staples, paper clips, glue or correction fluid/tape.

Answer **all** questions. The number of marks is given in the brackets at the end of each question. Write your answers on the writing papers provided. If you use more than one sheet of paper, fasten the sheets together. Submit the answers for both case study questions **separately**.

You are advised to spend several minutes per question reading through the data and questions before you begin writing your answers.

There are 8 printed pages including this cover page

Answer all questions.

Question 1

The Automobile Industries in India and Thailand

Figure 1: Population Growth in India

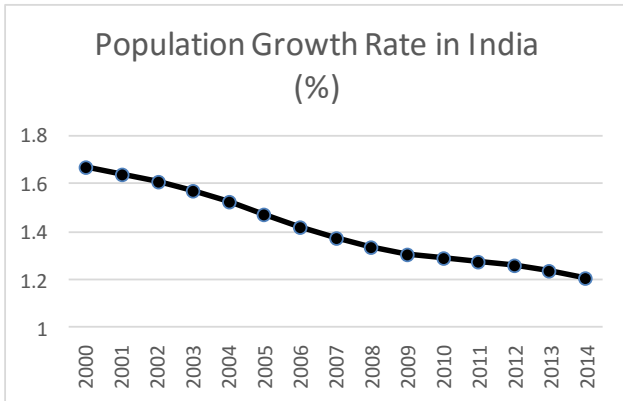
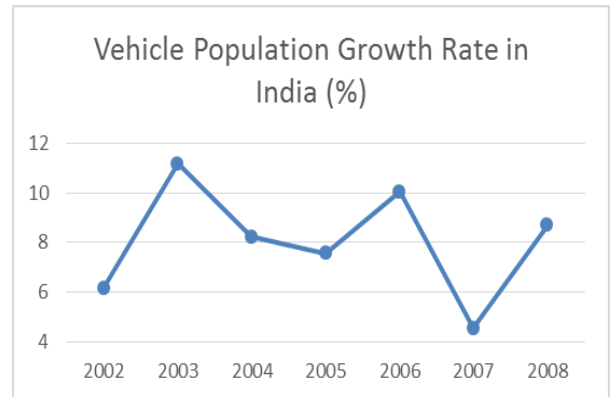


Figure 2: Vehicle Population Growth in India



Source: The World Bank

Extract 1: Traffic congestion and productivity losses

With growing prosperity in India, an increasing number of people can now afford their own private vehicles. Public transport is becoming an inferior good for many of them. They prefer travelling by their own cars to save time, to avoid the hassles of coordination in case of car-pooling, and to increase their comfort while travelling. The states with the highest number of motor vehicles per 100 people are Goa, Delhi, Tamil Nadu, Gujarat and Haryana. Delhi has the highest number of cars per 1,000 people (262). It also has the highest number of vehicles per km of road length, which thus increases the likelihood of congestion on roads. Often, because of this, states like Delhi face crippling traffic bottlenecks leading to a standstill in peak hours.

Poor road infrastructure, traffic mismanagement, lack of efficient public transport—the reasons can be numerous, but at the end of the day, all of this is resulting in an increase in congestion on roads leading to traffic chaos and ultimately huge loss of time and hence productivity of the nation. So, the increase in the prosperity of the nation is actually turning into economic losses for the nation. Also, there are environmental losses with the increase in air pollution, losses due to increase in accident rates on roads, increase in maintenance expenditure of road infrastructure, losses due to delays and lost opportunities which collectively cost millions to the nation each day. This will eventually hamper India's ability to reach its potential.

Source: Adapted from The Indian Express, Oct 27, 2012

Extract 2: When it Comes to Reducing Car Congestion, India's Cities Can Learn from its Businesses

City governments in India are still focused on investing in road expansions and overpass construction projects rather than curbing car dependence and improving public transport services. Instead of waiting for local governments to act, a handful of Indian businesses are taking the initiative to implement transport demand management (TDM) strategies, improving the productivity of their employees and reducing the social costs of car congestion.

Employer-initiated TDM strategies have been especially common in the information technology (IT) sector, because most IT employees in India use private cars to commute to and from work. These strategies have been relatively easy to implement given the availability of information—such as employees' origins and destinations, duration, and frequency of trips—for designing optimal transit and carpool routes.

Some initiatives have included providing employees with commuter subsidies for public transport or carpooling. Other businesses have experimented with company buses that transport workers from nearby metro stations to offices, providing much-needed “last-mile connectivity.” These programs have successfully shifted 30-50 percent of the targeted employees from cars to public transport, resulting in reduced travel times and significant cost savings for employers. Not only are employees more productive from shorter commutes, bus and other public transit subsidies are much cheaper compared to private company buses.

For example, Wipro worked with the Bangalore Metropolitan Transport Corporation on specific routes designed to move workers more comfortably and efficiently. This initiative encouraged employees to commute by bus rather than private vehicle and is credited with reducing employee carbon footprint by almost 16 percent in the first year of implementation.

Source: Adapted from World Resources Institute, [Anjali Mahendra](#) and [Pawan Mulukutla](#),
June 03, 2015

Extract 3: India Threatens Thai Automobile Industry's “Detroit of the East” Title

As if things were not bad enough already for Thailand's prestigious automotive sector a report by Standard Chartered Bank (SCB) shows that the country's claim as the “Detroit of the East” could be lost in less than five years. In the first seven months of 2014 the Thai automobile industry produced 1.1 million vehicles, a 28.5 per cent drop on the same period last year.

In 2009 India became Asia's fourth largest exporter of passenger vehicles behind Japan, South Korea and Thailand and in 2011 became the sixth largest passenger vehicle exporter in the world, exporting more than 3.9 million vehicles.

While the two countries are presently not direct competitors in the global market yet, they go head-to-head in several Asean markets. The report notes that several automotive manufacturers serving the Asean market are increasingly sourcing their engines from India. The Thai automobile industry has been particularly hard hit due to the political upheavals in 2013 and 2014, with violent anti-government protests, sand-bagged fortress barricades and

daily street marches aimed at strangling Bangkok. These events cast a pessimistic shadow over the Thai economy. Even the most optimistic prediction for full year Thailand 2014 GDP forecasts a maximum growth of just 2 per cent – 60.78 per cent below the 5.1 per cent in 2014.

Moreover, It has also suffered from a lack of skilled workers as well as low productivity of about 3.69 vehicles per employee, compared with 11-12 vehicles per employee in Japan. The Federation of Thai Industries (FTI) said the number of skilled workers available to feed the rapidly expanding Thailand automotive industry is an ongoing concern and developing highly skilled and knowledgeable workers is crucial.

Source: Adapted from The Establishment Post, John Le Fevre, September 16, 2014

Questions

- (a) Compare the trends in population and vehicle population figures in India from 2002 to 2008. [2]
- (b) Explain why public transport is considered an 'inferior good' in India. [2]
- (c) Suggest a possible reason for the difference in productivity between the Thai and Japanese automobile industry. [2]
- (d) (i) Explain what is meant by the term third party costs. [2]
- (ii) "Instead of waiting for local governments to act, a handful of Indian businesses are taking the initiative to implement transport demand management (TDM) strategies."
- Explain why private companies in India would take the initiative to implement TDM strategies. [4]
- (e) Assess whether the subsidy for public transport is the most effective policy in addressing the congestion problem in the Indian cities. [8]
- (f) "In the first seven months of 2014 the Thai automobile industry produced 1.1 million vehicles, a 28.5 per cent drop on the same period last year."
- To what extent is the rise of the Indian automobile industry the main reason for the above development in the Thai automobile industry? [10]

[Total: 30]

Question 2

US economic recovery and its impact on Asia

Extract 4: What Fed's tapering means

The Quantitative Easing (QE) program which began after the financial crisis in 2008 has led to a growing momentum of US economic recovery. QE kept interest rates low and this had a major impact on investments and consumption in the US.

The US Central Bank (Fed) has repeatedly linked the QE program with the labour market and inflation condition. With a stable and improving labour market, there is anticipation for the Fed to initiate a tapering of the QE program in the near future. The tapering of the QE, which in general means a reduction in the monthly bond purchase program, may result in a reduction of liquidity in the market and perhaps a hike in interest rate.

If that is so, corporate borrowing cost may increase with higher interest rate and this can hurt corporate earnings in the US. With higher interest rates, there is likelihood of USD to appreciate in the medium term.

Source: Adopted from "What the Fed's tapering means for Singapore", 6 June 2013

Extract 5: US economic recovery finally taking hold in 2014

The latest government data shows the economy has bounced back sharply in 2014, and that momentum is expected to carry into next year. There are signs that the 2013 growth slide has finally given way to what economists call a "virtuous cycle," in which improvement in one part of the economy feeds into the others, creating a self-sustaining expansion.

America is recovering for a few reasons. While many governments are tightening belts, America's is not: for the first time in five years, public spending as a proportion of GDP rose in 2014. American shoppers are flush with cheap credit. Lower oil prices also help, since America is still a net importer of the stuff.

The pace of the US growth of course, depends on when the Federal Reserve will decide to begin raising interest rates all the way back to more "normal" levels, and how quickly those rates begin to rise.

And while the U.S. seems to be back on its feet, the economy in the rest of the world is stumbling again. China's once red hot growth pace has slowed, and long-running efforts to revive growth in Europe and Japan continue to come up short. That—along with a stronger dollar—could hurt demand for U.S. exports. But for now, it looks like much of the U.S. economic recovery is solidly on track.

Source: CNBC, www.cnbc.com, 25 Dec 2014

Extract 6: When US interest rates rise: Singapore wins, Hong Kong loses

Economists at Bank of America (BofA) forecast that the Fed to hike interest rate at every other meeting in 2015 and 2016, bringing the funds rate to average 3.5% in the long run. But what would such an increase mean for Asia and its companies?

“Asian exports and growth typically strengthened during the past three episodes of US Fed rate hike cycles” That’s because rate increases are associated with stronger GDP growth in the US. For at least one market, Hong Kong, the implication is clear. Its banks will have to increase interest rates as well, because the Hong Kong dollar is pegged to the US dollar. So the cost of doing business is going to go up, particularly for enterprises with large bank borrowings. For other economies, the impact is more mixed. The winners, according to the Bank of America economists, would be the “Asian exporters,” which include Korea, Malaysia, Singapore and Taiwan, and the manufacturing companies that sell into the US.

But the GDP improvement in the Asian exporters may not be as strong this time around. Asia’s sensitivity to US GDP growth “appears to have fallen compared to the past,” says Bank of America.

One reason is the fall in the US share of the global economy, from 33% in 2001 to about 23% last year. At the same time, China’s share has climbed to about 12%. So even if US GDP growth improves – Bank of America forecasts 3.3% expansion in 2015, a full percentage point higher than its 2.3% forecast this year – the impact on the exporters may be more muted because of China’s economic slowdown.

Table 1: BofA estimation on the impact on Asia’s Growth due 1% expansion in the US and a 1% contraction in China.

	Overall impact	Impact of +1% US growth	Impact of -1% China growth
Singapore	1.1	1.7	-0.6
Taiwan	0.7	1.25	-0.6
Malaysia	0.3	0.75	-0.5
Korea	0.2	0.45	-0.3
Hong Kong	0.2	1.25	-1.1
Thailand	0.1	0.60	-0.5
Indonesia	-0.1	0.25	-0.3
India	-0.2	0.05	-0.2

Source: BofA Merrill Lynch Global Research estimates

The net impact of the divergent US-China growth may be beneficial for Singapore, Taiwan and Malaysia because they are electronics exporters, but negative for commodity exporters Indonesia (coal, palm oil) Thailand (rubber, food), and to some extent Malaysia (palm oil).

“The positive impact from firmer US growth (which benefits manufacturing exporters) [could be] *partly* negated by weaker China growth (which hurts commodity exporters),” reckons Bank of America. The main mode of transmission would be import demand for goods in the US and for commodities in China.

“How Asia fares will largely depend on how strong the US economic recovery will be in the coming years, as the Fed normalize interest rates,” Bank of America sums up.

Source: www.cfoinnovation.com, 13 Oct 2014

Table 2: Trade of Hong Kong and Singapore

Hong Kong Exports To		Singapore Exports To	
China	47%	China	14%
ASEAN	5.8%	Malaysia	12%
Malaysia	3.3%	Indonesia	12%
United States	3.2%	Hong Kong	7.2%
India	3.1%	Australia	6%
Hong Kong Imports From		Singapore Imports From	
China	50%	China	12%
Japan	7.2%	Malaysia	10%
United States	5.7%	South Korea	8.4%
South Korea	5.7%	United States	7.3%
Singapore	3.7%	Japan	6.1%

Source: www.aseanbriefing.com, 2015

Table 3: Summary of the US economy

	2011	2012	2013	2014
GDP growth (%)	1.6	2.3	2.2	2.4
Unemployment	8.3%	8%	6.6%	5.7%
Inflation	2.93%	1.59%	1.58%	-0.09%
US Government Budget (%GDP)	-10.7	-9.3	-6.4	-5.8
US Government Budget balance (US\$bn)	- 1299	- 1100	- 680	- 492

Source: Various

Questions

- (a) (i) Describe the trend in the US government budget balance between 2011 and 2014. [2]
- (ii) Explain how the trend in the US government budget balance is expected to affect the US inflation rate. [2]
- (b) With the use of a diagram, explain how the “Fed's tapering” may cause an appreciation of the US dollar. [4]
- (c) Extract 5 explains that the 2013 growth slide has given way to what economists call a "virtuous cycle".
Using the concept of the circular flow of income, explain how such a change will affect the equilibrium level of national income in 2014. [4]
- (d) With reference to the data, discuss whether economic growth in US is expected to improve from 2014 and beyond. [8]
- (e) Assess the likely impact of an increase in interest rates in the US and divergent US-China growth on the balance of payments of Singapore and Hong Kong. [10]

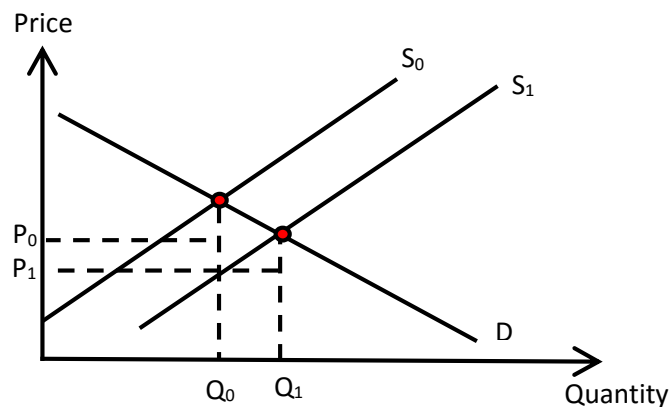
[Total: 30]

2015 Prelim (CSQ #1) H1 & H2

Mark Scheme

a.		Compare the trends in population and vehicle population figures in India from 2002 to 2008.	2m
		<ul style="list-style-type: none"> • Similarity: Both population and vehicle population figures are increasing (1) • Difference: <ul style="list-style-type: none"> - Vehicle population is growing much faster than human population. OR - Population figures are increasing at a decreasing rate, but vehicle population are increasing at an increasing rate (1) 	
b.		Explain why public transport is considered an 'inferior good' in India.	2m
		<ul style="list-style-type: none"> • Incomes are rising, growing prosperity leads to falling demand for public transport → YED is negative (expected for H2, not for H1) (1) • Either: Longer travel time, Or: Poorer comfort levels (1) 	
c.		Suggest a possible reason for the difference in productivity between the Thai and Japanese automobile industry.	2m
		<p>Identify the difference:</p> <ul style="list-style-type: none"> • The Thai automobile industry is less productive than the Japanese automobile industry <p>Suggest a possible reason:</p> <ul style="list-style-type: none"> • Either: The quality of labour is are likely to be higher as they are generally more well educated. • Or: Japan may possess more capital goods. Moreover, these capital goods may be of higher quality and technology level compared to what Thailand has. 	
d.	(i)	Explain what is meant by the term third party costs.	2m
		<p>Third party costs are:</p> <ul style="list-style-type: none"> • Costs arising from an economic activity that falls on parties not directly involved in the transaction (1) • And are not taken into account by those who directly participate in the economic activity (1) 	
	(ii)	<p>"Instead of waiting for local governments to act, a handful of Indian businesses are taking the initiative to implement transport demand management (TDM) strategies."</p> <p>Explain why private companies in India would take the initiative to implement TDM strategies.</p>	4m (H1 6m)
		<ul style="list-style-type: none"> - Identify that the firms are part of the 3rd party costs. (1m) H1 (1m) - Explain how TDM reduces these costs. (1m) H1 (3m) - (use framework) (2m) H1 (2m) <ul style="list-style-type: none"> • The third party costs incurred due to congestion includes the time wasted sitting in traffic. This results in a loss of productivity. • Private companies are the third parties that bear the costs due to time wastage and productivity. The cost of production face by private producers is higher than what it could be if the congestion problem is alleviated. • TDM strategies will be able to improve the productivity of the private firms, thereby reducing their cost of production. 	

- From the private firm's perspective, the objective is to maximise profits. If the benefits of implementing TDM due to the lowered cost of production are greater than the costs, then the firms should take the initiative to provide the TDM.
- Examples of benefits and costs
 - Benefits: Workers more likely to get to work on time and less tired out by traffic → increase in number of hours worked, increased productivity
 - Costs: Rental of company buses and hiring bus drivers
- Increased productivity due to the TDM would shift the firms' supply curve rightwards from S_0 to S_1 , resulting in a fall in equilibrium price from P_0 to P_1 and equilibrium quantity from Q_0 to Q_1
- Assuming that the demand for the goods of these firms is price elastic, a fall in price due to the increase in supply would result in an increase in TR.
- Assuming that the increase in TC due to TDM is less than the increase in TR, firms will take the initiative to implement TDM.



e.

Assess whether the subsidy for public transport is the most effective policy in addressing the congestion problem in the Indian cities.

8m

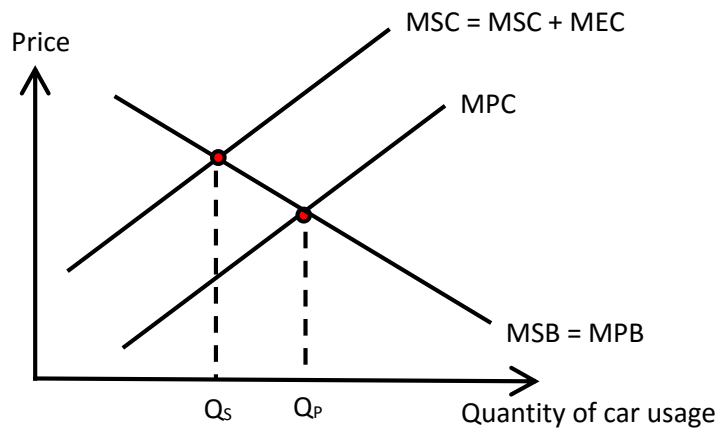
(Note: Students can interpret the subsidy for public transport as either a subsidy to producers of public transport, or a subsidy to consumers of public transport)

Introduction:

- A subsidy on public transport could encourage Indian consumers to use more public transport and reduce the usage of private vehicles. This could result in fewer vehicles on the roads, and therefore, alleviate the problem of congestion.
- However, this policy might not be very effective as it does not directly reduce the number of cars on the roads. Moreover, imposing a subsidy also have other limitations.

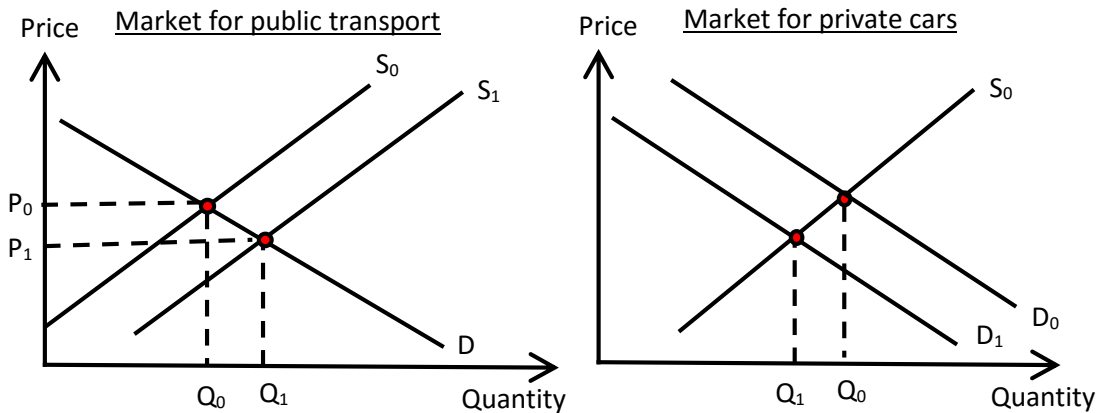
Body 1: Explaining the negative externality

- Congestion is a negative externality that arises due to the overconsumption of private vehicles. Consumers aim to maximise their net private benefit. Thus, in deciding the amount of car usage to consume, they will equate MPC and MPB, and consume at point Q_p . At Q_p , the net private benefits are maximised.
- However, the negative externality that results from car usage causes a divergence between MSC and MPC. At Q_p , the MSC is higher than MPC, resulting in a deadweight loss.
- From society's point of view, the social optimum consumption level is at Q_s , where $MSC = MSB$. This point maximises society's net benefit.

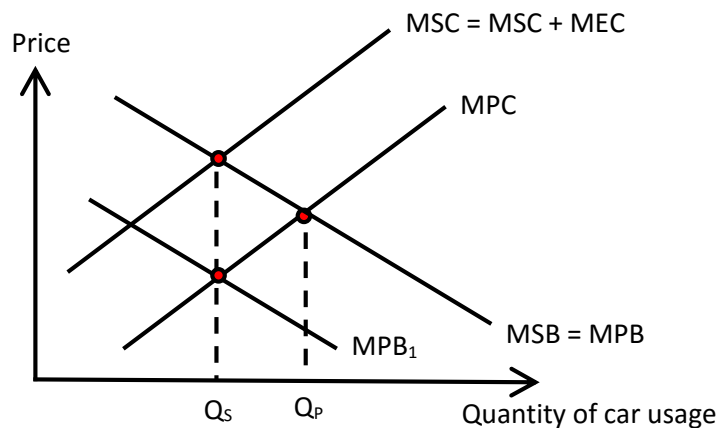


Body 2 (Thesis): Subsidising provision of public transport can address congestion

- Giving a subsidy to the producers of public transport would allow them to reduce their cost of production. Thus, the supply for public transport will increase from S_0 to S_1 . Thus, the eqm price for public transport will fall from P_0 to P_1 , and equilibrium quantity will increase from Q_0 to Q_1 . This implies that, after the subsidy, public transport is cheaper and easily available.
- Since public transport and cars are substitute goods, a decrease in price of public transport due to the subsidy will result in the decrease in demand for cars from D_0 to D_1 .



- As public transport is cheaper and easily available, the relative MPB for car usage will be lowered from MPB to MPB_1 .

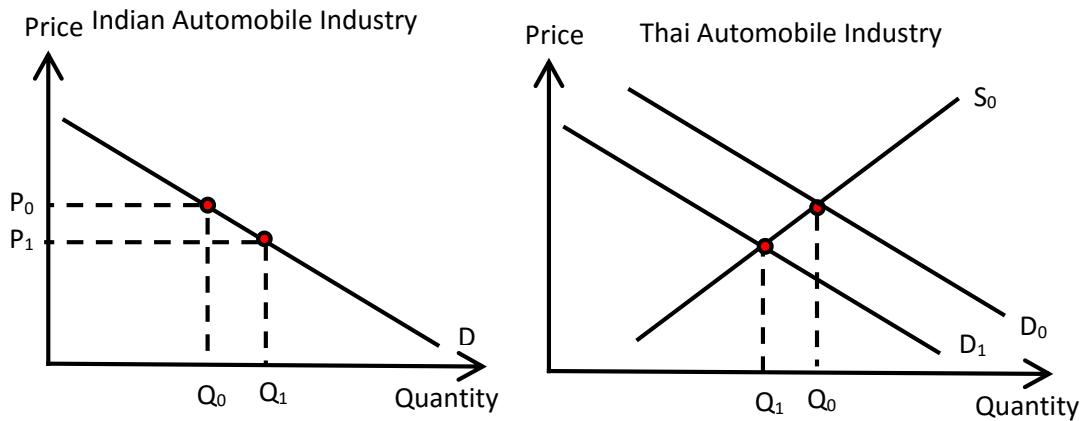


- As public transport is cheaper and easily available, the relative MPB for car usage will be lowered from MPB to MPB_1 . Consumers will now consume that $MPB_1 = MPC$, which results in the output level to be at Q_s . This coincides with the social optimum level of car usage.

	<p>Body 3 (Anti-thesis 1): Limitations of subsidising provision of public transport</p> <ul style="list-style-type: none"> • It attempts to address the problem of over-consumption of cars through improvement of public transport. In a way, the policy is not directly addressing the root cause of the problem. • The effectiveness of the subsidy depends on how strong a substitute consumers regard public transport is compared to cars. <p>Body 4 (Anti-thesis 2): Alternative measures</p> <ul style="list-style-type: none"> • Tax on the ownership and usage of cars • Quantity restriction on the number of cars that can used on the roads <p>Conclusion: Stand and justification</p> <ul style="list-style-type: none"> • A subsidy on public transport may not be the most effective solution to address the market failure due to car usage. • Firstly, it does not directly address the problem. An alternative policy that directly addresses the problem, like a tax on car usage, should be more effective. • Moreover, in India, consumers do not consider public transport to be a good substitute to cars as the quality and reliability of the public transport is very low. <table border="1"> <tr> <td>L1</td> <td>One-sided answer that shows basic knowledge of either subsidies or an alternative policy</td> <td>1-3m</td> </tr> <tr> <td rowspan="2">L2</td> <td>Well- explained but one-sided argument (e.g. only explained why subsidy is / is not the best policy, without any consideration of alternatives.)</td> <td>Max 4m</td> </tr> <tr> <td>Two-sided argument that explained how a subsidy on public transport and an alternative policy might work to solve the congestion, with reference to extracts and context of India.</td> <td>4-6m</td> </tr> <tr> <td>E</td> <td>Shows evaluation through a comparison of the policies, and arrive at a justified conclusion.</td> <td>1-2m</td> </tr> </table>	L1	One-sided answer that shows basic knowledge of either subsidies or an alternative policy	1-3m	L2	Well- explained but one-sided argument (e.g. only explained why subsidy is / is not the best policy, without any consideration of alternatives.)	Max 4m	Two-sided argument that explained how a subsidy on public transport and an alternative policy might work to solve the congestion, with reference to extracts and context of India.	4-6m	E	Shows evaluation through a comparison of the policies, and arrive at a justified conclusion.	1-2m	
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f.	<p>“In the first seven months of 2014 the Thai automobile industry produced 1.1 million vehicles, a 28.5 per cent drop on the same period last year.”</p> <p>To what extent is the rise of the Indian automobile industry the main reason for the above development in the Thai automobile industry?</p>	<p>10m</p> <p>(H1 8m)</p>											
	<p>Introduction:</p> <ul style="list-style-type: none"> • Automobiles produced in India and Thailand are close substitutes of each other. Therefore, it is possible that the rise of the Indian automobile industry could lead to the worsening of the Thai automobile industry. • However, there are also internal reasons for the decline in the Thai automobile industry. <p>Thesis: Rise in Indian Auto industry caused the 28.5% drop in Thai auto industry.</p> <ul style="list-style-type: none"> • Rise of the Indian automobile industry provided a decent alternative to the Thai vehicles in the global automobile market. This resulted in some consumers 												

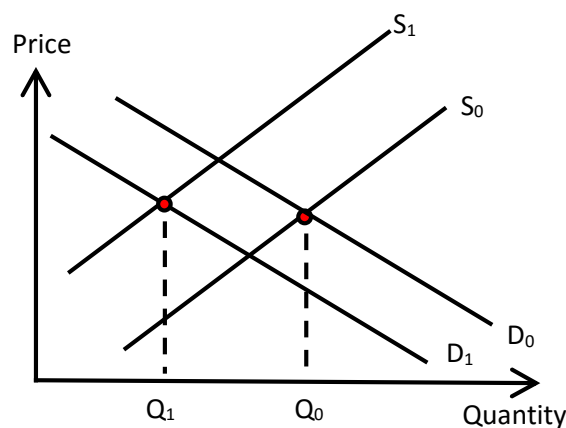
switching to Indian automobile firms due to the lower prices offered by India, ie "several automotive manufacturers serving the Asean market are increasingly sourcing their engines from India"

- The rise in Indian automobile industry could have led to the a reduce in demand for Thai automobiles. Demand for Thai automobiles fall from D_0 to D_1 . Consequently, there is a decrease in equilibrium quantity of Thai cars from Q_0 to Q_1



Anti-thesis: Rise in Indian Auto industry did not cause the 28.5% drop.

- The Thai automobile industry could have declined due to domestic problems like political upheavals and lack of skilled workers.
- Political upheavals could have resulted in a fall in consumer confidence. Thus, consumers will reduce their consumption of big ticket items like cars. Demand for Thai automobiles decreases from D_0 to D_1 .
- Political upheavals also caused road blockages and decrease in productivity. These could cause an increase in cost of production. Thus, supply of Thai automobiles will decrease.
- Lack of skilled workers also causes a decrease in productivity. Taken together, supply decreases from S_0 to S_1 .
- As a result, equilibrium quantity for Thai automobiles dropped significantly from Q_0 to Q_1 .



Conclusion:

- It is likely that domestic concerns are the main reasons for the 28% drop in the Thai automobile industry.
- The rise of India only exerted a minimal effect as India and Thailand are only directly competing in the ASEAN market, which is not big in global terms.
- Moreover, the domestic concerns in Thailand are very severe and longstanding. For eg, the political upheavals were frequent in the last decade, and could last several months at a time.

		H2	H1
L1	Shows superficial knowledge of how the rise of Indian automobile industry may have affected the Thai automobile industry.	1-3m	1-3m
L2	Well- explained but one-sided argument, explaining how the rise of Indian automobile industry is / is not the main factor that led to the =OR= Underdeveloped two-sided argument that explained how the rise of Indian automobile industry and the domestic factors (ie. political upheavals, lack of skilled labour) in Thailand might be the main factor that led to the fall in the Thai automobile industry.	4-6m	
L3	A two-sided argument, with a complete explanation and accurate application of the economic framework, on how the rise of Indian automobile industry and the domestic factors in Thailand might be the main reason that led to the fall in the Thai automobile industry.	7-8m	4-6m
E	Able to arrive at a justified conclusion on which factor is the main reason affecting the Thai automobile industry.	1-2m	1-2m

Question 2

US economic recovery and its impact on Asia

Extract 4: What Fed's tapering means

The Quantitative Easing (QE) program which began after the financial crisis in 2008 has led to a growing momentum of US economic recovery. QE kept interest rates low and this had a major impact on investments and consumption in the US.

The US Central Bank (Fed) has repeatedly linked the QE program with the labour market and inflation condition. With a stable and improving labour market, there is anticipation for the Fed to initiate a tapering of the QE program in the near future. The tapering of the QE, which in general means a reduction in the monthly bond purchase program, may result in a reduction of liquidity in the market and perhaps a hike in interest rate.

If that is so, corporate borrowing cost may increase with higher interest rate and this can hurt corporate earnings in the US. With higher interest rates, there is likelihood of USD to appreciate in the medium term.

Source: Adopted from "What the Fed's tapering means for Singapore", 6 June 2013

Extract 5: US economic recovery finally taking hold in 2014

The latest government data shows the economy has bounced back sharply in 2014, and that momentum is expected to carry into next year. There are signs that the 2013 growth slide has finally given way to what economists call a "virtuous cycle," in which improvement in one part of the economy feeds into the others, creating a self-sustaining expansion.

America is recovering for a few reasons. While many governments are tightening belts, America's is not: for the first time in five years, public spending as a proportion of GDP rose in 2014. American shoppers are flush with cheap credit. Lower oil prices also help, since America is still a net importer of the stuff.

The pace of the US growth of course, depends on when the Federal Reserve will decide to begin raising interest rates all the way back to more "normal" levels, and how quickly those rates begin to rise.

And while the U.S. seems to be back on its feet, the economy in the rest of the world is stumbling again. China's once red hot growth pace has slowed, and long-running efforts to revive growth in Europe and Japan continue to come up short. That—along with a stronger dollar—could hurt demand for U.S. exports. But for now, it looks like much of the U.S. economic recovery is solidly on track.

Source: CNBC, www.cnbc.com, 25 Dec 2014

Extract 6: When US interest rates rise: Singapore wins, Hong Kong loses

Economists at Bank of America (BofA) forecast that the Fed to hike interest rate at every other meeting in 2015 and 2016, bringing the funds rate to average 3.5% in the long run. But what would such an increase mean for Asia and its companies?

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- (a) (i) Describe the trend in the US government budget balance between 2011 and 2014. [2]
- (ii) Explain how the trend in the US government budget balance is expected to affect the US inflation rate. [2]
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- (c) Extract 5 explains that the 2013 growth slide has given way to what economists call a "virtuous cycle".
Using the concept of the circular flow of income, explain how such a change will affect the equilibrium level of national income in 2014. [4]
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- (e) Assess the likely impact of an increase in interest rates in the US and divergent US-China growth on the balance of payments of Singapore and Hong Kong. [10]

[Total: 30]


Answer Scheme

a	i.	Describe the trend in the government budget balance in the US between 2011 and 2014.	[2]
		There was a deficit in the US government budget from 2012 to 2014	1m
		The deficit showed a falling trend.	1m
	ii	Explain how the trend in the US's government budget balance is expected to affect the US inflation rate.	[2]
		Since the government budget is made up of government expenditure and tax revenue, a falling deficit would imply a contractionary measure	1m
		Hence with falling budget deficit, AD is expected to fall and hence inflation rates are expected to fall.	1m
b		With the use of a diagram, explain how "Fed's tapering" may cause an appreciation of the US dollar. [4]	[4]
		Fed's tapering refers to reduction in the monthly bond purchase program, may result in a reduction of liquidity in the market and perhaps a hike in interest rate.	1m
		With higher interest rates, there is likelihood of USD to appreciate in the medium term due to increase in "hot money" inflows or decrease in "hot money" outflows	1m
		Increase in demand for US dollar or decrease in supply of US dollar	1m
		Diagram	1m
c		Extract 5 explains that the 2013 growth slide has given way to what economists call a "virtuous cycle".	[4]
		Using the concept of the circular flow of income, explain how such a change, will affect the equilibrium level of national income in 2014.	
		A "virtuous cycle," comes about when "improvement in one part of the economy feeds into the others".	
		The circular flow of income explains the flow of income between firms, households, the government and the foreign sector.	1m
		For example, an increase in government expenditure on infrastructure, will lead to firms undertaking the production of the infrastructure. In order to produce the goods, firms require the resources such as land and labour from the households. The provides these resources in return for factor payments such as rents and wages.	3m
		The rising factor incomes, induces households to consume goods from various industries such as food and beverages, airline etc., save as well as purchase imports and pay income tax.	
		The rising expenditure in these industries leads to firms in these industries to produce more goods. Once again the firms will require more resources from households and this leads to more factor income to households. With rising factor incomes, households consume more goods and from a wider range of industries. The process continues hence "one part of the economy feeds into the others".	

d	<p>With reference to the data, discuss whether economic growth in US is expected to improve from 2014 and beyond.</p>	[8]
	<p>Thesis: EG is expected to increase in US</p> <p>i. <u>Explain how AD will increase in the US</u></p> <ul style="list-style-type: none"> • Ext 5 para 2: American shoppers are flush with cheap credit → Loans with low interest rate → COB is lower → C will increase • Extract 5 para 2: Public spending as a proportion of GDP rose in 2014 → Increase in G on G & S • Increase in G & C → AD will increase → RNY increase → Actual growth <p>ii. <u>Explain how SRAS will increase in the US</u></p> <ul style="list-style-type: none"> • Ext 5 para 2: lower imported oil prices → COP fall → SARS will increase → RNY increase → Actual growth 	
	<p>Anti-thesis: EG may fall or increase at a slower rate.</p> <p>i. <u>Explain how Increase in interest rates will have contractionary effects on the US economy.</u></p> <ul style="list-style-type: none"> • Ext 5 para 3: Pace of the US growth depends on when the Federal Reserve will decide to begin raising interest rates • Increase in i/r → COB increase, Reward for Savings increase → I & C falls → AD falls → RNY falls → Fall in Actual Growth • Increase in i/r → Appreciation of the US dollar → Hurt US export competitiveness → X falls → AD falls → RNY falls → Fall in Actual Growth <p>ii. <u>Explain how external events can affect US economic growth</u></p> <ul style="list-style-type: none"> • Ext 5 para 4 :China's once red hot growth pace has slowed,- running efforts to revive growth in Europe and Japan continue to come up short • China's economic slowdown and slow economic recovery in the EU & Japan will mean that US's trade & investment in these countries will be negatively affected. • E.g. Slowdown in income growth of the Chinese households → DD less of foreign goods from the US → US's X will fall → AD will fall → RNY falls → Fall in Actual Growth • E.g. US firms which are doing business in China could also be hit → Earn less sales & profits → Fall in factor income from abroad → Fall in GNP 	
	<p>Judgment Take a stand whether US's economy is expected to improve. Provide justification for the stand. Use data to support the stand.</p>	
	Level Descriptors	

	L1	Mere listing of points with lack of evidence	1-3m	
	L2	Well- explained but one-sided argument (e.g. US economic growth will increase) or balanced argument but under developed explanation - Max 4m Well developed and balanced explanation(US economic growth may either increase or slow down) with reference to extracts and context of the US economy,	4-6m	
	E1	Able to make reasoned conclusion	1-2 m	
e		Assess the likely impact of an increase in interest rates in the US and divergent US-China growth on the balance of payments of Singapore and Hong Kong.		[10]
	i.	<p><u>Explain how increase in interest rates in US will affect Singapore and Hong Kong in terms of BOP (current & capital account)</u></p> <p>Singapore</p> <ul style="list-style-type: none"> Ext 6 para 2: "Asian exporters which include Singapore will be the winners" Increase in interest rates → Appreciation of US dollar → Singapore exports are relatively cheaper, Imports from US are relatively more expensive → (X-M) should increase → Improve current account Singapore follow world interest rates, including US's interest rates → Increase in interest rates → Hot Money inflow → Improve capital account <p>Hong Kong</p> <ul style="list-style-type: none"> Ext 6 para 2: "Hong Kong dollar is pegged to the US dollar" → Appreciation of the HKD → Hong Kong exports are relatively more expensive, Imports are relatively cheaper → (X-M) should fall → Worsen current account Extract 6 para 2: Banks in Hong Kong will have to "increase interest rates" → Hot Money inflow → Improve capital account 		
	ii.	<p><u>Explain how the divergent US-China growth will affect Hong Kong and Singapore in terms of BOP (current & capital account)</u></p> <p>Singapore</p> <ul style="list-style-type: none"> Table 1 shows that divergent US-China growth will lead to overall 1.1% increase in Singapore's economic growth rate → Such data suggests that impacts of stronger growth in US (↑ in Y & PP in the US → ↑ in DD for Sg's X) will outweighs slowdown of China's economy (↓ in Y & PP in the US → ↓ in DD for Sg's X) → Singapore will continue to enjoy overall strong export growth, thus leading to 1.1% increase in economic growth → Singapore's current account is expected to improve <p>Hong Kong</p> <ul style="list-style-type: none"> Table 1 shows that divergent US-China growth will lead to 		

	<p>overall 0.2% increase in Hong Kong's economic growth rate → Such data suggests that Hong Kong may still experience growth in exports, thus leading to increase in 0.2% economic growth → Hong Kong's current account is expected to improve</p> <p>iii. <u>Compare the extent of impact of 2 events on Singapore and Hong Kong's BOP(current & capital account)</u></p> <ul style="list-style-type: none"> • Hong Kong is likely to experience a more negative impact than Singapore in terms of BOP(current account) • This is due to China being Hong Kong's biggest trading partner in terms of export destination (Table 2: Hong Kong export 47% to China out of its total trade), compared with Singapore, who only export 12 % of its total trade to China. 													
	<p>Level Descriptors</p> <table border="1"> <tr> <td>L1</td> <td>Superficial answers that explain some effects on Singapore and Hong kong in terms of BOP</td> <td>1-3m</td> </tr> <tr> <td>L2</td> <td> Answers that explain clearly both the events and the impact on Singapore and Hong kong but in terms of only either current account or capital account. Or Answers that explain clearly only 1 event /1 country but explained both current and capital account. </td> <td>4-6m</td> </tr> <tr> <td>L3</td> <td>Answers that explain clearly both the events and the impact on Singapore and Hong kong and in terms of both current account and capital account.</td> <td>7-8m</td> </tr> <tr> <td>E</td> <td>Judgment based on analysis; good effort at substantiation, e.g which country benefits/loses more</td> <td>1-2 m</td> </tr> </table>	L1	Superficial answers that explain some effects on Singapore and Hong kong in terms of BOP	1-3m	L2	Answers that explain clearly both the events and the impact on Singapore and Hong kong but in terms of only either current account or capital account. Or Answers that explain clearly only 1 event /1 country but explained both current and capital account.	4-6m	L3	Answers that explain clearly both the events and the impact on Singapore and Hong kong and in terms of both current account and capital account.	7-8m	E	Judgment based on analysis; good effort at substantiation, e.g which country benefits/loses more	1-2 m	
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 NYJC	PRELIMINARY EXAM 2015
	JC2 Economics H2 (9732/02)

Paper 2 - Essay

Monday

21 September 2015

08:00 – 10:15

TIME : 2 hours 15 mins

INSTRUCTIONS TO CANDIDATES

Write your name, class and name of economics tutor in the space provided on the writing paper.

Do not use staples, paper clips, glue or correction fluid/tape.

Answer three questions in total, of which one must be from Section A, one from Section B and one from either Section A or Section B.

The number of marks is given in the brackets at the end of each question or part question. Write your answers on the writing papers provided. At the end of the examination, fasten all your work securely together.

There are 2 printed pages including this cover page

Answer **three** questions in total.

Section A

One or two of your three chosen questions must be from this section.

1. With rising incomes, consumers are demanding for more premium leather goods. However, leather shoe suppliers are facing tough times as price of leather increased.

Using economic analysis, discuss the likely effects of the above changes on leather shoe market and its related markets. [25]

2. Jet Airways, India's second largest domestic airline in terms of the passenger load it carries, has slashed prices of its Business Class seats by up to 60%.

Source: DNA India, July 2015

(a) Explain the possible reasons for the action taken by Jet Airways [10]

(b) Discuss whether competition in the airline industry is beneficial to the consumers and the economy [15]

3. (a) Explain the main sources of market failure in Singapore [10]

(b) Discuss the view that government intervention is always necessary and beneficial when externalities are present [15]

Section B

One or two of your three chosen questions must be from this section.

4. (a) Pump priming is an action taken by the government to stimulate an economy, usually during a recessionary period.

Explain why such a measure is more effective when a greater portion of the extra income earned by households is consumed than withdrawn. [10]

(b) Assess the view that a large increase in national income is always desirable. [15]

5. Macroeconomic policy decision makers set targets for key policy objectives in relation to employment, inflation and economic growth.

(a) Explain why low rate of unemployment, low rate of inflation and sustained economic growth are key policy objectives. [10]

(b) Discuss whether macroeconomic policy decision makers should rely solely on supply-side policies to achieve these key policy objectives. [15]

- 6 Explain how globalisation has changed Singapore's pattern of trade and discuss whether Singapore is among the economies that have most to gain from globalisation. [25]

Suggested Answer EQ1

With rising incomes, consumers are demanding for more premium leather goods. However, leather shoe suppliers are facing tough times as price of leather increased.

Using economic analysis, discuss the likely effects of the above changes on leather shoe market and its related markets. [25]

Introduction

- Changes in demand and supply factors
- Relevant elasticity concepts to be used (YED and XED)
- Effect on price and quantity
- Effect on leather shoe market, substitute market, complement market

Note: Only 3 different markets need to be discussed in the body paragraphs.

Body

Premium leather shoe market (Normal good)

- Rising income → demand for premium leather shoe increases
- Price of leather increased (leather is used to make premium leather shoes) → cost of producing premium leather shoe increases → supply of premium leather shoe falls
- $PED > 1$: Degree of necessity is low for shoes made out of premium leather since consumers can seek for shoes (availability of substitutes) made of other types of materials such as canvas and rubber
- $YED > 1$: Shoes made out of premium leather is deemed as a luxury good where demand increases more than proportionately when income increases as a way of showing improvement in one's lifestyle, therefore purchasing more quality shoe such as premium leather shoe with an income rise
- Combined effect: Explain the likely effect → **Demand for premium leather shoes could rise more than supply falling** as shoes made out of premium leather are deemed to consumers to be shoes of high quality and that shoes made from premium leather are able to adapt to the wearer's feet shape, enhancing one's comfort level. With a rise in income, especially for the high income consumers, their demand for a luxury goods such as premium leather shoes will rise more than the fall in supply.
 - Price, quantity and *revenue* of premium leather shoe increases (Figure 1)

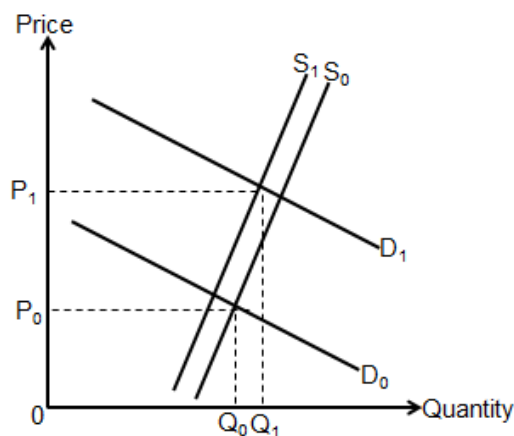


Figure 1: Premium Leather Shoe Market

Non-premium leather shoe market (Inferior good)

- Rising income → demand for non-premium leather shoe (inferior good) falls
- Price of leather increased (leather is used to make non-premium leather shoes) → cost of producing non-premium leather shoe increases → supply of non-premium leather shoe falls
- Combined effect: Explain the likely effect → **Demand for non-premium leather shoes could fall more than supply falling** especially for high income consumers who have a strong preference for shoes made out of only premium quality leather. Therefore, any leather shoes that are made of non-premium leather will be seen as less better off and they will demand much less of them even with a rise in their income.
 - Price, quantity and *revenue* of non-premium leather shoe decreases (Figure 2)

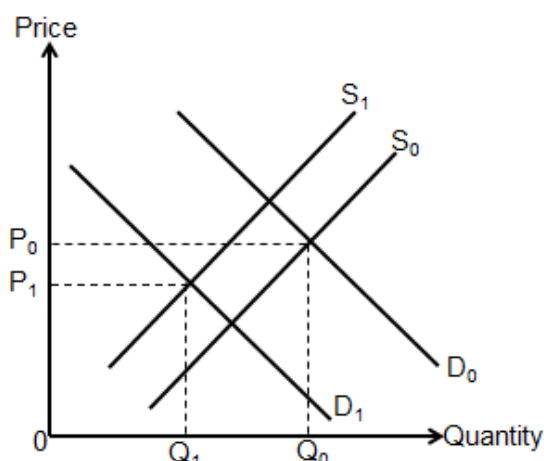


Figure 2: Non-premium Leather Shoe Market
/Non-leather Shoe (Inferior Good) Market

Non-leather shoe market (Inferior good)

- Rising income → High income consumers will demand more for shoes made out of leather instead of the non-leather shoes such as those made out of canvas and rubber. To high income consumers, non-leather shoes are seen as an inferior good and therefore will demand less for them when their income rises.
- With a rise in raw materials required to produce non-leather shoe such as those made out of canvas or rubber → cost of producing non-leather shoe increases → supply for non-leather shoe decreases
- Combined effect: With demand falling more than supply falling → price, quantity and revenue decreases (Figure 2)

Non-leather shoe market (Substitute)

- $XED < 1$ since shoes made of leather and non-leather are substitutes but they are not closely related as non-leather shoe (made from canvas or rubber), especially to a high income consumer, may not provide the same level of comfort as a shoe made from leather
- With the rise in price of premium leather shoes due to demand rising and supply falling → demand for non-leather shoe rises less than proportionately
- With a rise in raw materials required to produce non-leather shoe such as those made out of canvas or rubber → cost of producing non-leather shoe increases → supply for non-leather shoe decreases
- Combined effect: With demand rising less than supply → price rises while quantity decreases. Since price rises more than proportionately to the fall in quantity, *revenue* of non-leather shoe increases (Figure 3)

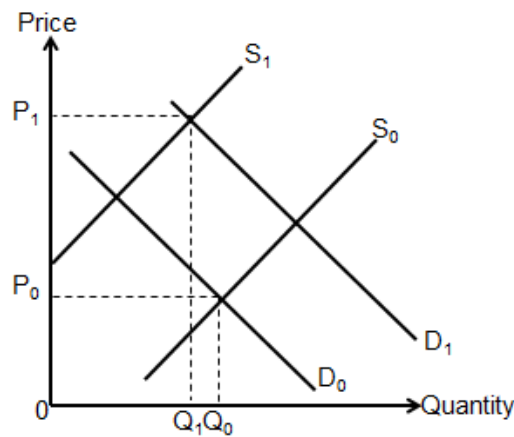


Figure 3: Non-leather Shoe (Substitute) Market

Socks market (Complement)

- $XED > 1$ since shoes made of premium leather and socks are complements and they are closely related since most leather shoes require the use of socks → with the rise in price of premium leather shoes → demand for socks fall more than proportionately
- With a rise in raw materials required to produce socks → cost of producing socks increases → supply for socks decreases
- Combined effect: With demand falling more than supply → price, quantity and revenue falls (Figure 4)

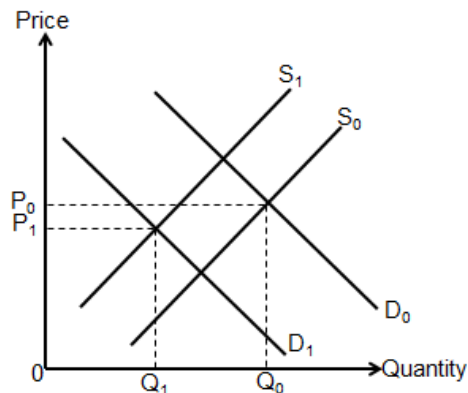


Figure 4: Socks Market

Conclusion

- Effect on the respective markets depends on the relative shifts of demand and supply and this can be due to the types of consumer groups (high vs low income groups).
- The effect on the respective markets is also due to *ceteris paribus* condition. Other demand and supply factors changing will result in different effects on the respective markets.
- Elasticity concepts allow producers to make decisions on how to increase their sales.

Mark Scheme

Level	Descriptors
Level 3 15 – 21	<ul style="list-style-type: none"> • Well-developed explanation for demand and supply factors, relevant elasticity concepts (YED and XED) and how price and quantity may be affected in at least 3 different markets with relevant contextualisation. • Well-developed analysis of other possible scenarios where the price and quantity may increase/decrease.
Level 2 10 – 14	<ul style="list-style-type: none"> • Underdeveloped explanation for demand and supply factors, elasticity concepts and how price and quantity may be affected. • Some attempts at contextualisation. • Some recognition that the extent of the shifts in demand and supply curves has an effect on price and quantity (combined shifts). • Markets discussed must involve both leather and non-leather shoe markets.
Level 1 1 - 9	<ul style="list-style-type: none"> • Answer shows some knowledge of demand and supply factors and how price and quantity may be affected in the markets but markets discussed are all single shifts. • Lack of economic analysis. • Minimal or no contextualisation.
Evaluation	
E2 (3-4)	For well-reasoned judgment on the likely effects on price and quantity in the relevant markets.
E1 (1-2)	For a mainly unexplained judgment on the likely effects on price and quantity in the relevant markets.

2. Jet Airways, India's second largest domestic airline in terms of the passenger load it carries, has slashed prices of its Business Class seats by up to 60%.

www.dnaindia.com 20th July 2015

a) Explain the possible reasons for the action taken by the Jet Airways. [10]

b) Discuss whether competition in the airline industry is always beneficial to consumers and the economy. [15]

Answer Key

a) Introduction:

- Airlines are likely to operate within an oligopolistic market.
 - Explain in brief the features of oligopoly market structure.
 - Assuming their aim is to maximise profits explain possible reasons for the action taken by the Jet Airways (pick any 3 to explain, with examples)
- ❖ **Predatory pricing:** In the preamble it is mentioned that Jet Airways is India's second largest domestic airline and have very large market share. Thus it can act like a dominant firm cutting fares aggressively to protect market share from new or existing competitors. Predatory pricing is the deliberate setting of prices at levels even lower than AC to deter potential entrants from entering the market. At such low prices, the potential entrant is unable to compete and will then be driven out of the market. Although by doing so the firm doing predatory pricing (in this case Jet Airways) may also suffer from heavy losses over that period of time, but is able to finance and continue its production by using the funds accumulated from the high supernormal profits earned before.
- ❖ **Increase revenue:** Business class tickets take up a large proportion of income and hence the demand for them may be price elastic. (Can explain $PED > 1$ by assuming large number of substitutes or business class tickets taking up a larger proportion of income). Thus if Jet Airways reduces price consumers will increase their quantity demanded more than proportionately → Total revenue increases. Assuming no change in cost this would lead to higher profits. Draw diag to show TR increase.
- ❖ **Jet Airways may have enjoyed large EOS and/or other cost savings** which they are passing on to the passengers in terms of lower fares. For e.g the fuel prices are falling and their operating costs may have fallen as well. Thus the firm is able to charge a lower price. Draw diag to show lower fares.
- ❖ **Jet airways may have taken the decision to cut price because of falling demand.** During lean season or if there is recession in the country there may be falling demand for luxury goods. By offering discounts they want to fill up its seats rather than flying nearly empty seats.

- ❖ The decision may be a retaliatory move to another rival. Since Jet Airways belongs to oligopoly market structure there is very high interdependence. So if a rival firm has cut its price Jet Airways also reacted by lower its price to avoid losing its customers to its rival firms.
- ❖ The firm may decide to lower price as they may have different objective other than profit maximising

Any other reason that explains with economic justification the action taken by the Jet Airways will be accepted.

Conclusion : The price reduction by Jet Airways most likely is a short term strategy and is unlikely to be unsustainable in the long run. However, it may benefit the passengers as they can enjoy air travel at a lower price. But the long term impact may not be overall beneficial as the Jet Airways' cutting prices may trigger a price war which may have overall negative impact on the industry as well as the economy.

Level	Descriptor	Marks
L1	Listing of reasons with minimum explanation.	1-4
L2	At least 2 well explained reasons using economic theory/framework , with some reference to Jet Airways' action.	5-6
L3	At least 3 well explained reasons using economic analysis in the context of the action taken by JET Airways. Must have at least one cost reason and one revenue reason.	7-10

b) Discuss whether competition in the airline industry is always beneficial to consumers and the economy.

- Students are expected to discuss the benefits and costs of greater competition to consumers and economy.
- Explain what is understood by **more competition**: This can be either because of more firms entering the airline industry and/or because of more intense competition amongst the existing firms.
- Consumers key interest is to obtain: the lowest price possible, obtain goods that are improved over time, obtain more variety of goods and retain maximum consumer surplus.
- For economy the key interest is to see whether the macro objectives are achieved or not.

Consumers: Consumers may benefit when companies have to compete vigorously for their business. Such competition leads to lower prices, better service, more innovative offerings, and a wider range of choices for consumers. Lower prices due

to competition and prevention of price fixing also reduce redistribution of wealth from consumers to firms with high monopoly power

❖ **Greater consumer welfare**

- Consumers may benefit from possible lower prices and higher output of products.
- Before introducing competition: Explain that firm produces at $MC=MR$ (profit-maximizing output) but $P>MC$.
- After introducing competition: still Price may be greater than MC but less so.
- Explain that with competition, market will produce at a higher level of output that is closer to the allocative efficient output.
- Use diagram to show how more competition leads to less monopoly power and hence lower price for consumers as firm's market share is reduced and the demand for their product is more price elastic with more substitutes available. Thus people may enjoy lower airfares.

However competition may also hurt consumers as the firms find their monopoly power getting reduced. Being large, the airline firms are able to reap substantial economies of scale. If competition is introduced to break up the market power the consumers may end up being worse off as they may not enjoy lower fares as a result of cost savings being passed on to them by producers enjoying substantial EOS.

❖ **Innovation and choice**

- Competition stimulates innovation and more choices for consumers. With competition, the airline firms would strive to be more efficient and cost-effective in their operations,
- Explain how more competition will force airline firms to offer better service to the air travelers and be innovative to retain supernormal profits. If these cost savings are passed on to consumers, they would hence benefit from lower fares, higher consumer surplus and more choices available to them.

However

Firms will now enjoy less supernormal profits due to increased competition and hence less funds to finance R&D efforts. Thus they may compromise on upgrading their services e.g while buying new modern aircrafts.

- ❖ Excessive competition might also lead to wasteful expenditures on advertising etc. and thus consumer welfare may be compromised.

Economy: Thesis

Expansion of market for air travel may result in expansion of the market .This will create positive spillover effects on the rest of the economy.

- Boost tourism and business travel ,Investment expenditure $\rightarrow X$ increase, I increase \rightarrow ceteris paribus AD increase $\rightarrow NY$ Increase.
- Boost GDP in terms of higher output and expansion of industry leading to more employment.
- Boost BOP – foreign exchange earned directly by national airlines as well as indirectly by influx of tourists.

However competition in the airline industry may also have adverse consequences for society and country as a whole.

- Might bring adverse effects in the form of job losses and unemployment if more competition leads to closures of loss earning airline companies.
- More competition limits the capacity of large firms to conduct R&D it may have adverse consequence on the safety and security of the airline industry in general.
- Too many airlines may also lead to severe negative externality.

In conclusion, whether competition in the airline industry is **always** beneficial or not depends on the importance of overall costs and benefits to the consumer and economy, whether the good aspects of competition outweigh the bad aspects. Therefore, although more competition may lead to lowering of airfare and more choices available to consumers yet **too much competition** reduce the profits of airlines industry which may then have severe detrimental effects both on consumer and economy as it will be difficult for firms to have research and development .Too much competition may result in firms using underhand methods to cut costs + poor quality products which may be harmful to consumers. Thus some competition can be introduced to reduce the ill effects of monopoly powers of existing large firms, but Government must understand that too much of competition may not be beneficial overall.

Mark Scheme:

L3	Excellent well-balanced 2 sided discussion of the positive and negative effects of competition on both consumers and economy applying to the context of airline industry.	9 – 11
L2	<ul style="list-style-type: none"> • One-sided detailed explanation of impact of competition on consumers and economy in the context of airline industry • OR • Two sided impact of competition on either consumer or Economy in the context of airline industry • OR • Two sided but superficial discussion of the impact on consumers and economy 	6 7-8
L1	<ul style="list-style-type: none"> • Weak and incomplete understanding of the question and context • Mere listing of points without explanation. • A one-sided answer that touches only on the good aspects of competition on consumers or on economy gets maximum 5 marks 	1 – 5
E2	For a rational conclusion and an evaluative assessment that is based on economic analysis (that is, a well-explained evaluation)	3 – 4
E1	Judgment without elaboration	1 – 2

3. (a) Explain the main sources of market failure in Singapore [10]
- (b) Discuss the view that government intervention is always necessary and beneficial when externalities are present. [15]

Interpretation of Question – Part (a)		
(a)	Explain the main sources of market failure in Singapore	[10]
What is the command cue? (What are the skills required for the question?)	What are the content cues? (What are the concepts required to answer the question?)	What are the contextual cues? (What is the context for the question?)
“Explain” – illustrate the relevant economic concepts using relevant examples & analytical framework	“market failure” – the working of the market resulting in resources being allocated in ways leading to inefficient outcomes “main sources” – the significant or prevalent (>1; preferably 3) sources to the market failure	“Singapore” – markets in a small, resource-scarce, open economy independent city-state

Schematic Answer Plan:

- Define “market failure” – workings of the free market results in scarce resources allocated in ways resulting in inefficient outcomes.
- State the possible “sources of market failure”
 - Non-provision of Public goods
 - Existence of externalities – Negative externality/ Positive externality
 - Market Imperfections (Market dominance, Imperfect information, Immobility of factors of production)
 - Inequity (unfair distribution of wealth & goods)
 - Under-consumption of Merit – comprising the positive externality and information failure sources
 - Over-consumption of Demerit goods - comprising the negative externality and information failure sources
- Explain 3 “main sources” [**must include 2(i) and any other 2 sources** listed above] of market failure in Singapore
 - Describe how the 3 sources cause market to fail
 - Provide reasons why in each case the market failure source is viewed as “main” in Singapore – eg. prevalence of the particular source in most markets across industries or the deadweight losses are fairly significant and a cause for social concern

Part (a) Mark Scheme:

L1	Mere listing of the characteristics of 3 sources with little or very brief explanation of how they cause markets to fail.	1 - 4
L2	Able to explain in detail the main characteristics of 3 sources (but excluded the non-provision of public goods) supported by well-used examples, with thorough explanation of the reasons on how they cause markets to fail; OR Able to explain in detail the main characteristics of 3 sources (but excluded the non-provision of public goods) supported by listed examples in the Singapore context, with some valid reasons on how they cause markets to fail.	5 - 6
L3 (low)	Able to explain in detail the main characteristics of 3 sources supported by well-used examples, with thorough explanation of the reasons on how they cause markets to fail	7 - 8
L3 (high)	Able to explain in detail the main characteristics of 3 sources supported by well-used examples, with thorough explanation of the reasons on how they cause markets to fail & brief statements justifying the selection as the main sources.	9 - 10

Interpretation of Question – Part (b)		
(b)	Discuss the view that government intervention is always necessary and beneficial when externalities are present.	[15]
<p>What is the command cue? (What are the skills required for the question?)</p> <p>“Discuss” – a 2-sided exploration of the issue (“the view”)</p>	<p>What are the content cues? (What are the concepts required to answer the question?)</p> <p>“government intervention” – involvement of the regulating authority in the workings of the free market that appears to have achieved inefficient outcomes; regulated market</p> <p>“always” – a definitive outcome; “at all times”</p> <p>“necessary” – “needed to be done”</p> <p>“beneficial” – “good”; “favorable”; “advantageous”</p> <p>“externalities are present” – the under-/over-consumption or under-/over production of a good/service emitting third party benefits/costs</p>	<p>What are the contextual cues? (What is the context for the question?)</p> <p>“externalities are present” – only relevant market failure source for discussion; can be applied to any economic activity or in any country</p>

Schematic Answer Plan:

- Introduction: Briefly reiterate the key point why externalities cause markets to fail
 - Negative externalities: under-priced; over-consumption or over-production
 - Positive externalities: over-priced; under-consumption or under-production relative to the social optimum output level.

* Students can explain any relevant source of externality.

2. Thesis: Government intervention is necessary and beneficial

- Govt intervention in the presence of negative externalities (& also as in the case of demerit goods) resulting in significantly large deadweight loss is to be regained is needed to be done and is favorable because:
 - It raises the market price and lowers the equilibrium quantity in the market
 - It leads to an efficient resource allocation resulting in welfare improvements for both consumers and producers.
- Example: To overcome market failure caused by car usage (negative externality), SG gov adopts the policies as discussed below:
 - Electronic Road Pricing (ERP)
 - Certificates of Entitlement (COEs)
 - Providing an efficient/quality public transport system

* Students can explain any relevant policy to address the negative externality for the chosen context.
- Explain **Electronic Road Pricing (ERP) [What is it & How it works]**
 - It imposes a price for using a designated road that is over-used (causing congestion)
 - Works like an indirect tax per unit to equate MEC caused by the car journey (tax per unit = MEC).
 - Road users are charged according to the external cost they impose on the rest of the society, such as the congestion, noise and pollution that their journey creates. This forces them to internalise their external costs. When motorists are made to bear the full cost of their driving, they will then cut down their consumption to the socially optimum level.
- Illustrate with diagram how a Pigouvian tax is implemented to force consumers to internalize the external costs**
 - Using the Demand – Supply Analysis framework**
 - An indirect tax imposed → ↑ cost of car/road usage → effectively reflected as a leftward/upward shift of the supply curve of roads

- At original price, P_0 , a shortage of road space is created. Drivers who must use the particular road will be willing to pay a higher price for the good while those unwilling to pay for the usage will reduce their quantity demand for it (& look for alternative routes) \rightarrow \downarrow in the number of cars using the now priced road.

(ii) Using the Cost-Benefit Analysis framework

- A Pigouvian tax \rightarrow \uparrow cost of car/road usage that generates negative externalities due to over-consumption.
- The govt can impose a tax = ab per unit of mile driven to internalize the external cost. The size of the tax (ab) should be ideally equivalent to the extent of marginal external cost (MEC) at the socially optimal output so as to completely eliminate the welfare loss.
- The tax forces the consumers to take into account (internalise) the external costs raising the MPC to be at the same level as the MSC. Faced with the new supply curve, the motorists will reduce consumption to the socially efficient level. The welfare loss to society would be eliminated.
- **[How well it works] Benefits of electronic road pricing (ERP)**
 - ERP aims to reduce congestion by raising the price of car usage. It is thus more targeted as it is levied only on the motorists who use the busy roads (e.g. the highways and the CBD area) during the peak hours
 - An added advantage of the ERP system is its flexibility. LTA regularly reviews the traffic conditions on the expressways and roads. Because of the way it is administered, the charges can be adjusted based on traffic congestion levels at the pricing points so that the ERP works truly like the Pigouvian tax, where the charges reflect the marginal external cost of driving at different time periods, along different stretches of roads
 - Hence, govt intervention in the form of ERP brings about more benefits as it allows the deadweight loss area to be regained as welfare improvements for both consumers and producers.

3. Anti-thesis:

i. Government intervention is necessary but not beneficial

(a) Government intervention may fail resulting in greater inefficiencies

- Even with the best intent, govt intervention in the market, though needed, may not be favourable if government intervention worsens the problem of resource allocation instead of improving it (ie. government failure).
 - A significantly higher price than the ideal/true price or over-taxing leads to an over-priced and under-utilised road which may lead to excessive speeding and increase the likelihood of accidents and loss of life.
 - A marginal increase or new price still lower than the ideal/true price or under-taxing leads to an under-priced road with minimal effects on the volume of road usage and the extent of congestion.
- The success of the government, like any of its endeavours, however, depends on its ability to gauge when, how and to what extent to intervene. Government actions are also prone to failure or have their limitations. Government failure could happen in the market for motor vehicle usage because of information imperfection:
 - A lack of information about the true value of a negative externality: It is often very difficult to price the value of a negative externality such as pollution in monetary terms. It is difficult to accurately measure the costs imposed and to trace the source of the pollution itself. Hence the government in its attempt to correct the over-consumption in context of motor vehicle usage to an efficient level may cause greater deadweight losses.
 - The overestimation of the MEC leads to an excessive tax which causes MPC to rise to $MPC + tax$, resulting in the consumption of quantity units of motor vehicles $<$ socially optimal level of output Q_s . Is the associated deadweight

loss leads to worsening of allocative inefficiency, the govt failure could be said to have occurred.

- ∴ govt failure results in the *deepening of market inefficiencies* through its intervention.

(b) Costs of govt intervention to correct MF outweighs the deadweight loss to be regained

- Very often, the gain from govt intervention has to be weighed against the costs of govt intervention.
- Govt intervention in the market may not be justified if the gain from govt intervention is weighed out against the costs of government intervention. Such costs may include administration or operational costs incurred by the government.
- Furthermore, govt intervention in the market may not be justified if it leads to consequences that impact the economy. For example, anti-pollution measures to reduce negative externalities may increase the unit COP which deter FDIs → affecting potential growth. Hence, in this case, govt intervention in the market will not be justified.

ii. Government intervention is unnecessary & not beneficial

- When the extent of *deadweight loss is not significantly large*, though it may result in relative inefficiencies with respect to the social optimum government intervention may not be necessary.
- When the property rights assigned in the market are already established & well-defined, and it allows for the parties involved to work towards a socially optimal outcome at a low negotiation costs. Hence, government involvement may just be to ensure the compliance of legislative statutes.

4. Conclusion

Though presence of externalities cause markets to fail resulting in over-consumption (-production) or under-consumption (-production), government intervention may not always be necessary and/or concurrently beneficial as the characteristics of each market is unique and the government's intervention capacity and efficiency in the respective markets may vary. Hence, the relevant regulatory agencies of the government need to exercise wisdom with regards to the need and favorable nature of any decision to intervene when markets fail.

Part (b) Mark Scheme:

L 1	Able to identify the basis for government intervention when externalities are present. Mere listing of the measures that can use to correct the over-consumption (-production) or under-consumption (-production) problem when externalities are present.	1 - 5
L 2	One-sided detailed explanation of the issue of the necessity and benefits of government intervention when externalities are present with use of examples in the Singapore context; OR Balanced but superficial explanation of the issue of the necessity and benefits of government intervention when externalities are present with limited use of examples in the Singapore context.	6 - 8
L3	Balanced and detailed explanation of the issue of the necessity and benefits of government intervention when externalities are present with adequate use of examples in the Singapore context.	9 -11
E1	Judgment on the issue without elaboration on the reasons for stand.	1 - 2
E2	Judgment on the issue with adequate elaboration of supporting reasons for stand.	3 - 4

Question 4:

- (a) Pump priming is an action taken by a government to stimulate an economy, usually during a recessionary period. Explain why such a measure is more effective when a greater portion of the extra income earned by households is consumed than withdrawn. [10]
 (b) Assess the view that a large increase in national income is always desirable. [15]

(a) Pump priming is an action taken by a government to stimulate an economy, usually during a recessionary period. Explain why such a measure is more effective when a greater portion of the extra income earned by households is consumed than withdrawn. [10]

<u>What is the command word?</u>	<u>What is the content word?</u>	<u>What is the context word?</u>
(what are the skills required for this question?) 'Explain why' = Use economic theory to provide reasons in detail, using examples	(what are the relevant concepts required to answer this question?) 'Pump priming' = Action taken by govt to stimulate economy during recessionary period = Expansionary fiscal/monetary policy to raise AD via rises in C, I and/or G 'measure is more effective' = the successful impact of increase in AD on NY to stimulate an economy 'a greater portion of the extra income earned by households is consumed than withdrawn' = larger mpc value vs smaller mpw value → determines the size of the multiplier effect	(where or when to apply for this question?) Examples of at least 2 different countries, with different mpc values

Schematic Plan

Pump priming (expansionary fiscal and monetary policies) → stimulate higher domestic C, I and G → higher AD → via multiplier → real NY rises more than proportionate (assume economy < Yf)
 The extent of the increase in NY depends on the size of the multiplier effect → $k = 1/(1-mpc) = 1/mpw = 1/(mps+mpt+mpm)$ → factors that affect size of k
 The larger the mpc, the larger the k , and hence the more effective expansionary policy has on raising NY and stimulating an economy during a recessionary period, through a rise in AD.

Introduction

Pump priming refers to use of expansionary fiscal and monetary policies to increase AD.
 The level of spending by households (Consumption), firms (Investment) and government (Govt spending) are components of aggregate demand (AD) in a country.
 Expansionary fiscal and monetary policies aim to increase domestic C and I via expansionary FP (cut in direct tax and rise in government spending) or via expansionary MP (via cut in interest rates) to increase aggregate demand.
 The real national income (NY) in the country (assuming the economy is below full employment, that is economy has unemployed resources) will increase more than proportionately, via the multiplier process, to the increase in AD. The extent of the impact of increases in C, I and G on NY depends on the multiplier effect, which is determined by the size of the multiplier (k).
 The size of k is determined by the marginal propensity to consume i.e. $k = 1/(1-mpc) = 1/mpw = 1/(mps+mpt+mpm)$ for a 4-sector economy.
 The higher the mpc, or the lower the mpw, the greater the size of k , and hence the greater will be the extent of increase in NY given any rise in C, I or G.

Body (PEEL)	
Point 1	
State the Point (P)	Expansionary fiscal and monetary policies aim to increase C, I and G and thus increase AD.
Explain the point with clear causal links (E)	Expansionary fiscal policy involves a rise in G and a cut in taxation. When the government cuts personal income tax rate, households enjoy increases in disposable income and thus higher purchasing power. Households can then increase consumption. A cut in corporate tax rate will increase after-tax profits and thus expected rate of returns for firms. Firms undertake more investments.
Elaborate the point with examples or diagram (E)	Expansionary monetary policy refers to cuts in interest rates. Interest rate is also the cost of borrowing. Thus, a cut in interest rate would make it less expensive for consumers to borrow money and buy on credit for big-ticket items. Also, lower interest rate would encourage consumers to consume (and save less) because the opportunity cost of spending has decreased, that is, less interest forgone on savings. This would cause an increase in consumption. Similarly, business would enjoy lower interest charges on loans for investment. More investment projects are now profitable for the same expected rates of returns. This leads to a rise in investment.
Link back to Qn (L)	Hence, expansionary fiscal and monetary policies will boost C, I and G. Increases in C, I and G cause AD to increase. For some countries like the US and UK, consumption is the largest component of aggregate demand. A rise in C will have increase AD and hence NY significantly. However, for countries like Singapore where consumption is a relatively small component of AD, a rise in C will increase AD and NY less significantly.
Point 2	
State the Point (P)	When AD rises, NY will rise by a larger extent due to the knock-on effect on income-induced consumption. The extent of the rise in NY depends on the size of the multiplier (k). What determines the size of the multiplier effect on NY is the marginal propensity to consume (mpc).
Explain the point with clear causal links (E)	The marginal propensity to consume (mpc) indicates the portion of additional or extra income that is used for consumption expenditures. The size of the multiplier, k, is directly related to mpc, that is $K = 1/(1 - mpc) = 1/mpw = 1/(mps + mpt + mpm)$. Assume 4-sector economy here.
Elaborate the point with examples or diagram (E)	Assuming $mpc = 0.9$, $K = 1/(1 - 0.9) = 1/0.1 = 10$. When AE rises by \$100m, NY will rise by 10 times to \$1000m. For example, if autonomous investment expenditure rises by \$100m, the national income of the economy is immediately raised by \$100m via the increase in the incomes of factor input owners. These factor owners will then spend 0.9 (= mpc) of their rise in income on consumption of goods and services, i.e. \$90m ($mpc \times \Delta Y = 0.9 \times \$100m$) is passed on to the next round of producers of goods and services, with only 0.1 (= mpw) of the rise in income being withdrawn from the circular flow ($0.1 \times \$100m = \$10m$). These producers will then spend 0.9 of their rise on income on domestic goods, i.e. \$81m is passed on in this third round and \$9m withdrawn. The process continues, with each round of domestic spending on goods and services being the next round of income for the producers of goods and services. The process comes to an end when the change in withdrawal is \$100m is equal to the initial change in injections of \$100m. Final increase in income is 10 times the initial rise of \$100m, that is, \$1000m. The larger the mpc, the greater will be the multiplier k and thus the multiplier effect. This is because when incomes rise, households are spending more on domestic goods out of any additional increase in income (rather than withdraw it) and thus each round of the multiplier process leads to a greater increase in national income. When people receive extra (additional) income and consume more of the extra income on locally produced goods, this will create a

	<p>greater increase in AD and NY in subsequent rounds.</p> <p>When people save, pay for taxes or spend more of their extra income on imports less money will be passed on through the circular flow as more of the extra income is withdrawn. Hence there will be a smaller increase in AD and NY.</p> <p>Assuming $mpc = 0.6$, $k = 1/(1-0.6) = 1/0.4 = 2.5$. When AE rises by \$100m, NY will rise by 2.5 times to \$250m.</p>
Link back to Qn (L)	Thus, a higher mpc (smaller mpw) leads to a larger multiplier effect whereas the larger the mpw (smaller mpc) leads to weaker multiplier effect.
Point 3	
State the Point (P)	Different countries have different values of mpc and thus different sizes of the multiplier, and hence different degrees of effect of rise in AD on NY.
Explain the point with clear causal links (E)	<p>Singapore has a smaller multiplier than other countries because of our mpc is relatively lower. This is because of our unique Central Provident Fund (CPF) scheme which requires workers to save a certain percentage of their monthly earned income. Singapore has one of the highest savings rate in the world (high mps). In addition, mpm is relatively higher for Singapore too because of our heavy reliance on imports due to our lack of resources.</p> <p>In contrast, USA has a bigger multiplier because their mpc is relatively higher, while the savings rate and import rate are rather low in that country. Assumption is that mpt is the same for both countries.</p>
Elaborate the point with examples or diagram (E)	Asian countries tend to have a higher marginal propensity to save compared to Western countries. This can be attributed to the value of thriftiness, a cultural factor. The propensity to save voluntarily (for retirement or payment for higher medical expenditure due to ageing population & lack of established social safety networks) may also be higher in many Asian countries. Hence, the mps and thus the mpw of many Asian countries will tend to be larger compared to other Western countries (mpc smaller).
Link back to Qn (L)	Consequently, the impact of any increases in C, I and/or G will have a smaller impact on Singapore's national income. On the other hand, USA has a larger multiplier and thus an increase in C, I or G will have a larger impact on US's national income.
Conclusion (SR)	
Summarise main points	<p>In conclusion, pump priming through the use of expansionary fiscal and monetary policies to stimulate an economy during a recessionary period work more effectively in countries with relatively larger mpc as a larger mpc value implies a greater multiplier effect. The rise in AD will lead to larger increases in NY via the multiplier to help the economy.</p> <p>In countries where the mpc is smaller, the government will need to raise C, I or G by greater amounts to achieve the same desired rise in NY to stimulate the economy.</p>

Level	Descriptors	Marks
L3	Excellent explanation of how use of pump priming to stimulate aggregate demand during a recession work more effectively in countries with relatively larger mpc than in countries with a relatively smaller mpc. Extent of the increase in the national income given a similar rise in AD is well explained using examples of different mpc and hence different k values for comparison.	7-10
L2	Clear explanation of how use of pump priming to stimulate the aggregate demand work more effectively when mpc is larger than when mpc is smaller. Use of some numerical examples to show the effect on rise in national income given an increase in AD but explanation is not complete.	5-6
L1	Superficial explanation or mere stating without elaboration of how use of pump priming to stimulate the aggregate demand work more effectively when mpc is larger than when mpc is smaller. Explanation is not supported by examples	1-4

(b) Assess the view that a large increase in national income is always desirable. [15]

<u>What is the command word?</u> (what are the skills required for this question?)	<u>What is the content word?</u> (what are the concepts required to answer this question?)	<u>What is the context word?</u> (what is the context for this question?)
'Assess' – consider both thesis and antithesis and synthesize with a judgment	'large increase in national income' = rapid or accelerated economic growth 'always desirable' = always beneficial, with positive effects on the economy	Different countries, time period

Schematic Plan

Increase in national income = Economic growth = Actual and/or potential growth

Large increase in national income = Accelerated economic growth

Causes of large $\uparrow Y$ \rightarrow Positive & Negative effects of large $\uparrow Y$ on macro and micro goals

Thesis: A large increase in NY is desirable

- 1) Large $\uparrow Y$ \rightarrow Growth \rightarrow also achieve other macroecon aims:
 Actual growth (economy $< Y_f$) \rightarrow fall in cyclical unemployment as dd for lab rises
 Potential growth \rightarrow lower inflation leading to price stability \rightarrow rise in export competitiveness \rightarrow improve BOT
 Large $\uparrow Y$ \rightarrow Growth \rightarrow sign of healthy economy \rightarrow \uparrow FDI \rightarrow further potential growth
- 2) Large $\uparrow Y$ \rightarrow higher SOL and improvement in income distribution especially when govt utilizes the higher tax revenue collected to help the lower income group, or devt of infrastructure in c'try that attracts more FDI, leading to greater potential growth

Antithesis: A large increase in NY is undesirable

- 1) Large $\uparrow Y$ \rightarrow Too fast growth \rightarrow conflict with other macroecon aims:
 Rapid potential growth \rightarrow higher structural unemployment
 Rapid actual growth due to rise in AD \rightarrow demand-pull inflation if economy is operating near Y_f
 Large $\uparrow Y$ \rightarrow rise in purchasing power \rightarrow more imports \rightarrow worsens BOP deficit
- 2) Large $\uparrow Y$ \rightarrow lower non-material SOL
 Large $\uparrow Y$ \rightarrow rise in income disparity if only those in the industries that contributed to the high growth benefit
 Large $\uparrow Y$ \rightarrow rise in negative externalities due to rise in productive activities \rightarrow lower SOL

Conclusion

Whether a large increase in NY is always beneficial depend on the source of the increase in NY (whether it is from rise in AD e.g. from higher C or rise in AS e.g. from higher I), availability of idle resources (whether economy is operating near Y_f), the current state of the economy as there may be conflicts between different macroeconomic goals (for example, the economy could currently be facing a BOP deficit) and the extent of material gains compared to non-material costs incurred in achieving the rise in NY.

It also depends on the factors that led to the large increase in NY. For example, if govt spending contributed to the increase in NY but it was funded from borrowing and greater govt debt, this leads to further negative repercussions.

The desirability of a large increase in NY greatly depends in the objectives of the govt.

<u>Introduction</u>	
<p>Increase in national income means the economy is achieving economic growth, which could be actual growth and/or potential growth. A large increase in national income is equivalent to targeting high rate or accelerated economic growth compared to normally.</p> <p>Actual growth can be achieved when the economy has excess capacity to accommodate any rise in AD. The rise in AD could be from a rise in C, I, G or X.</p> <p>Potential growth can be achieved when the quantity and quality of the resources are expanded or the level of technology is improved to increase the productive capacity of the economy and sustain actual growth without causing a rise in GPL.</p> <p>The rise in AD must be large to achieve the large increase in NY via the multiplier effect. The real NY will grow quickly provided the economy has excess capacity</p>	
<u>Body (PEEL)</u>	
THESIS: A LARGE INCREASE IN NY IS DESIRABLE	
Thesis 1	
State the Point (P)	A large increase in NY allows the country to achieve other macroeconomic goals, namely lower unemployment rate and lower inflation rate, and probably improvement in BOT.
Explain the point with clear causal links (E)	This is because higher actual economic growth leads to a greater utilization of resources and hence move the economy towards full employment.
Elaborate the point with examples or diagram (E)	<p>There is greater production of goods and services to meet the rise in AD, leading to greater demand for labour and other resources. Hence, unemployment rate falls as demand for labour is derived from the demand for goods and services .</p> <p>Moreover, greater output and potential growth in the country could have also been based on supply factors such as rise in level of technology and higher productivity. This enables the aggregate supply to rise and hence overall output and employment can rise. This rise in aggregate supply may lead to a fall in general price level, leading to a low rate of inflation, which is another important macroeconomic aim of a country.</p> <p>As the goods and services can now be produced at lower prices, exports of the country become more price-competitive to the rest of the world. This can lead to a rise in export earnings, improving the BOT in the country.</p>
Link back to Qn (L)	Thus, a large increase in NY is desirable as it can reduce both unemployment and inflation, and improve BOT.
Thesis 2	
State the Point (P)	A large increase in NY brings about a higher standard of living.
Explain the point with clear causal links (E)	First, with a larger income, as measured by Gross Domestic Product (GDP), and with a given population, higher GDP per capita will mean more goods and services are produced and available for consumption for the average person in the country. This should lead to higher standard of living.
Elaborate the point with examples or diagram (E)	Economic growth has led to a greater quantity and range of goods and services for consumers, which contributed to a significant increase in living standard in the country. Citizens have having purchasing power now with the large increase in NY and hence they will be able to enjoy a wider range of consumer goods, improving their material standard of living.

	In addition, a large increase in NY enables the government to collect more tax revenues to help fund welfare payments to improve the lives of the citizens. Those in the lower income groups can be assisted in many ways to ensure a better standard of living for them, for e.g. subsidies for housing and healthcare.
Link back to Qn (L)	Thus, a large increase in NY leads to improvements in the standard of living, a significant aim for many, especially the developing economies.
ANTI-THESIS: A LARGE INCREASE IN NY IS UNDESIRABLE	
Anti-Thesis 1	
State the Point (P)	However, it is necessary to note that rapid economic growth and large increase in NY may bring about conflicts with other macroeconomic goals, namely rising structural unemployment in the long run.
Explain the point with clear causal links (E)	If potential growth is accomplished with economic restructuring in manufacturing and industrialization to ensure exports of the country remain competitive, the new jobs created will be in industries where higher skills and education is required. Thus, the less skilled and lowly-educated workers may find that there is a mismatch between their skills and the job requirement, especially those in primary industries, leading to rising structural unemployment in the country.
Elaborate the point with examples or diagram (E)	For example, the problem of structural unemployment is a real concern in Singapore. Professionals, Managers, Executives and Technicians (PMETs) have joined the less skilled, lowly-educated workforce in the ranks of structural unemployed. The ageing workforce in Singapore which is made up of a large group of less skilled and educated workers in their 40s and 50s has further compounded this problem of structural unemployment.
Synthesis	Nevertheless, despite this conflict, economic growth is still a significant aim because it provides government with the tax revenue to fund retraining schemes for the structurally unemployed and the redesigning of jobs. In addition, higher economic growth helps to provides funds for more social security schemes to help the lower-income workers improve their living standards, thus achieving the aim of a more equitable distribution of income in the country as well.
Link back to Qn (L)	Thus it is important to note that rapid potential economic growth may bring about large increase in NY but the economic restructuring to achieve it may result in structural unemployment. Although rapid economic growth helps to promote higher employment, it can result in some workers to be permanently out of a job. So it is important for the govt to implement measures to minimize this negative impact of economic growth.
Anti-Thesis 2	
State the Point (P)	However, the pursuit of large increase in NY may lead to a conflict in pursuing other macroeconomic aims of low inflation and BOP equilibrium in the short-run.
Explain the point with clear causal links (E)	Rapid actual growth and large increase in NY may lead to higher rate of inflation and balance of payments deficit especially when the country is approaching full employment.
Elaborate the point with examples or diagram (E)	This is because as aggregate demand (AD) rises near full employment where the economy is reaching its full capacity, demand-pull inflation set in due to inability of AS to match increases in AD. This will affect the export competitiveness and hence worsen the country's balance of payments (BOP). Higher economic growth and purchasing power may also lead to rising demand for imports of consumer and capital goods and hence worsen the balance of payments further, especially if the economy is already facing a BOP deficit.

Link back to Qn (L)	Such negative effects of higher actual growth may cast doubt on the significance of promoting rapid actual growth in the country.
Anti-Thesis 3	
State the Point (P)	Besides the possible negative effects of rapid economic growth and large increase in NY on employment, inflation and balance of payments, there are other adverse impacts on income distribution and non-material SOL.
Explain the point with clear causal links (E)	The large increase in NY could be a result of rapid growth and expansion in certain industries and will only benefit certain groups of people in the country. Those working in the industries that enabled such large increase in NY could see a quick and high increase in their incomes while those working in other industries not related to this growth may see stagnant or even falling real incomes if GPL rises, leading to a worsening income gap.
Elaborate the point with examples or diagram (E)	Large increase in NY is a result of higher levels of productive activities. This often results in higher levels of negative externalities or spillover effects on third parties, resulting in lower consumer well-being. There will be higher levels of air and water pollution, traffic congestion, longer working hours and stress levels, all leading to a decrease in non-material SOL.
Link back to Qn (L)	Such negative effects of large increase in NY may cast doubts on the benefits of promoting rapid economic growth in the country.
Conclusion (SR)	
Summarise main points	Whether a large increase in NY is always beneficial depend on the source of the increase in NY (whether it is from rise in AD e.g. from higher C or rise in AS e.g. from higher I), availability of idle resources (whether economy is operating near Y_f), the current state of the economy as there may be conflicts between different macroeconomic goals (for example, the economy could currently be facing a BOP deficit) and the extent of material gains compared to non-material costs incurred in achieving the rise in NY.
Reiterate Stand	It also depends on the factors that led to the large increase in NY. For example, if govt spending contributed to the increase in NY but it was funded from borrowing and greater govt debt, this leads to further negative repercussions. The desirability of large increase in NY also greatly depends on the objectives of the govt as well as the existing world economic situation.

L3	Excellent and very well developed two sided discussion on whether a large increase in national income is always beneficial, using economic tools of analysis and very good real world examples relating to any economy. [2T + 2AT]	10-11
	Clear but not developed two sided theoretical discussion on whether a large increase in national income is always beneficial with use of tools of analysis and some examples [1T + 2AT]/[2T+1AT]	9
L2	Not well developed two-sided discussion of whether a large increase in national income is always beneficial, using some economic tools of analysis and some examples relating to any economy. [1T + 1AT] Very well developed one sided discussion with tools of analysis and relevant examples. [either 2T or 2 AT]	7-8 6
L1	Weak discussion on whether a large increase in national income is beneficial or not beneficial. Mere stating of points without elaboration.	1-5
E2	Judgment based on sound economic analysis on the extent of the statement's validity using broad evaluation points to elaborate.	3-4
E1	Many unexplained judgment on the view of whether a large increase in national income is beneficial.	1-2

Question 5:

Macroeconomic policy decision makers set targets for key policy objectives in relation to employment, inflation and economic growth.

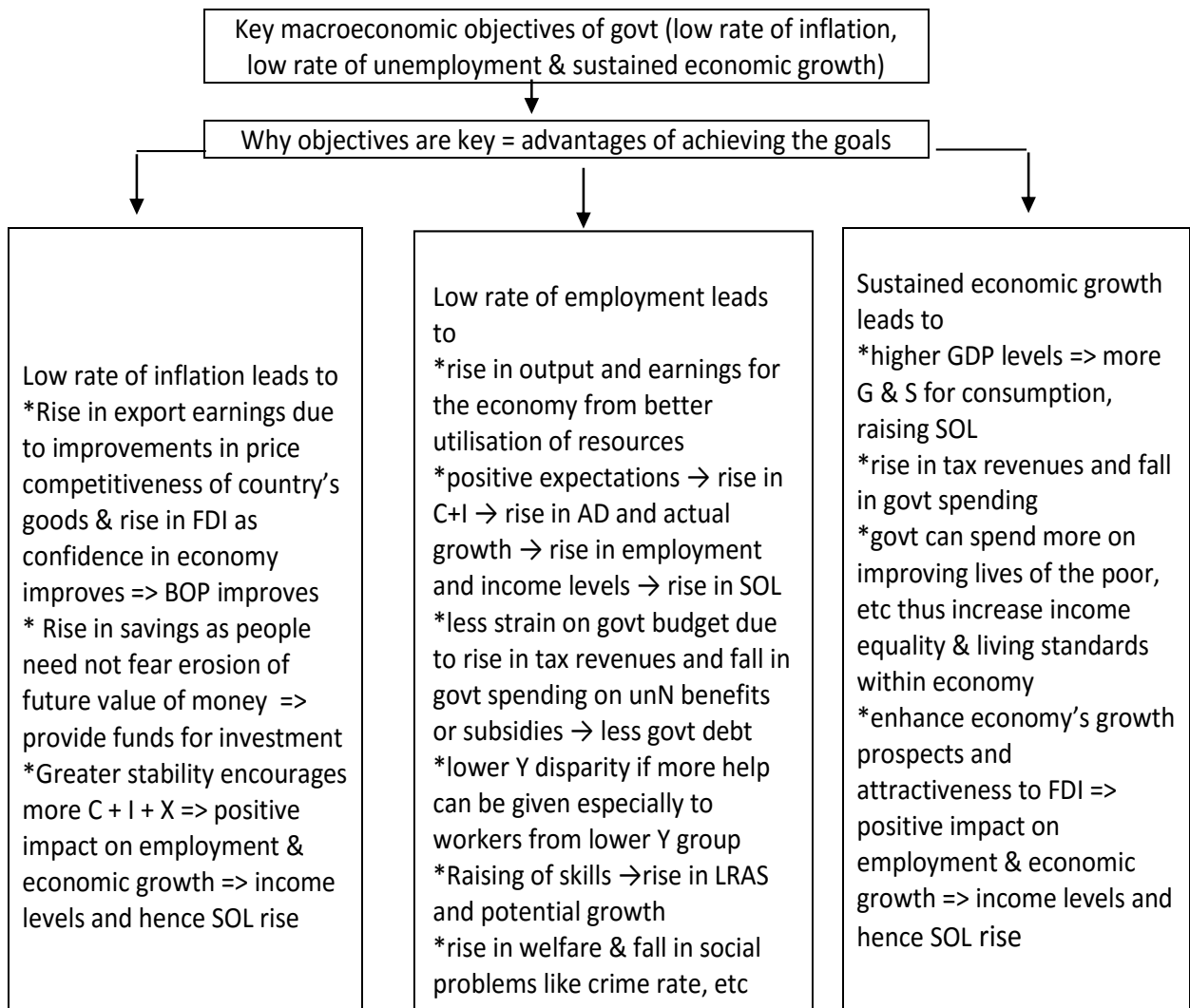
- (a) Explain why low rate of unemployment, low rate of inflation and sustained economic growth are key policy objectives. [10]
 (b) Discuss whether macroeconomic policy decision makers should rely solely on supply-side policies to achieve these key policy objectives. [15]

Interpret the Question – Part (a)

(a) Explain why low rate of unemployment, low rate of inflation and sustained economic growth are key macroeconomic objectives. [10]

<u>What is the command word?</u> (what are the skills required for this question?)	<u>What is the content word?</u> (what are the concepts required to answer this question?)	<u>What is the context word?</u> (what is the context for this question?)
‘Explain why’ – Use economic theory to provide reasons in detail, using examples	Key macroeconomic objectives = Main macroeconomic goals of a govt Why objectives are key = advantages of achieving the goals (or negative effects of not achieving the goals)	No specific context. Can use Spore as example

Schematic Plan



Introduction

The performance of a country is measured by its ability to achieve key macroeconomic objectives. Thus the macroeconomic policy decision makers (government) in every country aims to maintain internal stability through achieving low rate of inflation, low rate of unemployment, and sustained economic growth.

It is important to achieve these goals and maintain internal stability to enjoy the benefits when these objectives are achieved, and to avoid the adverse impact if the economy fails to achieve them.

Body

Macroeconomic goal 1: Low rate of inflation

Price stability is reflected by the inflation rate which measures the change in the country's general price level. It is important to keep the inflation rate low in order to maintain confidence and stability in the country.

When the rate of inflation is low in the country, the country's exports become more price-competitive, leading to a rise in export earnings and improvement in the current account of the BOP. FDIs will also be attracted as confidence in the economy improves the rate of returns and profits for the investors, leading to an improvement in the capital account of the BOP.

There will also be a rise in savings as there will less fear of erosion of future value of money. This ensures that more funds are available for investments at lower borrowing costs.

The greater stability afforded by a low rate of inflation encourages more consumption, investment and exports, leading to a rise in AD, producing positive effects on employment and income levels. This leads to higher standard of living for the citizens.

Macroeconomic goal 2: Sustained economic growth

A well-performing economy is generally one that is able to achieve sustainable economic growth. Economic growth refers to the increase in an economy's real GDP. There must be a combination of actual growth (led by increase in AD) and potential growth (increase in productive capacity marked by an increase in LRAS) for economic growth to be sustained in the long run.

Ability to achieve sustained economic growth leads to an expansion in the real GDP, enhancing the country's growth prospects and improving the living standards within the economy.

This is because with achievement of economic growth, especially following a recession, results in rising incomes for the factor owners. This will increase the purchasing power of households, resulting in more goods and services being consumed, leading to a rise in material SOL.

Furthermore, sustained economic growth may lead to a rise in investor confidence as future prospects improve, leading to an increase in investment activities within the country, further enhancing actual and potential growth in the economy.

The government of the country may enjoy higher tax revenues due to the increase in incomes, raising its ability to fund more transfer payments to help the poor, improving their lives. Income equality and standard of living will then increase. Expenditures on education and health may be increased too, raising the non-material SOL for citizens as well.

Sustained economic growth enhances the country's future growth prospects and attractiveness to more FDIs, leading to greater positive impact on employment, income and SOL levels.

Macroeconomic goal 3: Low rate of unemployment

Ability to achieve economic growth is often accompanied by falling unemployment rates within a country. Cyclical unemployment may fall with rise in AD. There is also a reduction in structural unemployment as more funds will be available to ensure workers' education and skills levels are raised to match job requirements.

Generally, a low rate of unemployment represents a rise in potential earnings for the economy as the economy is now using its resources more efficiently (better utilization of resources) leading to allocative and productive efficiencies. The economy is producing nearer or on its PPC, reaping the potential gains that the increase in utilization of resources have brought about, for example an increase in production of goods and services and rise in export revenue that could increase the country's national income and foreign exchange reserves. The positive future expectations can also lead to increases in C and I, raising AD and improving the economic growth prospects of the country further. Greater actual growth will lead to higher employment and income levels, improving SOL in the country.

There will also be positive effects on the government budget. Aside from the rise in tax revenues due to increase in incomes, there is also less strain on government resources to provide welfare payments to the unemployed. More funds could now be directed into infrastructural projects to improve growth and efficiency within the economy.

When the economy is performing well, employment rises with more workers filling up the job vacancies. There may be lowering of income disparity as the government can provide more funds to help train the less skilled workers as well as improve the lives of the lower income groups. Workers will have more motivation to work, leading to rise in LRAS and long run economic growth, helping the economy further.

In addition, social problems like crime rates will also fall with fall in unemployment, improving the social stability in the country.

Conclusion

The key policy objectives of low rate of unemployment, low rate of inflation and sustained economic growth must be achieved to maintain a successful economy. Macroeconomic policy decision makers must implement appropriate policies to ensure the achievement of these key policy objectives which are interlinked with one another.

Knowledge, Application, Understanding and Analysis

L3	Well-developed and detailed explanation of the meaning and advantages of achieving the key policy objectives of low rate of unemployment, low rate of inflation and sustained economic growth. [4 good points]	9-10
	[If 3 well-explained good points, low L3] <u>Note:</u> Alternative approach is to explain the disadvantages of NOT achieving the key policy objectives is also acceptable	7-8
L2	Under-developed explanation of the meaning and advantages of achieving the key policy objectives of low rate of unemployment, low rate of inflation and sustained economic growth. [Not well explained 3 points or well-explained 2 points]	5-6
L1	An answer that merely stated or defined the key policy objectives without or with little explanation of the reasons for the objectives	1-4

Interpret the Question – Part (b)

(b) Discuss whether macroeconomic policy decision makers should rely solely on supply-side policies to achieve these key policy objectives. [15]

<u>What is the command word?</u> (what are the skills required for this question?)	<u>What is the content word?</u> (what are the concepts required to answer this question?)	<u>What is the context word?</u> (what is the context for this question?)
Discuss = consider both sides of the argument and come to a reasoned conclusion	Rely solely on supply-side policies to achieve key policy objectives = macroeconomic goals can only be achieved through raising SRAS and LRAS Can ss-side policies be used to achieve key policy objectives? Are there any limitations to the use of ss-side policies to achieve key policy objectives?	No specific context. Can apply to Singapore & another country as comparison

Schematic Plan

Supply-side policies focus on shifting SRAS and LRAS

Supply-side policies have limitations

Hence it may not necessarily be true that govts should rely solely on them

Thesis: Should rely on ss-side policies to achieve key policy objectives

a) If macroeconomic problems arise from ss-side:

- *Wage-push inflation - need incomes and price policy to break wage-price spiral to affect SRAS
- * Imported cost-push inflation – need appreciation of currency to affect SRAS
- *Structural unN – need retraining, educn, etc to improve lab mobility and change AS
- *Poor econ growth due to poor infrastructure, FDI outflow, etc – need govt fiscal incentives to manage economy’s AS
- *Loss of comparative adv hurting econ growth – need ss-side policies to identify & promote new growth areas to raise international competitiveness of country’s exports. Use tax incentives to promote R & D, expand productive capacity and shift economy’s SRAS downwards and LRAS outwards, or PPC outwards to achieve low rate of employment, low rate of inflation and sustained economic growth

Antithesis: Should not rely on ss-side policies to achieve key policy objectives

a) SS-side policies have limitations:

- *Need costly funding, strain on govt budget, time lag, uncertainty of R & D efforts to raise efficiency
- b) If macroeconomic problems do not arise from ss-side:**
- *Demand-pull inflation – need contractionary FP or MP
- *Cyclical unN – need expansionary FP or MP
- *Poor econ growth due to global crisis or recession – need expansionary FP or MP, trade policies like FTAs, exchange rate policy, etc to stimulate AD
- c) To meet goal of sustained econ growth – need both dd-side & ss-side policies to work together**

Synthesis & Conclusion

DD-mgt policies are important when there is lack of AD to promote SR actual growth. SS-side policies are important for raising international competitiveness and promoting LR potential economic growth. Both demand-mgt and supply-side policies are complementary rather than conflicting, and should be used together. Need for ss-side policies to support dd-mgt policies as both are inter-related. For example, govt need to implement both dd-mgt and ss-side policies to achieve sustained economic growth in LR. Other policies like trade policies also need to be used to help the economy reach macroeconomic stability. The govt has to consider the prevailing economic condition, the nature of the economy and the cause of the macroeconomic problem to determine the type of policy to implement. For example, if the country is facing severe recession, then dd-mgt policies are more appropriate. But if the economy has a small k size, then the effectiveness of dd-mgt policies may be limited, prompting the govt to rely more on ss-side policies.

INTRO

Macroeconomic policy decision makers (the govt of the country) can implement different policies to manage the economy to achieve macroeconomic stabilization. The policies range from demand-management policies, supply-side policies, exchange rate policies, incomes and price policies, to trade policies.

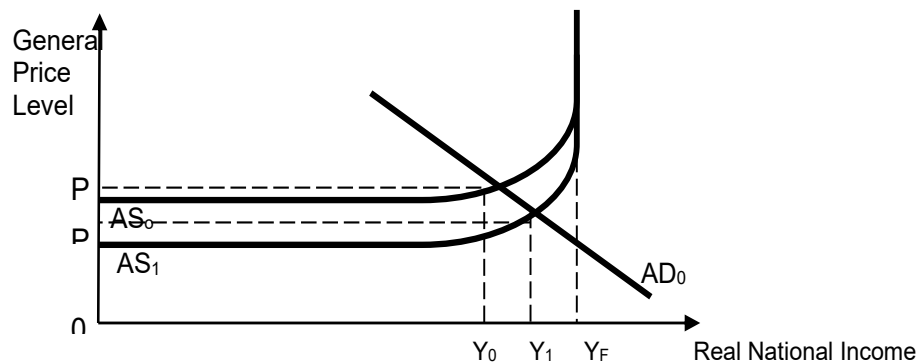
Supply-side policies focus on shifting the SRAS and LRAS through the use of a multitude of policy tools.

BODY

THESIS: Govt should rely solely on supply-side policies to achieve low rate of unemployment, low rate of inflation and sustained economic growth

(a) When the macroeconomic problem arise on the supply side

(i) Cost-push inflation in a country can arise from rising wages or expensive imported raw materials. If rising wages is the cause of wage-push inflation in the country, the govt will need to adopt an incomes and price policy to help keep prices and wage costs low to prevent GPL from rising. Such supply-side policies like restraints on wages (wage freeze) and price controls (maximum price legislation) can be used to keep production costs low and increase SRAS to control the inflation, and prevent the wage-price spiral from hurting the economy. The employment and income levels of the country are also increased, allowing the economy to achieve domestic stability, as seen in the diagram below.



(ii) If the country is experiencing imported cost-push inflation due to imports of more expensive raw materials or inputs, the govt can adopt the supply-side policy of appreciating the currency to keep costs down. A stronger currency following the appreciation helps to lower the price of the imported raw materials in terms of home currency. This brings down the production costs of final goods and services, keeping GPL under control. The SRAS of the economy shifts downwards, lowering GPL. Employment and income levels in the country are also raised as shown in the diagram above.

(iii) A country experiences two main types of unemployment, namely cyclical and structural. If the unemployment experienced by the country is of the structural type, then supply-side policies need to be implemented. Structural unemployment refers to the *mismatch* between the skills possessed by the retrenched workers and those required by new industries. This type of unemployment results mainly from immobility of resources (eg. geographical and occupational immobility), when the structure of the economy changes or when there are permanent changes in demand and supply conditions. Retrenched workers may not be able to find immediate employment in other industries.

The govt would need to provide and fund education, retraining facilities and assistance to the structurally unemployed, so that they can obtain the skills required by the expanding industries in the economy. The aim is to improve labour mobility, to move resources and labour from depressed to expanding industries. This will shift SRAS downwards and LRAS to the right as the productive capacity of the country is raised with better educated and skilled workers. The employment and income levels in the country are also increased.

(iv) Poor econ growth due to poor infrastructure, FDI outflow, etc – need govt fiscal incentives to manage economy's AS

(v) Loss of comparative advantage hurting econ growth – need ss-side policies to identify & promote new growth areas to raise international competitiveness of country's exports. Use tax incentives to promote R & D, expand productive capacity and shift economy's SRAS downwards and LRAS outwards, or PPC outwards to achieve low rate of employment, low rate of inflation and sustained economic growth

ANTI-THESIS: Govt should not rely solely on supply-side policies to achieve low rate of unemployment, rate of inflation and sustained economic growth

(a) Supply-side policies have limitations

Supply-side policies do not always work effectively. There are several limitations like:

- Need costly funding and hence strain on govt budget
- Time lag before effects can be seen
- Uncertainty of success of R & D efforts to raise efficiency

(b) When the macroeconomic problems do not arise on the supply side

(i) The country may be experiencing demand-pull inflation instead where there are persistent rises in AD in the economy that are not matched by AS. In such a situation, only demand-management policies like contractionary MP (raise interest rate) or contractionary FP (lower G, raise T) to lower C, I and G and hence AD to bring GPL down. There will conflicts between the objective of low rate of inflation with objectives of low rate of unemployment and sustained economic growth. However, this is only temporary as once the demand-pull inflation is kept under control, supply-side policies can be implemented to ensure all 3 goals are achieved.

(ii) If the country is suffering from cyclical unemployment, expansionary FP or MP needs to be implemented to solve the problem. AD must be raised to ensure more job opportunities are created to meet the demands of the unemployed. There will however be a conflict between low rate of unemployment with low rate of inflation. But this is again temporary as once the cyclical unemployment is tackled, supply-side policies can be implemented to ensure all 3 goals are achieved.

(iii) There may be poor economic growth due to a global crisis or recession – need expansionary FP or MP, trade policies like FTAs, exchange rate policy, etc to stimulate AD. The govt may need to adopt trade policies by signing FTAs with certain countries, or adopt zero appreciation (or even depreciation) to make exports more price competitive and ensure the loss of export earnings are kept under control.

Demand-management policies have their limitations too, for example, the small size of the multiplier if the mpw is high or the openness of the economy that render changes in interest rate ineffective.

(c) To achieve goal of sustained economic growth specifically

Both dd-mgt and ss-side policies must complement each other to enable goal of sustained economic growth to be achieved. Actual growth must occur via the use of dd-mgt policies that increases the components of AD, for example lowering of tax rates, raising of govt spending or cut in interest rates. The Spore govt changes the timing of govt projects during stable and normal economic situations by moving them forward to help stimulate actual growth. Potential growth must also take place via the use of ss-side policies that increase the quantity and/or quality of factors of production, for example more education and training of workers to upgrade their skills and productivity. The Spore govt embarks on restructuring and skills training to upgrade the workers' skills to raise their productivity, lower average production costs and attract FDIs to achieve potential growth.

CONCLUSION

DD-mgt policies are important when there is lack of AD to promote SR actual growth. SS-side policies are important for raising international competitiveness and promoting LR potential economic growth. Both demand-mgt and supply-side policies are complementary rather than conflicting, and should be used together. Need for ss-side policies to support dd-mgt policies as both are inter-related. For example, govt need to implement both dd-mgt and ss-side policies to achieve sustained economic growth in LR. Other policies like trade policies also need to be used to help the economy reach macroeconomic stability. The govt has to consider the prevailing economic condition, the nature of the economy and the cause of the macroeconomic problem to determine the type of policy to implement. For example, if the country is facing severe recession, then dd-mgt policies are more appropriate. But if the economy has a small k size, then the effectiveness of dd-mgt policies may be limited, prompting the govt to rely more on ss-side policies.

L3	Excellent and very well developed 2-sided discussion on whether macroeconomic policy decision makers should rely solely on supply-side policies to achieve the internal macro objectives. Use of sound economic tools of analysis and very good examples relating to some economies for comparison.	9-11
L2	Clear but not well developed 2-sided discussion on whether macroeconomic policy decision makers should rely solely on supply-side policies to achieve the internal macro objectives. Explanation of alternative policy. OR Well-developed one-sided explanation on how govt should or should not rely solely on supply-side policies to achieve the macro objectives. Some use of economic tools of analysis and little attempt at providing examples for comparison.	7-8 6
L1	Weak discussion on whether macroeconomic policy decision makers should rely solely on supply-side policies to achieve the internal macro objectives Mere stating of points without elaboration.	1-5
E2	Judgment based on sound economic analysis on the extent of the statement's validity using broad evaluation points to elaborate.	3-4
E1	Unexplained judgment on the statement's validity	1-2

Explain how globalisation has changed Singapore's pattern of trade and discuss whether Singapore is among the economies that have most to gain from globalisation. [25m]

Suggested solution:

Outline of the answer:

- Show how pattern of trade is determined.
- Explain how globalisation was able to change the pattern of trade of Singapore making specific relevance to the composition, volume and direction of trade.
- Analyse the benefits and cons of globalisation to Singapore
- A comparison is required between the countries that have more to gain than Singapore.
- A comparison is required between the countries that have less to gain than Singapore.
- An evaluation specific to Singapore to show that steps and measures had been taken to ensure that the cons are not going to affect Singapore much → Singapore is among the economies that have most to gain from globalisation

INTRODUCTION:

- Pattern of trade refer to the *composition, volume and direction of trade* in a country.
- Determinants of pattern of trade mainly lie in the differences in factor endowments, demand and government factors. (Theory of CA can be brought in to illustrate determination)
- Globalisation is the increase in economic activities such as the *trade of goods and services, capital, exchanges in labour and technology*. Such exchanges would affect the demand and supply factors that affect Singapore's trade patterns.

BODY 1: How globalization has changed Singapore's pattern of trade

- Globalisation impacts Singapore's pattern of trade namely through these factors:
 - ✓ Changes in comparative advantage
 - ✓ Changes in global trade policies
 - ✓ Changes in demand

DEVELOPMENT 1: Globalization leading to a change in comparative advantage and therefore impact Singapore's pattern of trade.

(i) **Changes in composition of trade due to changes in the quality of capital and labour**

Globalisation has seen a higher degree of exchange in capital, particularly in FDI in Singapore → brought about technological progress → led to an increase in the quality and quantity of capital and labour in Singapore → gaining comparative advantage in high-tech, high skilled level products such as financial services and bio-medical services.

The opening up of China (for example) allows this country with a high availability of labor to specialize in the production of labour-intensive low end manufacturing goods → gain comparative advantage in producing labour-intensive low end manufacturing goods

According to the law of comparative advantage → Singapore should specialize in the production of high-tech goods and services, and export them → Singapore should import labour intensive goods from China.

As a result, Singapore's trade composition shifts from exporting low-end manufactured goods to higher value added goods and importing lower value added goods. Similarly, Singapore's direction of trade will also be impacted since now it is able to export higher-end manufactured goods to developed nations as well rather than just import in the past from these nations.

Such developments as a result of globalization bring about the shift in comparative advantage for Singapore from low tech to high tech products.

(ii) **Increase in volume of trade due to improvement in transport system**

Led to a more efficient transport system → lowers the cost of transport of goods and services between countries → countries are encouraged to trade → increase the volume of trade for Singapore.

DEVELOPMENT 2: Globalization leading to changes in global trade policies and therefore impact Singapore's pattern of trade (volume of trade)

Establishment of WTO in promoting free trade → Singapore places high priority on the principles of multilateral trading embodied by WTO as seen from the active signing of FTAs with various countries → Singapore's volume of trade increase due to lower barriers of trade.

Globalization also results in protectionist measures being imposed by countries in order to protect their own interests → may adversely affect Singapore by restricting trade volume between Singapore and her trading partners.

DEVELOPMENT 3: Globalization leading to changes in demand and therefore impact Singapore's pattern of trade (rising volume of trade).

(i) Trend towards intra - industry trade

Outsourcing and offshoring increased the volumes of trade experienced by Singapore → Singapore is an attractive location → a large volume of finished and semi-finished products are imported and exported from Singapore.

(ii) Rise of new economies

Globalisation has seen the opening up of new economies e.g. China & Vietnam and has also presented new opportunities for trade to occur.

(Example) Economic growth in these emerging economies → lead to an increase in the demand for goods and services which Singapore produces e.g. financial services and cross-border logistical services → Assume imports expenditure stays the same → results in higher trade volume.

(iii) Taste and Preference

Growing affluence and labour movement made easier → Singapore become a more cosmopolitan society → changing taste and preference for its residents → more goods and services from other parts of the world is imported shifting the composition of the imports to be from necessities to luxuries and also more goods from other parts of the world (for example, food from Japan and Korea for the large number of Japanese and Koreans residing in Singapore).

2nd part of the question requires a discussion of whether Singapore is among the economies that have most to gain from Globalisation.

Requirements:

“Discuss”: 2-sided analysis

“Most to gain”: Need to analyse the benefits and costs to Singapore from Globalisation

“Among the economies”: A comparison between Singapore and other economies is required.

Possible flow of the essay:

(a) Explain the benefits of globalisation to Singapore.

(b) Explain the cons of globalisation to Singapore.

DISCUSS

(c) Compare the effects of globalisation on Singapore with other economies

(d) Judgement of the question

Characteristics of Singapore: Small and open economy with no natural resources

Benefits of globalisation to Singapore:

- **Free flow of goods and services**

- ⇒ Lower prices of goods and services, raises the material SOL of residents
- ⇒ Increase in quality of domestic products due to competition from imported goods
- ⇒ Increase in variety of products
- ⇒ Specialisation allows firms to reap internal EOS and if the costs savings are passed on to the consumers, it would increase consumer surplus → enhance export competitiveness → Export revenue will increase (assume import expenditure constant) and net exports will increase → AD increases → Real national income and employment increases → Current account will improve and BOP improves if capital account constant.
- ⇒ Increase in export markets → Increase in export revenue (assume import expenditure constant) → Net exports increase → AD increases → Real national income and employment increases → Current account will improve and BOP improves if capital account constant.
- ⇒ Improves productive and allocative efficiency.

- **Free flow of capital**

- ⇒ Influx of FDI increases the level of Investment Expenditure and increases AD → Raise the level of real national income, employment and improves long-term capital account (improves BOP) and potential growth.
- ⇒ The influx of hot money would increase the level of Money Supply → reduces interest rate → increases consumption expenditure and investment expenditure → Increases AD

- **Free flow of FOP**

- ⇒ Increase in labour force → Increases LRAS and actual economic growth in the process (intermediate region)
- ⇒ Raise labour productivity → Increases LRAS

⇒ Improves wage cost and hence attracts FDI which would then lead to increase in AD

- **Free flow of Technology and Ideas**

⇒ Improves innovation and raises the level of technology → may raise labour productivity → Increase LRAS

⇒ Improves the quality of products → better resources leading to increasing LRAS

⇒ Lowers COP due to productive efficiency → Lower SRAS

⇒ Stimulate potential growth

Link the above benefits to the context of Singapore.

Cons of globalisation to Singapore

⇒ Loss of domestic employment (import-substitutes industries) / Structural unemployment

⇒ Income inequality worsens

⇒ Foreign monopoly

⇒ Dependent on other economies for survival (more susceptible to external shocks)

⇒ Off-shoring / outsourcing creates domestic unemployment

⇒ Hot money creates exchange rate fluctuations which causes uncertainty to trade

⇒ Brain-drain

⇒ Competition between locals and foreign workers which creates social diversion

COMPARISON:

Which are the countries that may have gained more from globalisation compared to Singapore?

→ Developing nations such as China and India

- Increase export earnings due to low prices (Comparative Advantage)
- Increase FDI inflow facilitates growth
- Allow economic growth at a faster rate

Which are the countries that may have suffered more from globalisation compared to Singapore?

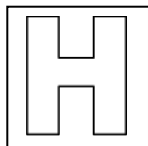
→ Developed nations or Newly Industrialised Economies (US, Europe & Japan)

- Structural unemployment among developed nations
- Outsourcing / off-shoring may pose more problems for developed economies due to loss in CA

Judgement:

- Globalisation provides more opportunities than threats especially for the less developed countries
- Governments need to adopt appropriate policies to mediate the adverse impacts of globalisation → FTAs signed with 33 countries
- Singapore Government constantly evaluates the industries to ensure that the industries remain relevant to the world market (challenges of globalisation) → consistent restructuring of the economy → Programmes such as SPURS and WTS programmes that are aimed at retraining so that the unemployed will be able to find jobs despite structural unemployment

Marking Scheme		
L1	Sketchy answer on how globalisation can affect the patterns of trade. Answer did not fully address how globalisation affected the patterns of trade. Brief description of the benefits and/or costs of Globalisation with no comparison with other economies.	1- 9
L2	Incomplete explanation of how globalisation can change the patterns of trade and provide some analysis of the benefits and costs of globalisation to a country with no contextual examples or application to Singapore. Comparison with other economies is minimal.	10-15
L3	Well-explained answer in Singapore context on how globalisation can change the patterns of trade and adequately analyse the benefits and costs of Globalisation could lead to Singapore being most to gain by comparing with the other economies. Contextual examples are clearly used to illustrate the points.	16 - 21
E1	Mainly unexplained judgement	1-2
E2	Judgement or evaluative assessment based on sound economic analysis	3-4



NATIONAL JUNIOR COLLEGE
SH2 Preliminary Examinations for General Certificate of Education Advanced Level
Higher 1

ECONOMICS

8819/01

Paper 1

14 September 2015

3 hour

Additional Materials: Answer Paper, Cover Pages

READ THESE INSTRUCTIONS FIRST

Write your name and subject class on all the work you hand in.

Write in dark blue or black pen.

You may use an HB pencil for any diagrams or graphs.

Do not use staples, paper clips, glue or correction fluid.

DO **NOT** WRITE IN ANY OF THE MARGINS.

Section A: Case Study Questions

Answer **ALL** questions. You are advised to spend some time reading through the data before you begin writing your answers.

Section B: Essay Questions

Answer **ONE** question.

Start each question on a new piece of paper.

Fill in the necessary information on the cover pages.

At the end of the examination, fasten all your work securely with the cover pages given.

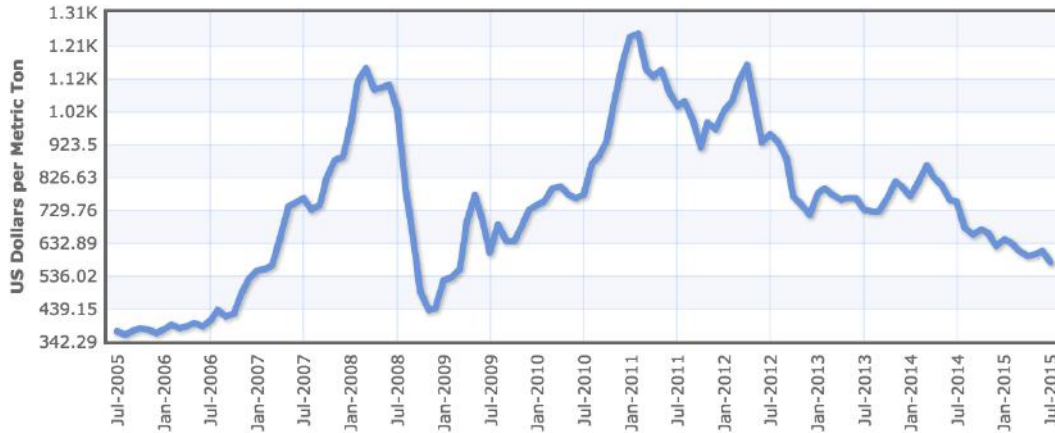
The number of marks is given in brackets [] at the end of each question or part question.

This document consists of **11** printed pages.

Section A
Answer all questions.

Question 1 Palm Oil Market in Indonesia

Figure 1: Global price of palm oil



Source: World Bank

Extract 1: Palm oil prices set for a volatile 2013

Palm oil prices are set to start 2013 on a sour note as record high stocks and rising output in Southeast Asia overwhelm already weak demand, while regulatory uncertainty in top buyers India and China adds to the gloomy outlook.

Analysts and traders at an industry meeting in Bali expect the world's biggest palm oil producers, Indonesia and Malaysia, to boost supplies next year, barring any weather disruptions.

While lower prices will attract food demand, appetite could be curbed by possible regulations by China and India. India, the world's biggest buyer, may set higher taxes on edible oil imports to protect oilseed farmers, and China launches strict quality curbs for imports on 1st of January 2013. Indonesia is also considering increasing tax incentives to encourage palm oil companies to set up refineries as it develops its downstream sector to compete with Malaysia and draw in more export earnings.

Source: Adapted from Reuters, 30 Nov 2012

Extract 2: South-East Asia Haze: What is slash-and-burn?

Slash-and-burn is arguably the easiest and cheapest way to clear patches of land for plantation. Some farmers are clearing the forest to plant crops. But the big concern is that many of these fires may have been started to burn rainforests so big corporations can plant oil palm plantations.

An extremely versatile commodity that's cheaper and more efficient to produce than other vegetable oils, palm oil is currently used in half of all consumer goods from biscuits, to shampoos, to cosmetics and biofuels. In 2003, an European Union directive went into effect that mandated that by 2010 member countries would have to replace 5.75 percent of all transportation fuels with biofuels. The surge in demand means that there is need for extra land for palm oil plantations.

Singapore and parts of Malaysia and Indonesia have been shrouded in a dense, pungent smog in recent days caused by fires in Indonesia. Pollution levels have hit record high. This haze is largely due to the slash-and-burn technique of clearing the land in Indonesia.

Under this practise, farmers cut down part of the vegetation on a patch of land and then set fire to the remainder. When started on peats, the fire is extremely difficult to control or stop. These fires produce a thick smog and release a huge volume of greenhouse gases. The current haze is being caused by fires in Sumatra in Indonesia, much of which is a giant peat bog. Indonesia's government has outlawed the use of fire to clear land.

Source: Adapted from *The BBC News*, 24 June 2013

Extract 3: The fires problem persists

In early March 2014, forest and peat fires in Indonesia spiked again. But while we can determine the extent of the fires and where they are happening, there's still a lot we don't know. For one, Indonesia's government fails to release the most timely, updated information on where oil palm, pulpwood, and logging companies are operating. Second, further investigation on the ground is an urgent priority, including in-depth research and surveying to better understand the proportion of burning done by large companies versus medium-sized operations. Certainly, poor farmers lack alternatives to the use of fire when clearing their land. They may also use fire to deliberately damage or claim land controlled by larger companies. Such land conflict is common across Indonesia.

The governments of Indonesia and Singapore, as well as the wider ASEAN grouping, are taking efforts to reduce the risk of fires. Fire detection and combat efforts have been stepped up, and Indonesian law enforcement has made a significant number of arrests. Governments of the ASEAN community agreed in October to collaborate and share data on fires and land use, though unfortunately this information will not be made public. And further, many companies have publicly announced "no burn" policies, and are investing in their own fire monitoring and control systems.

But as the unprecedented number of fire alerts in Indonesia shows us, these efforts are falling far short of what's needed to curb the crisis.

Source: *The Guardian*, 14 March 2014

Extract 4: Falling commodity prices a blessing in disguise for Indonesia – World Bank

Falling commodity prices have dealt a hard blow to Indonesia, one of the world's largest suppliers of minerals and agricultural commodities. But there's a silver lining: It may drive investment into other sectors, the World Bank says.

"Lower commodity prices should increase the relative profitability and attractiveness of manufacturing and help Indonesia develop its industrial base," the World Bank argued.

Declining commodity prices over the past two years have led to a deterioration in Indonesia's current account, which contributed to the massive exit from Indonesian assets during last summer's taper-related crisis.

Rapidly rising wages in China present Indonesia with a potential opening to regain a comparative advantage in labour-intensive export sectors. Appreciation in the Chinese yuan – which has seen its real effective exchange rate rise 30% since 2005 — is further eroding China's competitiveness in manufactured goods. These pressures, combined with slower overall economic growth, are prompting firms to look beyond Chinese coastal areas as a manufacturing base. Some of that investment is now flowing to Southeast Asia. "These

dynamics offer ASEAN countries, including Indonesia, an opportunity to attract more investment in their manufacturing industries,” the World Bank said.

Indonesia has been attracting investment in recent years in the automotive and consumer-goods sectors, both for export and to meet growing demand domestically. But maximizing its present opportunity will require reforms, the World Bank said, highlighting the need to improve labour productivity, infrastructure and the legal system.

“In light of ongoing economic risks and Indonesia’s ambitious development agenda, laying the groundwork for future reforms, minimizing policy uncertainty and making continued reform progress in some areas should remain a priority,” the report said.

Source: *The Wall Street Journal*, 18 March 2014

Questions:

- (a) (i) Using Table 1, compare the overall change in global palm oil prices between 2009 and 2011 with that between 2012 and 2015. [2]
- (ii) Using demand and supply analysis, account for the change identified in (a)(i). [4]
- (b) Explain why the government in India may want to set a higher tax on edible oil imports from Indonesia. [2]
- (c) (i) With reference to Extract 2, explain how negative externalities arise in the palm oil production. [4]
- (ii) Discuss whether the use of a Pigovian tax or a system of tradable permits is more effective in tackling the problem of negative externalities in the production of palm oil. [10]
- (d) Extract 4 explains how the falling commodity prices and the current events in China economy can be a blessing in disguise for Indonesia. To what extent do you agree that these events would be beneficial to Indonesia? [8]

[Total: 30]

Question 2 Balancing growth and long term economic health**Extract 5: Resilient Dynamism**

The theme *Resilient Dynamism* perfectly captured the tenor of the global economy at the time of the 43rd Annual Meeting of the World Economic Forum. In the post-crisis world, resilience must be a goal for all countries if they are to endure another significant downturn. Achieving dynamism also has to be a priority now that crisis response has given way to the implementation of restructuring programmes.

Resilient dynamism means tackling immediate problems and long-term challenges at the same time. In a session on Europe, Young Global Leader alumnus Valdis Dombrovskis, Prime Minister of Latvia, described how, confronted by the crisis, his government had to implement an austerity programme while also taking steps that would improve the economy's competitiveness over time. Aiming for resilient dynamism goes hand in hand with the never-ending missions to achieve sustainability and competitiveness. Countries must restructure at home so they can compete in the world.

Source: Adapted from *World Economic Forum Annual Meeting 2013 Report*

Extract 6: China's reform plan to deliver 7.5 percent growth

China put its fast-growing consumer class at centre-stage as outgoing Premier Wen Jiabao set out a reform plan on Tuesday to spread the fruits of economic growth more evenly in the country of 1.3 billion.

Mr Wen said unleashing the power of China's consumers was vital to the future of the world's second biggest economy. "We should unswervingly take expanding domestic demand as our long-term strategy for economic development," Wen told delegates at the once-a-year meeting of China's National People's Congress (NPC).

Mr Wen made consumers the cornerstone of an economic strategy designed to deliver an overall growth target of 7.5 percent in 2013. Rebalancing growth away from the investment-driven, export-oriented model that has delivered three decades of double digit growth, lifted hundreds of millions of people from rural poverty and turned China into the world's biggest trading economy, has been a policy priority for much of Mr Wen's decade in office.

There are growing concerns that more fixed-asset investment - already worth about 50 percent of GDP - would simply add to the inefficiency of China's state sector.

Inefficiency in industry exacerbates China's horrific pollution problem, which has its origins in its factory-fuelled expansion. "The state of the ecological environment affects the level of people's well-being and also posterity and the future of our nation," Mr Wen acknowledged.

There has been widespread public anger and rare media criticism over pollution in China after choking smog enveloped large swathes of the north of the country recently, grounding flights, forcing people indoors and forcing emergency measures such as factory closures.

In addition, China needs about 40 trillion yuan (\$6.4 trillion) to pay for a 10-year urbanisation plan the Government hopes will close the chasm between the country's urban rich and rural poor. Beijing aims to bring 400 million people to cities as the Government seeks to turn China into a wealthy world power with economic growth generated by affluent consumers.

Despite its ranking as the second-largest economy globally after three decades of stellar growth, China remains an aspiring middle-income country with high income inequality and dependent on state-backed investment. About 13 percent of China's population still live on

less than \$1.25 per day, and average urban disposable income is just 21,810 yuan (US\$3,500) a year. Yet at the same time, the Hurun Report says China has 317 billionaires - a fifth of the total number in the world.

Urbanisation could cure China's economic imbalances, putting it on a path to domestic consumption-led growth to replace three decades of investment and export-driven development that stoked global trade tensions. The Government hopes 60 percent of China's population will be urban residents by 2020, from about half now, and will build homes, roads, hospitals and schools for them.

Source: *The Telegraph*, 5 Mar 2013

Extract 7: We've got growth - but it's the wrong sort

In Britain, Treasury officials can allow themselves a small sigh of relief. Barring any accidents, UK growth this year should be close to 2 per cent, with survey evidence pointing to a 3 per cent plus surge in output next year.

Low interest rates and improved credit conditions are finally working their magic on demand. Even the squeeze on living standards should, with a fast-improving jobs market, be over by late next year.

All good then, at least from the Government's perspective? Unfortunately not. It's still far too early to make that sort of judgment, for what we are seeing is very much the wrong sort of growth. "Low interest rates and rising house prices are the opposite to the UK's long-term needs," says Simon Wells, chief UK economist at HSBC. Much the same point is made by Michael Saunders at Citi: "The rebound is led by demand rather than supply-side improvements, and is not rebalancing the economy towards investment and exports."

Regrettably, the Government has not addressed the deep structural faults at the heart of the economy - the results of a decades-long failure to live within our means. It comes to something when splashing the cash takes priority over investment in the country's infrastructure and energy needs.

For evidence of what's gone wrong, there are two key statistics. One is the "current account deficit", which measures the shortfall between what the nation earns abroad and what it spends. Britain has not been in current account surplus for 30 years, and shows few signs of changing. Last year, the deficit was 3.8 per cent of GDP, and in the first quarter of this year, it was an astonishing 5.5 per cent. Despite a massive 20 per cent plus devaluation in the pound since the start of the financial crisis, which theoretically makes exports more competitive and imports less so, we cannot get over our addiction to all things foreign.

The other measure of economic ill-health is "gross fixed capital formation", which tells us how much of our economic output is being invested rather than consumed. At just 14 per cent of GDP, it's by far the lowest among the advanced countries, and has been for years. On both exporting and investment, Britain is failing on a monumental scale.

Policy-makers pay lip service to the idea of more balanced, sustainable growth, but act differently, with measures to boost demand in what remains in many sectors a profoundly supply-constrained economy.

Source: Adapted from Jeremy Warner, *The Daily Telegraph*, 18 Oct 2013

Table 1: Key Economic Indicators of the United Kingdom

	2009	2010	2011	2012	2013
Growth in GDP, constant prices (% change)	-4.3	1.9	1.6	0.7	1.7
Unemployment rate (%)	7.6	7.9	8.1	8.0	7.6
Current Account Balance (US\$ billion)	-64.8	-62.7	-43.4	-98.2	-119.9

Table 2: Key Economic Indicators of China

	2009	2010	2011	2012	2013
Growth in GDP, constant prices (% change)	9.2	10.4	9.3	7.8	7.8
Unemployment rate (%)	4.3	4.1	4.1	4.1	4.1
Current Account Balance (US\$ billion)	243.3	237.8	136.1	215.4	182.8

Source of Tables 1 and 2: World Economic Outlook database, International Monetary Fund

Questions

- (a) Compare the change in China’s current account balance with that of the United Kingdom between 2009 and 2013. [2]
- (b) Explain **one** example of how a government’s tackling of an immediate economic problem could lead to a challenge in the longer term. [2]
- (c) With reference to Extract 7, explain a possible reason why despite a massive devaluation of the pound, UK’s current account deficit rose further. [2]
- (d) With reference to the data, explain how urbanisation would affect China’s economic well-being. [6]
- (e) Discuss why the economic growth in the UK might be “the wrong sort of growth”. [8]
- (f) According to Extract 5, “resilient dynamism means tackling immediate problems and long-term challenges at the same time.” With reference to the data and your own knowledge, discuss the appropriate policy measures you would recommend for China to achieve “resilient dynamism”. [10]

Section B

Answer **one** question from this section.

3. (a) With the use of examples, explain the concepts of scarcity, choice and opportunity cost. [10]
- (b) Discuss the significance of the characteristics of the Singapore economy in determining her pattern of trade with other countries. [15]
4. (a) Explain the possible causes of unemployment in Singapore. [10]
- (b) Suppose a country such as Singapore were to experience a period of high unemployment and inflation rates. Discuss the extent to which supply-side policies could be adopted to address these problems. [15]

-- END OF PAPER --

National Junior College Economics Department

Preliminary Examination 2015 Answer Booklet

Senior High 2 H1 Economics

(Syllabus 8819)

Section A: Case Study Questions

Suggested Answer Scheme

Question 1:

- (a) Using Table 1, compare the overall change in global palm oil prices [2]
(i) between 2009 and 2011 with that between 2012 and 2015.

Similarity:

- The price of palm oil fluctuates for both periods of time.

Differences:

- The price of the palm oil has increased between 2009 and 2011, but decreased between 2012 and 2015.
- The increase in the price of palm oil between 2009 and 2011 is more significant than the decrease in its price from 2012 to 2015.

1m each, 2 comparisons.

- (a) Using demand and supply analysis, account for the change identified in [4]
(ii) (a)(i).

The increase in the price of the palm oil between 2009 and 2011 is due to the rising demand for palm oil in EU. [Extract 2] By 2010, EU members need to replace 5.75 percent of all transportation fuels with biofuel. This increases the demand for biofuel. The demand for palm oil is derived from the demand for biofuel (palm oil is used to produce biofuel and it is cheaper to produce than other vegetable oils). Therefore, this leads to the increase in the demand for palm oil, which drives the global prices of palm oil upwards between 2009 and 2011.

[Extract 1] The price of palm oil has decreased between 2012 to 2015 due to the record high output in Southeast Asia and the weakening of demand in China and India who are the top buyers of palm oil. India may set higher tax imports on edible oil imports and China launches strict quality curbs for imports on 1st Jan 2013. These regulations will decrease the demand for palm oil. On the other hand, there is a record high supply of palm oil in the palm oil producing countries. Therefore this leads to a surplus of palm oil at the existing price level, which will have a downward pressure on the price of palm oil.

2m each for explaining the reasons for the direction of the price changes.
1m for using the data and 1m for explanation using dd-ss analysis.

- (b) Explain why the government in India may want to set a higher tax on [2]
edible oil imports from Indonesia.

This is to protect the oilseed farmers in India. It may be cheaper for the producers of edible oil in India to import the products from Indonesia instead of producing it in India. This will decrease the demand for oil as a raw material. As such, this decreases the revenue of the oilseed farmers.

Marks to be awarded to students if they are able to link to the revenue or profits of the oilseed farmers.

- (c) **With reference to Extract 2, explain how negative externalities arise in the palm oil production.** [4]
(i)

Define negative externalities [1]:

Negative externalities occur when the production and/or the consumption of a good or service impose external costs on third parties who are not involved in the production and/or consumption of the good or service for which no appropriate compensation is paid.

Explain how the air pollution problem arises from the production of palm oil:

The farmers use the slash-and-burn method to clear patches of land for oil palm plantation. Under this practice, farmers cut down part of the vegetation on a patch of land and then set fire to the remainder. The fire is extremely difficult to stop and produces thick and pungent smog. It pollutes the environment and deteriorates the air quality.

Identify the third parties involved and explain the external cost on them [3]:

The residents living in Malaysia and Singapore could likely have more breathing difficulties and subject to an increase in medical costs.

If the haze problem persists, the tourists may refrain from travelling to these places such as Singapore. The tourism-related industries such as retails, sales, hotels, food and beverage will suffer a decline in their business and hence profits.

Marking tips:

2 mark for identifying one 3rd party and the external cost to the 3rd party.

Capped at 3 if definition of negative externality is not given.

- (c) **Discuss whether the use of a Pigovian tax or a system of tradable permits is more effective in tackling the problem of negative externalities in the production of palm oil.** [10]
(ii)

Explain the market failure in the production of palm oil

Private cost: cost of raw materials, salaries paid to the workers and etc to produce the palm oil

Private benefit: profits made from selling palm oil

External cost: as mentioned in (c)(i)

Show there is a divergence between private costs and social costs.

Diagram that is well explained to show how the market failed in optimal resource allocation with clear identification of $MPB = MPC$ and $MSB = MSC$.

At the free market equilibrium, producers and consumers will only consider private costs and benefits and produce at $MPB = MPC$.

With the existence of negative externality, $MSC > MPC$. Assuming that $MSB = MPB$ (no positive externality), the market will consume at the output Q_m where $MPB = MPC$, which is greater than the socially optimal output of Q_s where $MSC = MSB$.

The free market leads to an over production of palm oil by $Q_s Q_m$ units, where the welfare loss to society is represented by area AE_1E_0 thereby resulting in allocative inefficiency.

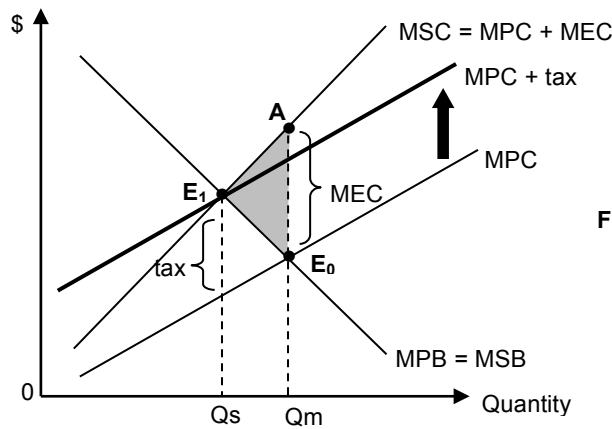


Figure 1: Internalising negative externality through taxation

Analyse the use of Pigovian tax:

The government can levy a specific tax that approximates the money value of external costs (known as Pigovian tax), created by the negative externality, generated per unit of output at the socially optimal level of output.

For example, in figure 1, a specific tax at the socially optimal level of output OR will increase the firm's unit cost, shifting the supply curve from MPC to $MPC + tax$. The result is that the equilibrium output will decline so that it corresponds with the socially optimum level of output of OR units. There would therefore be no over-production of the good as $MSB = MSC$ and allocative efficiency is attained.

The taxation forces the palm oil producers to internalise the externality hence producing at the socially optimum level of output where MSB equates MSC , this outcome removes the dead-weight loss to society (AE_0E_1); the gain due to the reduction in production ($AE_1Q_sQ_m$) offsets the lost due to the reduction in consumption ($E_1E_0Q_mQ_s$), but it does not remove the external costs entirely.

Limitations: However, there are problems with the imposition of Pigovian taxes. There is the problem of accurately assessing the exact monetary value of external costs at the socially optimal level of output (e.g. measuring the external costs generated by negative externalities like noise pollution), which in turn implies that the appropriate level of tax is difficult to determine. Despite this, the use of Pigovian Tax is more effective than a system of tradable permits as the firms know for sure how much the cost savings from each tonne of emission reduction is. The return from investment in green technology is more uncertain under the tradable permits system. The cost savings to be had from investment in green technology depends very much on the price of the tradable permits which fluctuates from year-to-year depending on the demand and supply conditions. It is this uncertainty that is keeping firms from spending on R&D and investing in green technology.

In addition, the administrative costs of collecting the tax may be very high. Firms may also have the incentive to evade such taxes, for example by not registering the operation of the companies which has made it more difficult for the government to track the source of fires in Indonesia.

Analyse the use of a system of tradable permits:

Under a system of tradable permits, the government has to first decide on the amount of negative externality (assume to be pollution) which is associated with the socially optimal level of output. The government then issues permits and distributes them to palm oil producers/firms. Firms who want to pollute must have a permit, and hence the emissions produced will equal to the level which is socially optimal. Firms which pollute less than the amount of permits they have been allocated can sell these to other firms which require them at a price which is determined by the market for tradable permits (determined by the demand and supply of these permits)

While the overall level of emissions is determined by a command-and-control method, their distribution is determined by the market, making it a market-based approach to tackling the problem of negative externality.

The main advantage of tradable permits over the use of Pigouvian tax is that the government can simply settle total amount of permitted discharge according to the ability of the environment to absorb the pollutants; it can do this without any knowledge of the specific costs and benefits of individual firms. The market in tradable permits can then allocate the reduction in pollution to where it can be achieved at least cost.

Limitations: However, governments still need to agree on the total amount of pollution which is associated with the socially optimal level of production and a system to distribute the permits fairly to all firms.

Currently, the government also do not have the precise information on the proportion of burning done by large companies versus medium-sized operations. Therefore if the government allocate the numbers of permits equally to all firms, it may lead to unfair trading of the permits in the free market as the smaller firms may not need that many permits and can sell to the bigger firms who need the permits more. If the government allocate the number of permits according to the size of the firms, it may not decrease the burning effectively as the size of firms doesn't mean that proportion of burning done.

This policy is likely to allow the more polluting firms to continue producing and polluting (unlike the use of Pigouvian tax mentioned above), since firms whose methods are more polluting usually also have very high clean-up costs. These firms may find it cheaper to outbid the less polluting firms in order to get the permits, rather than to incur the cost of cleaning up the pollution or to reduce production which decreases firms' revenue.

Synthesis:

As mentioned in Extract 3, there are other information not known such as the updated information on where oil palm companies are operating and if the proportion of burning is done by large companies or medium-sized operations. The poor farmers do not have other alternatives to clear the land. The slash-and-burn method is the cheapest and fastest way to clear the land for palm oil plantation. By using Pigouvian tax or a system of tradable permits, it may hurt the livelihood of the poor farmers or worsen the land conflict issues between the farmers or the large companies.

Both policies are not effective to use in the short term as many sets of data are unknown. Other than having more in-depth investigation to find out the root cause of the burning problem, the government can help the poorer palm oil

farmers to find other cheaper alternatives to clear the land for use, while enforcing the “no burn” policies on the bigger palm oil companies.

Mark Scheme

<p>L3 6-8 marks</p>	<p>For an answer that shows:</p> <ul style="list-style-type: none"> • Excellent depth in analysis: <ul style="list-style-type: none"> ○ Accurate and clear use of economic concepts and analysis throughout • Excellent breadth in analysis: <ul style="list-style-type: none"> ○ Consider the problem of negative externalities in the production of palm oil ○ Consider the pros and cons of the use of Pigovian Tax in tackling the problem ○ Consider the pros and cons of a system of tradable permits in tackling the problem ○ Compare the use of Pigouvian Tax and the system of tradable permits. • Supported by <ul style="list-style-type: none"> ○ Well labelled and well referred to market failure diagram(s) ○ Arguments are contextualised and well supported by examples and reference to case materials ○ Logical structure
<p>L2 4-5 marks</p>	<p>For an answer that shows:</p> <ul style="list-style-type: none"> • Sufficient depth in analysis: <ul style="list-style-type: none"> ○ Accurate use of economic concepts and analysis in most explanations • Sufficient breadth in analysis: <ul style="list-style-type: none"> ○ May or may not consider the problem of negative externalities in the production of palm oil ○ Consider the use of Pigovian Tax in tackling the problem but may not include the cons of the policy ○ Consider the use of a system of tradable permits in tackling the problem but may not include the cons of the policy • Supported by <ul style="list-style-type: none"> ○ Well labelled and well referred to market failure diagram(s) ○ Some reference to case materials
<p>L1 1-3 marks</p>	<p>For an answer that shows:</p> <ul style="list-style-type: none"> • Insufficient depth in analysis: <ul style="list-style-type: none"> ○ Accurate use of economic concepts and analysis in some explanations • Insufficient breadth in analysis:

	<ul style="list-style-type: none"> ○ May not consider the problem of negative externalities in the production of palm oil ○ Consider either the use of Pigovian Tax or a system of tradable permits and/or the cons of the policy in tackling the problem ○ Little reference to case materials
E2	Well-reasoned evaluative conclusion supported by analysis and evidence from case materials.
E1	Attempt at a reasoned conclusion that is not supported by analysis.

- (d) **Extract 4 explains how the falling commodity prices and the current events in China economy can be a blessing in disguise for Indonesia. To what extent do you agree that these events would be beneficial to Indonesia?** [8]

Introduction:

Identify the events – falling commodity prices, rising wages in China and the appreciation of Chinese yuan since 2005

The events would be beneficial to Indonesia in terms of the 4 maco goals, SOL, efficiency and equity.

Body:

Thesis: Positive effects on Indonesia

1. The falling commodity prices means a lower cost of production within the economy. This will help to increase the SRAS. With a higher SRAS, there will be economic growth if the economy is not a full employment.

Illustrate using an AD-AS diagram.

Evaluation: if the economy is a full employment (Keynesian range), this increase in SRAS may not be relevant.

2. Indonesia has a comparative advantage over China in the production of labour-intensive goods as it can produce the goods at a lower opportunity cost, i.e.: it has to forgo less of other goods in order to produce it. The falling commodity prices in Indonesia and the rapidly rising wages in China can increase the relative profitability and attractiveness of Indonesia as a manufacturing base. The appreciation of Chinese yuan since 2005 has also made the Chinese exports less price competitive. Therefore, Indonesia has been attracting investment in recent years in the automotive and consumer-goods sectors. This will increase FDI → improves KFA and hence BOP. This also increases AD, LRAS, actual and potential economic growth.

Illustrate using an AD-AS diagram.

Evaluation: the profits earned from these FDI will be remitted to the home country in the future. This will worsen the current account of Indonesia in the long run.

3. Indonesia has been attracting investment in recent years in the automotive and consumer-goods sectors, both for export and to meet growing demand domestically. – Increases X, AD and actual growth, and also decreases cyclical unemployment.

Evaluation: if the economy is near full employment, the increase in AD may result in demand-pull inflation.

Anti-thesis: Negative effects on Indonesia

1. The development of the manufacturing industries may lead to rising structural unemployment as the Indonesian farmers are not equipped with the knowledge and skills to work in the manufacturing industries.

Evaluation: the workers can learn the skills to work in the manufacturing industries and it would be relatively easy and quick for them to do so as the skill needed is still quite labour-intensive.

2. These low skilled workers in Indonesia may be exploited by these big foreign firms that employ them. The abundance of low skilled labour in the developing countries may actually cause their wages to be depressed as MNCs being profit-motivated will not be willing to pay them higher wages, and can decide to relocate to other low-cost countries once labour becomes too expensive. The large foreign investors may exploit the farmers and/or the workers by having them to work for long hours and/or in unfavourable working conditions.

3. The increase in the manufacturing plants will degrade the environment and exhaust the natural resources which is proven by the fires problem due to the burning of forests for palm oil plantations in Indonesia.

Conclusion:

The events are largely beneficial to the Indonesia economy. However, these benefits are largely based on the theory of comparative advantage. In reality, comparative advantage is dynamic and can be created, acquired or shifted through various factors such as foreign direct investments (FDI), demographic changes, technology changes, innovation and government policy. It means that Indonesia can lose the CA in the production of labour-intensive goods one day. Hence, in order to maximise the current situation, there is a need to improve labour productivity, infrastructure and legal system quickly. China may gain the same comparative advantage if there is a large devaluation of their currency (which is happening now).

Mark Scheme

<p>L3 5-6 marks</p>	<ul style="list-style-type: none"> • Excellent two-sided discussion of why the falling commodity prices and other events would be beneficial to Indonesia • Excellent depth and rigour of analysis based on analytical framework such as AD/AS diagram and theory of comparative advantage to explain the impact on the economy • Excellent breadth and scope of analysis covering a variety of arguments for both thesis and anti-thesis (at least 3 different arguments eg. 2 for thesis + 1 for antithesis or 1 for thesis and 2 for anti-thesis) • Arguments are contextualised and well supported by examples and reference to case materials
<p>L2 3-4 marks</p>	<ul style="list-style-type: none"> • Two-sided discussion of why the falling commodity prices and other events would be beneficial to Indonesia, but may not be well-developed <li style="text-align: center;">OR the discussion may one-sided but fairly well-developed with well-substantiated arguments • There is some rigour of analysis in using AD-AS concepts,

	<p>although depth may be limited</p> <ul style="list-style-type: none"> • Some breadth and scope of analysis covering a variety of arguments for both thesis and anti-thesis (at least 2 different arguments eg. 1T + 1A or 2T or 2A) • Some reference to case materials to support arguments
L1 1-2 marks	<ul style="list-style-type: none"> • A brief or superficial answer that is not well-developed and lacking in analysis • Or largely irrelevant answer with a few relevant points that are incidental rather than coherently argued • There may be conceptual errors in the explanation • Little reference to case materials
E2	A reasoned conclusion and judgement supported by analysis
E1	Some attempt at an evaluative conclusion not supported by analysis

[Total: 30]

Question 2:

- (a) **Compare the change in China's current account balance with that of the United Kingdom between 2009 and 2013.** [2]

China's current account balance shows a decrease in its surplus [1 mark] over the period whereas the UK's current account balance shows an increase in its deficit [1 mark] over the same period.

Marking tip:

No marks if student states that the current account balance has "decreased/declined" without mentioning surplus/deficit.

- (b) **Explain one example of how a government's tackling of an immediate economic problem could lead to a challenge in the longer term.** [2]

Several possible answers:

- Using expansionary fiscal policy to tackle the immediate problem of recession could lead to excessively high government debt. By increasing government spending and reducing taxes to stimulate the economy, the government may end up with a large budget deficit which has to be financed by borrowing. This leads to an increase in the government debt. This could pose a challenge in the future as the government might have difficulty repaying the debt and thus trigger a debt crisis.
- Using expansionary monetary policy such as quantitative easing to tackle a current recession could lead to an excessive increase in money supply. This could lead to high inflation in the longer term when the economy has recovered and there are supply constraints, resulting in "too much money chasing too few goods", thus causing prices of goods and services to increase rapidly. If inflation becomes too high in the future (eg. hyperinflation), it can be difficult to control. (Can also explain in terms of increase in AD reaching full employment resulting in DD-pull inflation eventually)
- Government encouraging investment in high skill and high technology industries to tackle an economic slowdown could lead to structural unemployment in the longer term, as unemployed workers do not have the right skills to be redeployed to the growth sectors and become structurally unemployed in the long term.
- Government adopting protectionistic policies eg tariff barriers to correct a current trade deficit or protect domestic industries to save jobs could lead to uncompetitiveness of domestic industries, greater inefficiency and wastage of resources in the longer term.

Any reasonable example and explanation which has the following:

1. A government action/policy to tackle a current economic issue
2. A problem in the future caused by the government action/policy. The problem in the longer term should be fairly serious and long term in

nature (hence a “challenge”) and not just a short term cyclical movement that can be easily tackled by stabilisation policies.

1 mark for giving a correct example. 1 mark for the explanation.

- (c) **With reference to Extract 3, explain a possible reason why despite a massive devaluation of the pound, UK’s current account deficit rose further.** [2]

One possible reason for the increasing current account deficit is that UK’s expenditure on imports continued to rise despite the devaluation of the pound. This could be due to UK’s demand for imports being price-inelastic which causes the fall in quantity demanded to be less than proportionate to the increase in price of imports, resulting in an increase in import expenditure. As mentioned in Extract 3, the British seem to have an “addiction for all things foreign”, suggesting that their demand for imports may be price-inelastic. (Can also accept if students explain the dd for imports may have increased due to their preference for foreign goods)

1 mark for identifying the rise in imports as the possible reason

1 mark for the explanation.

- (d) **With reference to the data, explain how urbanisation would affect China’s economic well-being.** [6]

Urbanisation refers to an increase in the proportion of people living in urban areas (ie cities and towns) compared to rural areas (ie the countryside). According to Extract 2, the China government has embarked on a 10-year urbanisation plan with the aim of bringing 400 million people to the cities, and increasing the proportion of the population living in urban areas from 50 percent to 60 percent by 2020.

One of the main effects of urbanisation is **a reduction of income inequality**. As mentioned in Extract 2, China currently has high income inequality, with 13 percent of China’s population living on less than \$1.25 per day and average urban disposable income just 21,810 yuan (US\$3,500) a year. People living in rural areas tend to be poor due to the relatively backward and undeveloped state of these areas, where many may be unemployed or underemployed in traditional farms. By moving to the urban areas, they will be able to find better-paying jobs and increase their income. This helps to reduce the income gap between the rich and poor, and thus increase the economic welfare of the people.

Another effect is the **increase in consumption** which will then contribute to the growth of the economy. As mentioned in Extract 2, urbanisation could help to put China “on a path to domestic consumption-led growth to replace three decades of investment and export-driven development.” As people move from rural to urban areas, they not only experience an increase in their income through getting better-paying jobs, they are also likely to spend more on consumption as a result of the change in lifestyle and greater variety of goods and services available. This increase in consumption means an increase in AD which would help to generate further increases in income through the multiplier process, resulting in a more than proportionate increase in national income. The increase

in economic growth generated by the rising consumption would also mean an increase in the economic well-being.

In addition, urbanisation also helps to generate economic growth through the **increase in government spending**. As mentioned in Extract 2, the government “will build homes, roads, hospitals and schools” to cater to the increasing urban population. The increase in government spending leads to an increase in AD which will result in a multiplied increase in national income through the multiplier effect. This also means an increase in per capita income and thus an increase in the economic well-being of the people. Also, government spending on public goods and merit goods such as transport and recreational facilities can be said to improve the material aspect of standard of living directly and thus economic well-being. Moreover, the government spending on infrastructure also increases the productive capacity of the country, thus increasing the potential growth of the economy and hence future economic well-being as well.

Marking Tip:

2 marks for each effect explained.

No credit for discussion of non-material/qualitative aspects of SOL (or social well-being)

- (e) **Discuss why the economic growth in the UK might be “the wrong sort of growth”.**

[8]

Introduction:

Define economic growth – increase in real national income or GDP over a period of time.

Explain that economic growth comprises actual growth and potential growth.

Actual growth – actual increase in real output or equilibrium national income. Can be due to increase in AD or SRAS

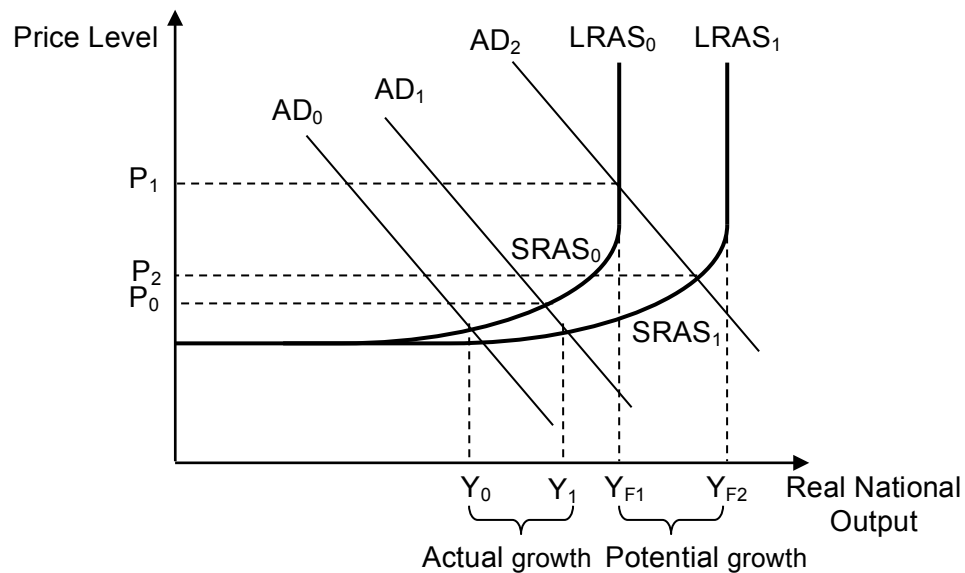
Potential growth – rate of increase in potential output or productive capacity. Shown by increase in LRAS.

- **Explain the significance of actual and potential growth**

For economic growth to be sustainable in the long term, actual growth should keep pace with potential growth. If actual growth is too low and falls below potential growth, there will be increase in spare capacity and unemployment. If actual growth exceeds potential growth, it could lead to increase in inflation as the economy eventually reaches full employment and there is a lack of capacity to increase output to meet rising demand.

Illustrate using AD/AS model:

Figure 1: Actual vs. Potential Growth using AD/AS model



As shown in Fig 1, the increase in AD from AD_0 to AD_1 and increase in SRAS from $SRAS_0$ to $SRAS_1$ leads to an increase in real output from Y_0 to Y_1 , which represents actual growth. Without any increase in productive capacity, the increase in AD from AD_1 to AD_2 will lead to inflationary pressure causing price level to increase from P_0 to P_1 . However, with potential growth shown by the increase in LRAS from $LRAS_0$ to $LRAS_1$, there will be an increase in spare capacity, bringing the price level down to P_2 . Hence, increase in potential growth enables an economy to achieve sustained economic growth without inflationary pressure.

- **Thesis: Explain why UK's economic growth is the "wrong sort of growth"**

UK's economic growth is driven mainly by demand, particularly consumption, without improvements in supply conditions. As mentioned in Extract 3, low interest rates and improved credit conditions have helped to fuel an increase in demand, driving house prices up in the process. This leads to an increase in the actual growth of the economy. However, without any increase in productive capacity or potential growth, the economy will face a lack of capacity to increase output, leading to inflationary pressure. This is evident from the statement that the government has introduced "measures to boost demand in what remains in many sectors a profoundly supply-constrained economy."

Economic growth that is driven only by consumption demand may also conflict with external stability. The increase in consumption may mean that the country is spending more on imports resulting in a balance of trade deficit. This seems to be the case in the UK as the current account deficit has been increasing over the years as shown in Table 1. According to Extract 3, the British appears to have an "addiction to all things foreign" as they continued to increase spending on imports despite the devaluation of the pound which makes imports more expensive.

Another indication that the UK is having the wrong sort of growth is the relatively low level of investment measured by gross fixed capital formation. At just 14 per cent of GDP, it is by far the lowest among the advanced countries.

The low level of investment means that there is little growth in productive capacity, which aggravates the supply constraints faced by the economy. This means that actual growth is likely to outstrip potential growth, resulting in increase in inflationary pressure.

- **Anti-Thesis: Explain why UK’s economic growth might not be the “wrong sort of growth”**

As shown in Table 1, UK’s unemployment rate is still relatively high at around 8%, while its growth rate has been weak since the recession in 2009. This suggests that there is still spare capacity in the economy as it has not reached its full employment equilibrium yet. The supply constraints could be applicable only to certain sectors rather than to the whole economy, and may be tackled by improving factor mobility. Hence, stimulating actual growth by increasing demand may not be wrong based on the current economic conditions in the UK. When the unemployment rate has fallen and the economy approaches full employment, the government can then focus on supply-side policies to increase the productive capacity of the economy.

Consumption-led growth can also be appropriate as it reduces the country’s vulnerability to external factors compared to growth that is driven by exports. For example, China’s export-driven economic growth has resulted in global trade tensions, which prompted the government to focus on increasing domestic consumption as the new driver of economic growth. In a global recession, most countries will likely reduce their spending on imports, thus causing the UK’s exports to fall. Hence, the government may have to rely on increasing consumption spending to stimulate economic growth, as export demand will likely be weak. In this case, UK’s consumption-led economic growth might not be the wrong sort of growth.

Conclusion & Evaluation:

Whether UK’s economic growth is the wrong sort of growth depends on the economic conditions and the time period. In the short-run, as the economy is still recovering from the global recession and unemployment is still relatively high, it may not be wrong to stimulate economic growth by increasing consumption demand to tackle the immediate problems. However, in the long run, consumption-led growth alone will not increase productive capacity and the lack of potential growth could result in higher inflation instead. It also depends on the openness of the economy and its balance of payments position. If the country is highly import reliant and is experiencing a high current account deficit, then consumption-driven economic growth such as that of the UK may not be appropriate as it could worsen the country’s current account deficit. However, if the country has been experiencing a persistent and high balance of payments surplus, it may not be wrong to increase consumption to drive economic growth even if it reduces the balance of payments surplus.

Mark Scheme

<p>L3 5-6 marks</p>	<ul style="list-style-type: none"> • Excellent two-sided discussion of why UK’s economic growth might or might not be the wrong sort of growth • Excellent depth and rigour of analysis based on analytical framework such as AD/AS diagram to distinguish between actual and potential growth
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	<ul style="list-style-type: none"> • Excellent breadth and scope of analysis covering a variety of arguments for both thesis and anti-thesis (at least 3 different arguments eg. 2 for thesis + 1 for antithesis or 1 for thesis and 2 for anti-thesis) • Arguments are contextualised and well supported by examples and reference to case materials
L2 3-4 marks	<ul style="list-style-type: none"> • Two-sided discussion of why UK's economic growth might or might not be the wrong sort of growth, but may not be well-developed OR the discussion may one-sided but fairly well-developed with well-substantiated arguments • There is some rigour of analysis in distinguishing between actual and potential growth, although depth may be limited • Some breadth and scope of analysis covering a variety of arguments for both thesis and anti-thesis (at least 2 different arguments eg. 1T + 1A or 2T or 2A) • Some reference to case materials to support arguments
L1 1-2 marks	<ul style="list-style-type: none"> • A brief or superficial answer that is not well-developed and lacking in analysis • Or largely irrelevant answer with a few relevant points that are incidental rather than coherently argued • There may be conceptual errors in the explanation • Little reference to case materials
E2	A reasoned conclusion and judgement supported by analysis
E1	Some attempt at an evaluative conclusion not supported by analysis

- (f) **According to Extract 1, “resilient dynamism means tackling immediate problems and long-term challenges at the same time.” With reference to the data and your own knowledge, discuss the appropriate policy measures you would recommend for China to achieve “resilient dynamism”.** [10]

Introduction

To achieve “resilient dynamism,” China will need to tackle its immediate economic problems while at the same time looking into the longer term challenges. The appropriate policy measures will thus need to address the current economic issues and the long term challenges faced by China.

1. Current economic issues faced by China

- High income inequality

One of China’s main economic issues is the high income inequality. As mentioned in Extract 2, about 13 percent of China’s population still live on less than \$1.25 per day, but yet China has one fifth of the world’s billionaires. It can be seen that despite the high double-digit growth enjoyed by China over the past few decades, poverty is still quite prevalent especially in the rural areas. It is hence the government’s priority to “spread the fruits of economic growth more evenly in the country of 1.3 billion” and “close the chasm between the country’s urban rich and rural poor.”

- Growth slowdown

It can be seen from Table 1 that China's growth has been slowing down to 7.8% in 2013 compared to the double-digit growth rates in the previous decades. Given China's large population of 1.3 billion, this could have an adverse impact on the economic well-being of its people. Unemployment, however, remains stable at around 4% which is possibly close to full employment level.

- Worsening Current Account balance

China's current account surplus has been declining in recent years, indicating a worsening balance of payments position. However, it still has a fairly high current account surplus of over US\$180 billion in 2013, so this may not be a significant problem

2. Longer term challenges of China

- Re-balancing growth

China is facing the need to re-balance its growth away from the investment-driven and export-oriented model to one driven by domestic demand. Although investments and exports have helped to generate high economic growth in China, it could lead to longer term challenges in the form of inefficiency, wastage of resources, instability due to global trade tensions and vulnerability to external shocks. As mentioned in Extract 2, "there are growing concerns that more fixed-asset investment would simply add to the inefficiency of China's state sector". Excessive investment can mean an over-expansion of productive capacity resulting in underutilisation of capacity and wastage of resources. For example, over investment in property development has resulted in large numbers of apartments and offices being unoccupied, reflecting a misallocation and wastage of resources.

- Pollution

China's high growth has been fuelled by the rapid expansion of manufacturing industries which have contributed to a severe pollution problem, even forcing people indoors and factories to close temporarily. If not tackled, the pollution problem can have a severe impact on the well-being of future generations and affect the future economic health of the country.

3. **Appropriate policy measures for dynamic resilience** – the government will need to combine policies to address the current economic issues with measures to tackle the longer term challenges

3a Addressing Current Economic Issues:

To tackle income inequality:

- Redistributive policies

To deal with the high income inequality, the government can implement redistributive policies such as giving more subsidies and welfare aid to the poor. At the same time, the government can increase the progressivity of the income tax structure, taxing the rich at a higher rate while reducing the rate of tax on the poor.

Evaluation:

- Giving more transfer payments to help the poor could be a strain on the government budget and divert public funds from other more productive uses such as spending on infrastructure.
- Giving more welfare payments to the poor may encourage a "dependency" attitude as people may rely on getting government aid rather than work hard to increase their own income.
- If the tax structure becomes over progressive, it may be a disincentive for people to work hard to increase their income. This could result in a

fall in work effort and productivity.

- **Urbanisation**

The government can encourage urbanisation by building more homes, schools and hospitals and use public campaigns and information dissemination to persuade people to move from rural to urban areas. With better jobs available in the cities, people's income will increase and this will help to reduce the income gap between the rich and poor. The government can also set up job agencies in the urban cities to help migrants from the rural areas to find jobs in the cities.

Urbanisation also helps to tackle the longer term issue of rebalancing growth. With increased proportion of people living in urban cities, there will also be an increase in consumption spending, thus expanding domestic demand and reducing the economy's dependence on investment and exports for growth.

Evaluation:

- Spending on building infrastructure in the cities to promote urbanisation is also a strain on the government budget and could result in the government incurring a budget deficit and lead to high government debt
- Urbanisation also comes with its associated problems such as overcrowding, increased crime rate and social tensions. If there are insufficient jobs in the city for the migrants from the rural areas, it could result in more jobless and homeless people in the cities.

3b Addressing Longer Term Challenges:

To promote economic growth and re-balance growth:

- **Stimulate consumption spending**

As mentioned in Extract 2, unleashing the power of China's consumers is vital to China's economic future. There is a need to rebalance growth by reducing the reliance on investments and exports and expanding domestic demand. The government can implement policies to increase the disposable income of consumers such as reducing taxes especially for the lower income (as mentioned above as part of redistributive policies). As lower income households tend to have higher marginal propensity to consume (mpc), their increase in disposable income will lead to an increase in consumption spending. The government can also put money directly into people's pockets by giving direct subsidies or transfer payments to the poor such as shopping vouchers or welfare grants. This increases their disposable income and will thus encourage them to spend more. Urbanisation as mentioned above will also help to increase consumption as the lifestyle in the urban cities could encourage people to spend more compared to living in rural areas.

At the same time, increasing consumption leads to an increase in AD which induces further increases in consumption through the multiplier effect and eventually results in a multiplied increase in national income, thus addressing the problem of economic slowdown.

Evaluation

While increasing domestic consumption can help to reduce the economy's reliance on investments and exports and thus reduce the inefficiency and instability caused by over-reliance on them, it must also be balanced with appropriate supply-side policies to increase AS. Over-expansion of consumption demand may bring the economy to the Classical range of the AS, resulting in high inflation without any increase in real output as the economy has reached its full employment level. Hence, the economy still needs to maintain a certain level of investment to increase its productive capacity and ensure there is potential

growth to prevent inflationary pressure from building up.

To address the challenge of environmental degradation and pollution

- Taxation – Pigovian tax

The government can impose a Pigovian tax to make firms pay for polluting the environment. This has the effect of internalising the negative externalities generated by firms as they have to pay a tax on every unit of the good they produce. If the tax is equivalent to the marginal external cost due to pollution, then it will help to bring the market equilibrium to the social optimal output, thus achieving allocative efficiency.

Evaluation:

- It is difficult to determine the right amount of tax to impose. If the tax is too high, it could lead to under-provision of the good and reduce consumer welfare. If the tax is too low, it fails to reduce pollution sufficiently and inefficiency will persist in the economy.
- The tax revenue can be used to fund R&D to encourage the development and adoption of cleaner and greener technology by the manufacturing industries.

- Regulation

The government may impose regulation to control pollution. Such regulations may include imposing a limit to the amount of pollution firms are permitted to emit and imposing a fine if they exceed the limit. For example, during the Beijing Olympics, the Chinese government introduced a road rationing regulation in which only cars with even-number license plates are allowed to enter the roads on one day while those with odd-number license plates are allowed to enter the following day. The policy helped to reduce vehicle emissions significantly.

Evaluation:

- While regulation can help to reduce pollution effectively, it can also cause distortions in the market and can lead to inefficiency. A blanket restriction of the amount of pollution allowed to be generated by firms does not encourage the more efficient firms to cut down their emissions. It may even induce firms with lower emissions to increase their pollution level as they see it as a right given to them.
- Regulation has to be properly enforced to be effective, resulting in enforcement costs to society. Resources will need to be spent on enforcing the regulation such as monitoring the pollution levels of firms, pressing charges and collecting the fines from the firms etc. The costs of enforcing the regulation need to be weighed against the benefits of the reduction in pollution.

Conclusion:

For China to achieve resilient dynamism, it will need to reduce its high income inequality and stimulate economic growth, while at the same time rebalancing its growth to focus more on increasing domestic demand and addressing the longer term challenge of reducing pollution and improving their living environment. A combination of different policy measures will thus be required to address these issues and challenges. For example, redistributive policies such as progressive income tax may help to reduce income inequality but will not address the challenge of reducing inefficiency of investments and environmental pollution. It thus needs to be supplemented by policies such as regulation or taxation to reduce pollution from factories and thus ensure the long term sustainability of its economy. Moreover, each policy has its own limitations and will not be able to address both the short term issues and long term challenges of the country at

the same time. Hence a mix of policies is recommended to tackle both the short term and long term issues faced by the country.

Mark Scheme

<p>L3 6-8 marks</p>	<ul style="list-style-type: none"> • Excellent discussion of appropriate policy measures to address both current economic issues and longer term challenges faced by China • Excellent analysis of the current economic issues and longer term challenges faced by China with reference to case materials (at least <u>one short term issue</u> and <u>one long term challenge</u>) • The policy measures are well explained and evaluated. (At least 3 policies well explained) • Effective use of case materials as well as 'own knowledge' to support arguments and/or discuss the policies.
<p>L2 4-5 marks</p>	<ul style="list-style-type: none"> • Good discussion of appropriate policy measures to address both current economic issues and longer term challenges faced by China • Good analysis of the current economic issues and longer term challenges faced by China with reference to case materials but may not be well developed • The policy measures are appropriate but may not be well explained or may not be evaluated. (At least 2 policies well explained) • Limited use of case materials as well as 'own knowledge' to support arguments and/or discuss the policies.
<p>L1 1-3 marks</p>	<ul style="list-style-type: none"> • The answer is largely irrelevant with a few relevant points that are not clearly explained' • Current economic issues and/or longer term challenges may not be accurately identified • Policies may be inappropriate and/or do not address the issues and challenges directly • No reference to case materials or lack of recognition of context.
<p>E2</p>	<p>Well-reasoned evaluative conclusion supported by analysis and examples</p>
<p>E1</p>	<p>Attempt at a reasoned conclusion that is not supported by analysis.</p>

Section B: Essay Questions

- 3. (a) With the use of examples, explain the concepts of scarcity, choice and opportunity cost. [10]**

Introduction

- The problem of scarcity arises because human wants are unlimited, but limited resources are not enough to meet all of society's wants.
- As a result, scarcity necessitates choice, such that the society allocates limited resources to produce a certain combination of goods and services that satisfies maximum wants.

Body

- Explain the scarcity.
 - The problem of scarcity arises because human wants are unlimited, but limited resources are not enough to meet all of society's wants.
 - Resources are limited because the world has only a given amount of them at any given period of time constrained by the level of technology at that time period. Examples of resources are land, labour, capital and entrepreneurship. On the other hand, there are unlimited wants where the desire for even higher levels of consumption to gain greater utility occurs once a particular consumption level is achieved. Similarly, desires increase over time as old wants are satisfied and new wants are created to gain greater utility.
- Explain the concepts of choice and opportunity cost
 - Individuals are assumed to be rational in their decision making by weighing the benefits and costs carefully when making a choice, which involves sacrifice. Choice is the act of selecting among alternatives and it involves the need to make sacrifices. For example, the country can choose to allocate resources in numerous ways to produce different combinations of consumer goods and capital goods, i.e. the country can choose to produce more consumer goods but less capital goods or to produce less consumer goods but more capital goods.
 - The sacrifice of alternatives in the production or consumption of a good or the carrying out of an action is known as its opportunity cost, which is the next best alternative foregone. This represents the real cost of the good consumed or produced or the activity being carried out. For example, given the amount of resources and the state of technology, an additional unit of consumer goods produced implies giving up the opportunity to produce capital goods. The more consumer goods a nation produces, the less resources available to produce capital goods, due to scarce resources.
 - Scarcity of resources puts a limit on how much goods and services an economy is capable of producing to satisfy maximum wants and thus contribute to the living standards of people. Every time an economic agent makes a choice, there is a trade-off for the use of that resource for one or more alternative use(s). The extent of the trade-off is known as the opportunity cost.
- Explain the PPC / PPF.
 - The concepts of scarcity, choice and opportunity cost can be illustrated graphically by using a production possibility curve (PPC) or production possibility frontier (PPF).
 - Figure 1 is the PPC / PPF that shows all the possible combinations of two goods (for e.g. capital goods and consumer goods) that a country can produce with all its available resources / factors of production fully and efficiently employed within a specified period of time with a given state of technology.

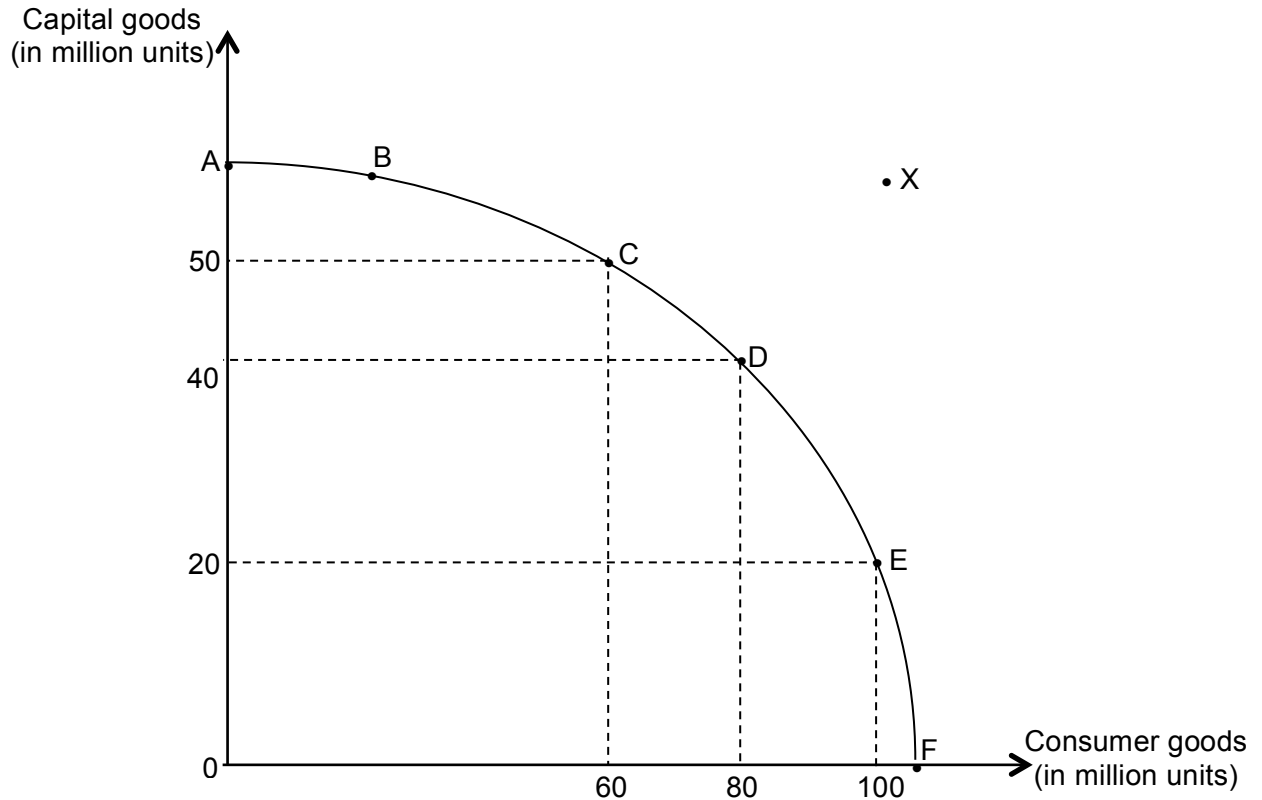


Figure 1: Production Possibility Curve (PPC) or Production Possibility Frontier (PPF)

- Explain the central economic problem, using the PPC diagram.
- By definition, the PPC indicates the maximum quantity of one good that can be produced for a given quantity of the other good produced. Thus, combinations beyond the boundary are unattainable with the economy's given resources and current state of technology. Hence, the central economic problem is represented by the unattainable combinations of consumer goods and capital goods, which lie outside of the PPC (e.g. Point X).
- Movement along the PPC represents the concept of choice. For example, the country can choose combination A that consists of all capital goods and no consumer goods produced or combination F that consists of all consumer goods and no capital goods produced. Combinations B, C, D and E consist of both capital goods and consumer goods produced, with the amount of each good differing. Since it is impossible to increase the production of consumer goods without reducing the production of capital goods, the movement along the PPC also represents the concept of opportunity cost.
- The concept of opportunity cost is also illustrated by the negative slope of the PPC. The PPC is downward-sloping from left to right illustrating that scarce resources have alternative uses and the trade-off as we move resources from one industry into the other. If the country wishes to produce more of consumer goods, it will have to give up some units of capital goods. Referring to Figure 1, suppose the country is currently producing at point C and it wishes to increase the production of consumer goods by 20 million units. To do so, it will have to divert resources away from the production of capital goods, thereby reducing the output by 10 million units, moving from point C to D. If the country wants to further produce another 20 million units of consumer goods, it will have to divert resources away from the production of capital goods, and this time reducing the output by 20 million units, moving from point D to E. As the country wants to produce equal successive increases in the amount of consumer goods, it has to

have up increasingly greater amounts of capital goods, reflecting the law of increasing opportunity costs (which is represented by the increasingly negative slope of the PPC).

- The opportunity costs increase because factor inputs are not perfect substitutes of one another, hence are not equally suited for producing different goods.
- As an economy increases the production of consumer goods, e.g. agricultural goods, eventually it has to use resources (e.g. labour) that are less suitable for producing agricultural goods (but are better suited for producing capital goods e.g. machinery). This means that increasingly more resources must be used to produce additional equal amounts of agricultural goods. Consequently, increasing number of machinery is given up to obtain additional equal amount of agricultural goods.
- Similarly, if the country moves upward along the curve and produces more capital goods, this also involves increasing opportunity cost as it would have to use resources which are less suitable for producing capital goods but more suitable for producing agricultural goods. The first resources that are transferred from agricultural / crop production to machinery production will likely be those that are least suited for crop production. For example, the least suited labour in growing crops (e.g. highly skilled labour) is first transferred from growing crops to machinery production. Subsequently, progressively more proficient labour that grows crops well such as farmers will have to be foregone to produce more machinery in order to produce additional units of capital goods.

Conclusion

All societies face the problem of scarcity because resources are limited and human wants are unlimited. Scarcity forces society to choose between the competing uses of the limited resources. It is scarcity that gives rise to the central economic problem i.e. the allocation of resources among competing uses for the satisfaction of maximum human wants.

Mark Scheme

Levels	Descriptors
High L3 9-10	<ul style="list-style-type: none"> • For an answer that shows: <ul style="list-style-type: none"> ➤ Excellent depth in analysis. <ul style="list-style-type: none"> ✓ Accurate, precise and clear use of economic concepts and analysis in all explanations. ✓ PPC framework is used. ➤ Excellent breadth in analysis (3 out of 3 concepts are considered) <ul style="list-style-type: none"> ✓ Concept of scarcity, ✓ Concept of choice, ✓ Concept of opportunity costs • Supported by <ul style="list-style-type: none"> ➤ Well-labelled and well referred to diagrams. ➤ Contextualised examples. ➤ Logical structure.
Low L3 7-8	<ul style="list-style-type: none"> • For an answer that shows: <ul style="list-style-type: none"> ➤ Very good depth in analysis.

	<ul style="list-style-type: none"> ✓ Accurate and clear use of economic concepts and analysis in most explanations. ✓ PPC framework is used. ➤ Very good breadth in analysis (at least 2 out of 3 concepts are considered and well-developed). <ul style="list-style-type: none"> ✓ Concept of scarcity, ✓ Concept of choice, ✓ Concept of opportunity costs • Supported by <ul style="list-style-type: none"> ➤ Well-labelled and well referred to diagrams. ➤ Contextualised examples. ➤ Reasoned structure.
<p>L2 5-6</p>	<ul style="list-style-type: none"> • For an answer that shows: <ul style="list-style-type: none"> ➤ Sufficient depth in analysis. <ul style="list-style-type: none"> ✓ Accurate use of economic concepts and analysis in some explanations. ✓ PPC framework is used. ➤ Sufficient breadth in analysis (at least 2 out of 3 concepts are considered). <ul style="list-style-type: none"> ✓ Concept of scarcity, ✓ Concept of choice, ✓ Concept of opportunity costs • Supported by <ul style="list-style-type: none"> ➤ Well-labelled and well referred to diagrams. ➤ Examples are provided.
<p>High L1 3-4</p>	<ul style="list-style-type: none"> • For an answer that shows: <ul style="list-style-type: none"> ➤ Insufficient depth in analysis. <ul style="list-style-type: none"> ✓ Accurate use of economic concepts and analysis in some explanations. ➤ Insufficient breadth in analysis (at least 1 out of 3 concepts is considered). <ul style="list-style-type: none"> ✓ Concept of scarcity, ✓ Concept of choice, ✓ Concept of opportunity costs
<p>Low L1 1-2</p>	<ul style="list-style-type: none"> • For an answer that: <ul style="list-style-type: none"> ➤ Is largely irrelevant. <ul style="list-style-type: none"> ✓ Examples are not related to the concepts of scarcity, choice and opportunity cost ➤ Contains fundamental conceptual errors in analysis.

3 (b) Discuss the significance of the characteristics of the Singapore economy in determining her pattern of trade with other countries.**[15]****Introduction: Background on Singapore's characteristics:**

- Singapore is a small size with limited resources. It has a small land area of 718.3km, which is less than 3% of UK's land size. It does not have a lot of natural resources and the most valuable resource is labour.
- It is very open to trade and capital flows.
- Total merchandise trade is more than 3 times of GDP, with exports of goods amounting to over 180% of GDP and imports over 160% of GDP.
- Traditionally, Singapore has been a major entrepot centre because of its location along major international shipping routes. Over 50% of its total imports or over 45% of total exports comprised of re-exports (ie goods which are exported in the same form as they are imported apart from minor processing such as sorting, grading, splitting into lots, re-packing, etc.)
- Domestic exports are exports of Singapore origin ie grown, produced, manufactured, assembled or processed in Singapore. Singapore's main domestic exports are refined petroleum products (30%), chemicals and chemical products (17.5%), electronics products (26%), and non-electronic machinery and equipment (including transport equipment) (12%). (Figures based on 2010)
- Singapore is one of the major oil refining centres in the world, importing crude oil and exporting refined petroleum to Asian countries such as Malaysia, China, Hong Kong, Indonesia and Vietnam, as well as some European countries.
- The main destinations of Singapore's non-oil domestic exports are Europe (mainly UK, Netherlands, France and Germany), US, China, Malaysia, Hong Kong, Indonesia and Japan.
- The main origins for imports are Europe (mainly Germany, France, UK and Netherlands), Malaysia, US, China, Japan, South Korea, Indonesia, Taiwan and Saudi Arabia

Thesis: The characteristics of Singapore economy is significant in determining her pattern of trade with other countries

- The differences in resource endowments determine the comparative advantage of Singapore economy. Comparative advantage is determined by relative opportunity costs between countries.
- a) Singapore's comparative advantage determines its domestic exports
- Singapore has a relatively skilled and well educated labour force, with 90% having at least primary education and about 40% educated at tertiary level (diploma or degree). Singapore's workforce came in amongst the top in various international research and ranking reports by the International Institute for Management Development (IMD), Business Environment Risk Intelligence (BERI), Political & Economic Risk Consultancy (PERC) and World Economic Forum (WEF)
 - Singapore also has a strategic location, with a natural deep-water harbour located along the major international trade routes
 - Singapore has depended heavily on foreign direct investments (FDI) to spearhead its economic development. The government has also invested heavily in infrastructure such as developing Changi airport, Mass Rapid Transit (MRT) systems, expressways, industrial parks, Science parks, etc.
 - Based on resource endowments, Singapore is likely to have lower opportunity cost and hence comparative advantage in capital-intensive, knowledge-based or high technology industries. Hence, the country has specialized in capital-

intensive industries such as oil-refining, chemical industries, electronic products and machinery and equipment. These products are exported to developing countries in Asia as well as developed countries in Europe and America.

- Singapore also has comparative advantage in port services due to its strategic location. Hence the PSA is one of the busiest port in the world, providing port and transshipment services to countries all over the world.
- b) Singapore's lack of comparative advantage determines its imports
- As Singapore's is poor in natural resources, it is likely to have higher opportunity cost in producing agricultural products (eg. the opportunity cost of using a plot of land for agriculture would be much higher given its limited land resource). Hence Singapore does not have comparative advantage in agriculture and mining products. The labour cost in Singapore is also relatively higher than developing countries, so it has no comparative advantage in labour-intensive industries. Over the past 2 decades, many labour-intensive industries have relocated from Singapore to other countries in the region such as Indonesia, Thailand and Vietnam, which have lower labour costs.
 - Hence, Singapore depends on imports of primary products, raw materials and labour intensive manufactures from countries in the region such as Malaysia, Indonesia, Thailand and China. It also imports crude oil from oil exporters such as Saudi Arabia and Brunei.

Anti-Thesis: The characteristics of Singapore economy is not significant in determining her pattern of trade with other countries as there are other determinants

a) Government policy

In Singapore, government policy plays a part in influencing the trade pattern beyond static differences in comparative advantage.

- Promoting potential high-growth industries – the government identifies industries which have high growth potential and promotes the development of such industries by attracting leading companies in such industries to operate in Singapore and, if necessary, the foreign talent required to spearhead these industries. It also provides training to the workforce in the skills required for the identified industries. Examples are biotechnology, aerospace and digital animation. This also includes services such as Integrated Resorts, medical services, financial services and education (eg. developing Singapore as an international financial centre, regional medical hub and education hub)
- Developing industries of strategic importance – the government may also develop certain industries which have strategic significance such as national security and defense. The government formed the Singapore Technologies group which produces military weapons among other goods considered essential to national interests. Over time, the state-owned company has improved its efficiency and competitiveness and began exporting such products as well.
- Free trade agreements – the government pursues bilateral free trade agreements with other countries, thus facilitating greater access to export markets in these countries. This in turn influences the type and volume of exports to the respective countries.

b) Intra-industry trade

Comparative advantage theory assumes that countries specialize in particular products and exchange them for other products in which they do not have comparative advantage. However, in reality countries may also trade in the same products or different components of the same product.

- Product differentiation (horizontal intra-industry trade) – While Singapore exports some consumer electronics goods (eg. television and computers), it also imports these goods from other countries. This is because different countries may produce different brands of the same product with differences in quality, design and features.
- Fragmentation of production process (vertical intra-industry trade) – The production of a product may be broken up into several stages, with different countries producing different components of the product. For example, Singapore may export disk drives and other computer components, which are then assembled into computers in other countries. At the same time, Singapore may import other electronic components used in the manufacture of its disk drives, as well as the finished computer products from other countries. It might appear that Singapore is exporting and importing the same product group ie. computer related products. However, this is not inconsistent with comparative advantage as it means that different countries have different comparative advantage in different stages of the production process. The issue is how to classify the products more specifically to reflect the different stages of production involved.

c) Demand-side factors

The theory of comparative advantage focuses on the supply side (based on relative opportunity costs in production). In reality, the pattern of trade in terms of countries which Singapore exports to and imports from is also determined by demand factors. These demand factors include:

- Tastes and preferences with regard to variety of differentiated products – This could explain why Singapore exports and imports similar type of goods in some industries eg. consumer electronics.
- Income of other countries – As the income of a country increases, its demand for imports tend to rise. The high income growth in China partly explains why Singapore’s trade with China has increased over the years.

Conclusion:

In general, the pattern of trade in Singapore can be largely explained by comparative advantage theory that is determined by its characteristics. However, the theory of comparative advantage is based on a static analysis of relative opportunity costs. In reality, comparative advantage is dynamic and can be created, acquired or shifted through various factors such as foreign direct investments (FDI), demographic changes, technology changes, innovation and government policy. Moreover, comparative advantage may determine the broad product groups the country should specialize in eg. capital-intensive industries, but not the specific products the country should produce for export eg. disk drives or telecommunications equipment. Therefore, some adjustments may need to be made to allow for dynamic changes in comparative advantage and other influences on trade patterns such as government policy and intra-industry trade.

Mark Scheme

Levels	Descriptors
<p>High L3 11</p>	<ul style="list-style-type: none"> • For an answer that shows: <ul style="list-style-type: none"> ➤ Excellent depth in analysis. <ul style="list-style-type: none"> ✓ Accurate, precise and clear use of economic concepts and analysis in all explanations.

	<ul style="list-style-type: none"> ➤ Excellent breadth in analysis <ul style="list-style-type: none"> ✓ Comparative advantage is considered ✓ Other factors influencing patterns of trade are considered (at least 2 factors) ✓ Include the impact on the following: (all 3 areas are considered) <ul style="list-style-type: none"> ○ Type of goods and services Singapore exports and imports ○ The relative volume of goods and services Singapore exports and imports ○ The major trading partners of Singapore • Supported by <ul style="list-style-type: none"> ➤ Well-labelled and well referred to diagrams (if there is). ➤ Contextualised examples. ➤ Logical structure.
<p>Low L3 9-10</p>	<ul style="list-style-type: none"> • For an answer that shows: <ul style="list-style-type: none"> ➤ Very good depth in analysis. <ul style="list-style-type: none"> ✓ Accurate and clear use of economic concepts and analysis in most explanations. ➤ Very good breadth in analysis <ul style="list-style-type: none"> ✓ Comparative advantage is considered ✓ Other factors influencing patterns of trade are considered (at least 2 factors) ✓ Include the impact on the following: (at least 2 out of 3 areas are considered) <ul style="list-style-type: none"> ○ Type of goods and services Singapore exports and imports ○ The relative volume of goods and services Singapore exports and imports ○ The major trading partners of Singapore • Supported by <ul style="list-style-type: none"> ➤ Well-labelled and well referred to diagrams (if there is). ➤ Contextualised examples. ➤ Reasoned structure.
<p>L2 6-8</p>	<ul style="list-style-type: none"> • For an answer that shows: <ul style="list-style-type: none"> ➤ Sufficient depth in analysis. <ul style="list-style-type: none"> ✓ Accurate use of economic concepts and analysis in some explanations. ➤ Sufficient breadth in analysis <ul style="list-style-type: none"> ✓ Comparative advantage is considered ✓ Other factors influencing patterns of trade are considered (at least 1 factor) ✓ Include the impact on the following: (at least 2 out of 3 areas are considered) – cap at 6 if consider 1 area. <ul style="list-style-type: none"> ○ Type of goods and services Singapore exports and imports ○ The relative volume of goods and services Singapore exports and imports ○ The major trading partners of Singapore

	<ul style="list-style-type: none"> • Supported by <ul style="list-style-type: none"> ➤ Well-labelled and well referred to diagrams. ➤ Examples are provided.
High L1 3-5	<ul style="list-style-type: none"> • For an answer that shows: <ul style="list-style-type: none"> ➤ Insufficient depth in analysis. <ul style="list-style-type: none"> ✓ Accurate use of economic concepts and analysis in some explanations. ➤ Insufficient breadth in analysis <ul style="list-style-type: none"> ✓ Comparative advantage is considered ✓ Include the impact on the following: (only 1 area is considered) <ul style="list-style-type: none"> ○ Type of goods and services Singapore exports and imports ○ The relative volume of goods and services Singapore exports and imports ○ The major trading partners of Singapore
Low L1 1-2	<ul style="list-style-type: none"> • For an answer that: <ul style="list-style-type: none"> ➤ Is largely irrelevant. <ul style="list-style-type: none"> ✓ Factor(s) is not related to patterns of trade ✓ Characteristics discussed is not related to Singapore economy ➤ Contains fundamental conceptual errors in analysis.

Levels	Descriptors
E2 3-4	<ul style="list-style-type: none"> • For a well-reasoned criteria-based judgement that answers the question on the significance of the characteristics of the Singapore economy in determining her pattern of trade with other countries
E1 1-2	<ul style="list-style-type: none"> • For an unexplained criteria-based judgement that answers the question on the significance of the characteristics of the Singapore economy in determining her pattern of trade with other countries

4. (a) Explain the possible causes of unemployment in Singapore. [10]

Define unemployment – refers to a situation whereby people who are of the legal age, and are **willing** and **able to work**, are **unable to get suitable jobs**. Full employment is a situation in which all available resources are fully utilised such that the economy is operating at a point on the production possibility frontier (PPF). **Achieving full employment** would therefore mean eliminating unemployment as far as possible. Although unemployment may include other types of resources, we shall only be discussing **labour unemployment**.

The types of Spore's unemployment are cyclical, structural and frictional.

Explain causes of **cyclical** unemployment from Spore's perspective:

- Demand deficient unemployment – applicable during global recession. As the external sector is large in Singapore, firms aiming to maintain export competitiveness try to reduce costs of production by reducing output & employment.
- Workers are retrenched and unemployment rises.
- Singapore has gone through 3 major periods of high unemployment in 5 years from 1998 – 2003 due to external shocks. External influences play an important role especially since Singapore is very dependent on external demand.
- Singapore is still largely dependent on electronics exports and hence its economy has to suffer from the volatile cycles experience by the electronics sector.

Explain causes of **structural** unemployment in Spore:

- Structural unemployment – due to structural factors (eg. labour immobility, mismatch of skills) which prevent unemployed from getting jobs in industries or areas where labour is in demand.
- There is a growing threat of structural unemployment due to the workforce demographics coupled with changing economic structure. While the working population is ageing, about a quarter of the resident workforce (ie citizens and PRs) still have below secondary education.
- As Spore's economy has to cope with globalization and outsourcing, it has to restructure its economy, and in the process structural unemployment will also result.
- E.g. the economy is moving increasingly towards higher technology and higher value added industries such as bio-medical, pharmaceuticals, info-communications, etc. which require higher skills. Manufacturing industries which are labour intensive are relocating to lower cost countries in the region such as Indonesia, Malaysia, Vietnam and China. It is likely that older low-skilled workers who are displaced by structural change will find it difficult to find jobs in the growing sectors of the economy.
- Even in service sector, there is intense competition regionally. For example, ports around the region, such as Port Tanjung Pelepas in Malaysia have upgraded its facilities and offers competitive services to shippers as well. With fewer businesses, Spore's PSA have to layoff its workers if their productivity is not higher.

Explain causes of **frictional** unemployment in Spore:

- Frictional unemployment arises because it takes time for workers to be matched with suitable jobs. The unending flow of people into and out of the labour force and the process of job creation and job destruction create the

need for people to search for jobs and for firms to find suitable employees. Since both employers and employees spend time searching what they believe will be the best match available, frictional unemployment arises.

- Frictional unemployment could arise when workers leave declining industry for expanding ones. It could also arise when the recurring stream of students passing out from schools and institutions of higher learning start to look for jobs but have not found them yet.

Conclusion: Unemployment generally low in Singapore ranging mainly 1-3% over the past 20 years, except during the recession periods of 2002-2004 and 2009 when the unemployment rate rose above 3%. Such declines in economic activity and employment, however, tend to be short-term in nature. Her unemployment level is very much caused by internal & external factors. Structural unemployment is the most significant problem as the economy restructures in the face of globalization.

Mark Scheme

Level	Descriptors
Level 3 7-10	For an answer that shows: <ul style="list-style-type: none"> - Excellent depth in analysis: <ul style="list-style-type: none"> o accurate use of economic concepts and analysis throughout - Excellent breadth in analysis: <ul style="list-style-type: none"> o Answer demonstrates a thorough analysis and explanation on at least 2 main causes of unemployment in Singapore o (for 9-10m): At least 3 causes of unemployment explained - Supported by <ul style="list-style-type: none"> o Well labelled and well referred to market failure diagram(s) o Contextualised examples o Logical structure
Level 2 5-6	For an answer that shows: <ul style="list-style-type: none"> - Good depth in analysis <ul style="list-style-type: none"> o Accurate use of economic concepts and analysis in most explanations. Use of economic concepts and analysis may not be precise. - Good breadth in analysis: <ul style="list-style-type: none"> o Answer demonstrates a good analysis and explanation on at least 2 main causes of unemployment in Singapore o Max 5: for one cause of unemployment well-explained - Supported by <ul style="list-style-type: none"> o Well labelled and well referred to market failure diagram(s) o Examples
Level 1 3-4	For an answer that shows: <ul style="list-style-type: none"> - Insufficient depth in analysis <ul style="list-style-type: none"> o Inaccurate use of economic concepts and analysis in most explanations. - Insufficient breadth in analysis: <ul style="list-style-type: none"> o Some analysis and explanation on at least one main cause of unemployment in Singapore. o Some effort to contextualise
1-2	For an answer that <ul style="list-style-type: none"> - Is largely irrelevant - Contains fundamental conceptual errors in analysis. - Largely descriptive answer

- (b) Suppose a country such as Singapore were to experience a period of high unemployment and inflation rates. Discuss the extent to which supply-side policies could be adopted to address these problems.

[15]

Explain **what are supply-side policies**.

Policies aimed at shifting the SRAS or LRAS to achieve the macroeconomic aims i.e. low unemployment, low inflation, healthy BOP and economic growth. May be categorized into:

- **Market-oriented policies** – promoting competition and enterprise, and reducing structural rigidities and market imperfections → allow the market to work more efficiently
- **Interventionist** – direct interventions by government to influence economic activities or behaviour of firms and individuals

Cause of high unemployment and inflation rates: this may be due to the rising cost of production in the economy, leading to the decrease in SRAS and the rise in GPL and unemployment rates in the economy.

Thesis: Supply-side policies can be adopted to address these problems.

Policies to increase SRAS:

Market-Oriented

- Promoting greater competition to reduce cost-push factors – through pro-competition policies like competition act and corporatisation. For e.g.: converting a government agency providing certain goods or services into a company that is run on a profit-making, commercial-oriented basis but still wholly owned by the government. This will ensure market discipline and thus promoting efficiency which will cause a downward shift of SRAS.
- The government corporatised some of its statutory boards by converting them into companies that continued to be owned by the government. In 1995, the Public Utilities Board (PUB) corporatised its electricity and gas services to form Singapore Power. In 1997, the Port of Singapore Authority was corporatised to form PSA Corporation. Other statutory boards that have been corporatised over the years include the restructured hospitals (SGH, TTSH, CGH, AH, NUH etc.), the public universities (NUS, NTU) and the Commercial and Industrial Security Corporation (CISCO).
- Note: Other pro-competition policies can be identified and explained in the context of Singapore.

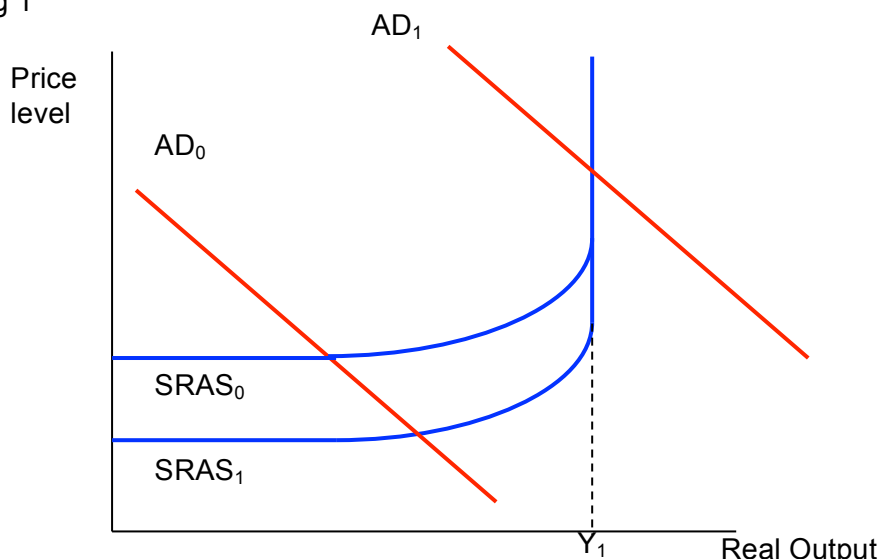
Limitations:

- Large monopolistic corporations are necessary if the economy is able to enjoy substantial economies of scale from mass production. Allowing more competition may result in lower efficiency as economies of scale are not fully exploited, resulting in higher costs.
- For services which are important to society e.g. telecommunications, public transport and power supply, corporatisation could be detrimental to the public interest if the private monopoly created becomes too concerned with achieving its profit targets and abuses its monopoly power or if the business fails due to poor management.
- Private enterprises may also not invest much in training for workers as the investment in these workers will be lost when the workers leave (especially to rival firms).

Interventionist

- The government may introduce measures to reduce cost of production directly eg. wage subsidies, rental rebates, utility rebates, etc. which may induce firms to increase output and employ more workers. This is shown by a downward shift of SRAS, which leads to an increase in Y, bringing it closer to the full employment level.
- Providing guidelines and information to influence wage, price or production decisions. National wage guidelines may be issued to prevent excessive rise in wage costs and ensure wage increase corresponds to productivity growth. In this way, it can keep per unit cost of production at its minimal and hence avoids cost-push factors.
- From Figure 1, with the policies to increase SRAS, the curve will shift downward from $SRAS_0$ to $SRAS_1$. This will increase the real output which thus reduces cyclical unemployment and inflation levels.

Fig 1



Limitations:

- Opportunity cost of giving wage subsidies, rental rebates, utility rebates for firms to reduce costs.
- Imposing too many regulations and controls may give rise to inefficiency due to government bureaucracy and corruption. Over-regulation of industries may also result in lack of responsiveness to market conditions or technological improvements, resulting in stagnation and loss of competitiveness.

Policies to increase LRAS:

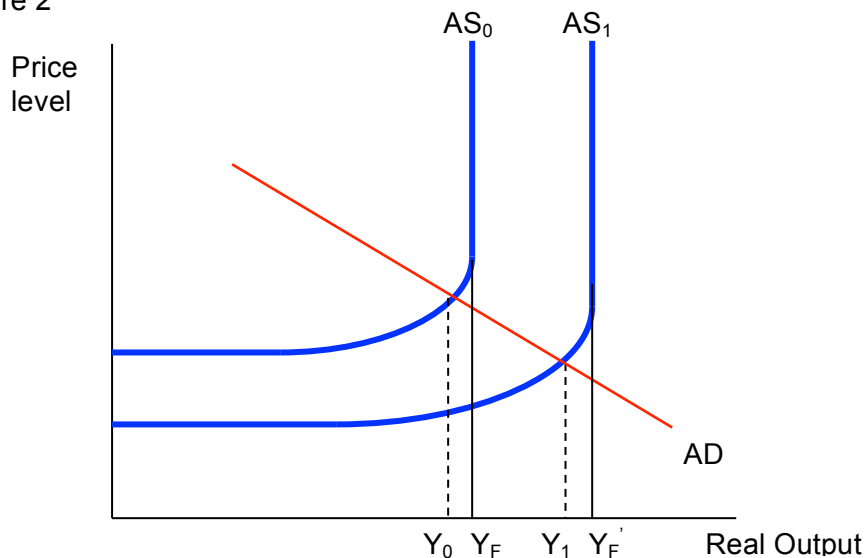
Market-Oriented

- Reducing unemployment benefits: Unemployment welfare benefits are seen as encouraging people to remain unemployed, especially if the difference between the take-home pay of being employed and the welfare benefit is small. It is therefore argued that reducing or removing unemployment benefits would encourage the unemployed to try harder to find jobs, thus reducing unemployment. As more long-term unemployed persons re-enter the labour force, the increased size of the labour force leads to higher potential output in the economy, possibly leading to a rightward shift of the LRAS.

Interventionist

- Promoting Continuing Education and Training (CET) – Establishing the Workforce Skills Qualifications (WSQ) system and providing subsidies to promote skills training. For example, the Skills Training for Excellence Programme (STEP) provides subsidized training courses to upgrade the skills of Professionals, Managers, Executives and Technicians (PMETs) in Singapore. These aim at improving the skills and productivity of the workforce, making workers more employable and enhancing their occupational mobility, so that they can take up jobs in the expanding sectors of the economy. Another scheme, the Workfare Training Support (WTS) scheme provides incentives and subsidies for low wage workers to upgrade their skills. The incentives include absentee payroll for companies who send their low skill workers for training and training allowance for low wage workers who sign up for the relevant training on their own. These policies aim to reduce structural unemployment.

Figure 2



From Fig 2 – Original equilibrium Y_0 already near full employment. Shift in AS results in further increase in real output from Y_0 to Y_1 with increase in employment. The increase in employment may come from a reduction in structural and frictional unemployment. This will also decrease the price level.

Limitations:

- Training wastage could arise if the unemployed take up the wrong courses which do not help them to get jobs. This could be due to their imperfect knowledge of job market conditions and future trends.
- SS-side policies such as skills training may take a long time before their effects are seen.
- Interventionist policies may also result in inefficiencies due to government failure (eg. wrong decisions, corruption or excessive bureaucracy) or over-reliance on subsidies.

Anti-Thesis: Supply-side policies cannot be adopted to address these problems

If the cause of the inflation is due to demand-pull inflation (as shown in Figure 1 above, AD_1) and the main cause of unemployment is due to structural unemployment, policies to decrease COP are not effective to solve the problems.

If the economy is at Keynesian range (possibly facing high cyclical unemployment and import price push inflation), policies to increase LRAS are not effective to solve the problems.

Therefore, other policies such as contractionary AD-management policies are needed to control demand-pull inflation. In the recent years, the high inflation rate is also caused by the increase in the price of big-ticket items such as transport and housing. As such, policies like cooling measures for the housing, improvement on public transport system and increase in the numbers of COE issued are implemented to decrease the prices of these products.

If the cause of the inflation is due to import price push inflation, appreciation of the SGD will be more appropriate than supply-side policies. With the appreciation of currency, the price of imported goods in terms of local currency will be lower thus mitigating the increase in cost of using these raw materials.

Given the reliance of Singapore economy on imported raw material, this can be a more probable case if there is any increase in the global price of essential raw material like crude oil. Therefore the appreciation of currency is able to mitigate the inflation problem immediately.

Conclusion

Appropriateness of SS-side policies to decrease unemployment and inflation rates **depends on the nature and causes of these problems**. The root cause could be high commodity prices such as high oil prices from the exporting countries that increase the cost of production in Singapore significantly. In this case, SS-side policies may not be as effective as a strengthening of the Singapore dollars to control import price push inflation in the short run. In the long run, SS-side policies are more appropriate as the economy would likely be operating at or near full employment, and there is a need to address structural and frictional unemployment. It can also ensure sustainable growth with low inflation rates.

Given the **characteristics of the economy** (small and open), Singapore will be susceptible to global recession (which will lead to decline in economic activities within Singapore due to the decrease in the exports demanded by other countries) and import price push inflation (as mentioned above). Additionally, in the face of globalisation, the country may face a significant structural unemployment problem as the economy restructures. Therefore, the country cannot depend on supply-side policies to overcome the high rates of inflation and unemployment rates. The characteristics of the economy allow us to anticipate the potential economic problems and take appropriate actions now to avoid these problems.

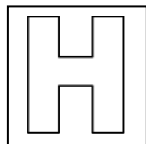
Mark Scheme

Levels	Descriptors
High L3 11	<ul style="list-style-type: none"> • For an answer that shows: <ul style="list-style-type: none"> ➤ Excellent depth in analysis. <ul style="list-style-type: none"> ✓ Accurate, precise and clear use of economic concepts and analysis in all explanations. ➤ Excellent breadth in analysis <ul style="list-style-type: none"> ✓ At least 3 different policies are considered (must be one

	<ul style="list-style-type: none"> market-oriented and one interventionist stated explicitly) <ul style="list-style-type: none"> ✓ The impact on both inflation and unemployment rates is considered ✓ The impact on both SRAS and LRAS is considered. ✓ Limitations of most policies are considered. • Supported by <ul style="list-style-type: none"> ➤ Well-labelled and well referred to diagrams. ➤ Contextualised examples. ➤ Logical structure.
<p>Low L3 9-10</p>	<ul style="list-style-type: none"> • For an answer that shows: <ul style="list-style-type: none"> ➤ Very good depth in analysis. <ul style="list-style-type: none"> ✓ Accurate and clear use of economic concepts and analysis in most explanations. ➤ Very good breadth in analysis <ul style="list-style-type: none"> ✓ At least 3 different policies are considered (can be either market-oriented or interventionist) ✓ The impact on both inflation and unemployment rates is considered ✓ The impact on both SRAS and LRAS is considered. ✓ Limitations of most policies are considered. • Supported by <ul style="list-style-type: none"> ➤ Well-labelled and well referred to diagrams. ➤ Contextualised examples. ➤ Reasoned structure.
<p>L2 6-8</p>	<ul style="list-style-type: none"> • For an answer that shows: <ul style="list-style-type: none"> ➤ Sufficient depth in analysis. <ul style="list-style-type: none"> ✓ Accurate use of economic concepts and analysis in some explanations. ➤ Sufficient breadth in analysis <ul style="list-style-type: none"> ✓ At least 2 different policies are considered (can be market-oriented and/or interventionist) ✓ The impact on both inflation and unemployment rates is considered ✓ Max 6 if consider the impact on either inflation or unemployment rate. ✓ Different impact on AS is considered (either SRAS or LRAS) ✓ Limitations of some policies are considered. • Supported by <ul style="list-style-type: none"> ➤ Well-labelled and well referred to diagrams. ➤ Examples are provided.
<p>High L1 3-5</p>	<ul style="list-style-type: none"> • For an answer that shows: <ul style="list-style-type: none"> ➤ Insufficient depth in analysis. <ul style="list-style-type: none"> ✓ Accurate use of economic concepts and analysis in

	<p>some explanations.</p> <ul style="list-style-type: none"> ➤ Insufficient breadth in analysis (at least 1 out of the 4 macroeconomic objectives is considered). <ul style="list-style-type: none"> ✓ One policy is considered (either market-oriented or interventionist) ✓ Consider the impact on unemployment or inflation rate. ✓ Different impact on AS is considered (either SRAS or LRAS) ✓ No or limited consideration of limitations of policies.
Low L1 1-2	<ul style="list-style-type: none"> • For an answer that: <ul style="list-style-type: none"> ➤ Is largely irrelevant. <ul style="list-style-type: none"> ✓ Impact on inflation and/or unemployment is not related to the use of supply-side policies. ✓ Use of supply-side policies is not related to inflation or unemployment ➤ Contains fundamental conceptual errors in analysis.

Levels	Descriptors
E2 3-4	<ul style="list-style-type: none"> • For a well-reasoned criteria-based judgement that answers the question on the extent to which supply-side policies could be adopted to address the problems of high inflation and unemployment rates
E1 1-2	<ul style="list-style-type: none"> • For an unexplained criteria-based judgement that answers the question on the extent to which supply-side policies could be adopted to address the problems of high inflation and unemployment rates



NATIONAL JUNIOR COLLEGE
SH2 Preliminary Examinations for General Certificate of Education Advanced Level
Higher 2

ECONOMICS

9732/01

Paper 1

14 September 2015

2 hour 15 minutes

Additional Materials: Answer Paper, Cover Pages

READ THESE INSTRUCTIONS FIRST

Write your name and subject class on all the work you hand in.

Write in dark blue or black pen.

You may use an HB pencil for any diagrams or graphs.

Do not use staples, paper clips, glue or correction fluid.

DO **NOT** WRITE IN ANY OF THE MARGINS.

Answer **all** questions.

Start each question on a new piece of paper.

Start parts (e) and (f) for both case studies on a new piece of paper.

Fill in the necessary information on the cover pages.

At the end of the examination, fasten all your work securely with the cover pages given.

The number of marks is given in brackets [] at the end of each question or part question.

This document consists of **8** printed pages.

Answer **all** questions.

Question 1 The Aviation Industry

Extract 1: Liberalisation of the EU aviation market

The liberalisation of the European Union (EU) aviation market gave low-cost carriers the opportunity to fully penetrate the European market in the past decade. They took advantage of the opportunity to establish an ever increasing number of crew and aircraft bases all over Europe. Facilitated by the introduction of direct Internet booking platforms, low-cost carriers such as Whizzair, Jet2.com and Blueair started to gain market share quickly at the beginning of 2000. The low cost carrier business model is essentially different from that of traditional network carriers: using a low unit cost base to charge low fares, generate new market demand and serving routes at a lower frequency than the full service carriers. These carriers focused more on short haul flights which are typically defined as flights that take less than three hours to complete as compared to long haul flights which take 7 to 12 hours to complete.

On the other hand, the growth in the number of flights and routes served by the traditional carriers such as Lufthansa and Air France stagnated or became negative as of 2000, resulting in a substantially declining share in the number of European flights between 2000 and 2013. These airlines need to relook at their cost structure in order to survive.

Source: OECD Report, International Transport Discussion Paper 2014

Extract 2: American and US Airways officially merge to create world's biggest airline

The world's biggest airline was officially created on Monday with the merger of American Airways (AA) and US Airways, capping a round of consolidation that has worried the US government, rivals and consumer groups.

The merged airline will take the American Airlines name and will have a global network of nearly 6,700 daily flights to more than 330 destinations in more than 50 countries, and more than 100,000 employees worldwide. The company has a firm order for 600 new aircraft.

Last month, the Justice Department gave the \$11bn merger the go-ahead after initially raising anti-trust concerns. In order to address those concerns the two companies gave up gate slots and take-offs at major US airports including Washington DC's Reagan national, New York's LaGuardia, Boston's Logan and LAX in Los Angeles.

Earlier in the month the US Supreme Court rejected an attempt by consumer groups and travel agents to halt the merger. The objectors had argued that the merger would cause "irreparable injury" to the domestic airline industry, driving up prices and damaging service. AA and US Airways argued that the merger was vital as the two companies seek to cut their costs. AA went into bankruptcy in 2011, the seventh US carrier to go bust since 2000. The deal brings the company back out of bankruptcy.

The carriers' financial woes have fuelled a series of mergers that have reshaped the US airline industry, including Delta and Northwest, United and Continental and Southwest's merger with AirTran. Since 2005, mergers have reduced the US's major airlines from nine to four.

Challenges remain for the new airline. Previous mergers have been hampered by difficulties in merging staff and technology that have taken years to iron out.

Source: Adapted from Dominic Rushe, *The Guardian*, 9 December 2013

Extract 3: Airlines seek carbon market to curb post-2020 pollution

Airlines backed a call for an emissions market to offset growth in their greenhouse gases after 2020, a step that could spur international talks on tackling pollution from the industry, which is responsible for about 2 percent of greenhouse gases globally.

International Air Transport Association members adopted a resolution in favour of a market-based mechanism to help address airlines' emissions. However, they did not agree to a global limit on greenhouse gas emissions from air travel, or set out in detail how governments should implement a market-based mechanism to cover all airlines.

The IATA resolution comes as representatives of governments in the UN's International Civil Aviation Organization (ICAO) try to iron out a deal to reduce air industry pollution. Countries from Russia and China to the U.S. are seeking a global pact after protesting the inclusion of foreign flights in the European Union's emissions-trading system last year. The bloc deferred the carbon curbs to help the ICAO talks.

In addition to the current EU's carbon cap-and-trade system, airline companies can also top up their permit quota with carbon credits – awarded by the UN to projects that cut emissions in developing countries, such as solar panels or windfarms.

But green campaigners pointed out that Monday's IATA resolution could allow airlines simply to buy cheap carbon credits to offset their emissions, rather than make real reductions in the aviation sector itself, and this system could be less effective than alternatives.

Carbon credits are currently at rock bottom prices because of a glut on the market, and because companies covered by the EU's emissions trading system were awarded far more free permits than they needed.

The resolution was backed by an "overwhelming" majority of airline executives voting at the meeting, according to IATA Chairman and Qantas Airways Ltd. CEO Alan Joyce. However, Air India Ltd. and Air China Ltd. both voiced concerns.

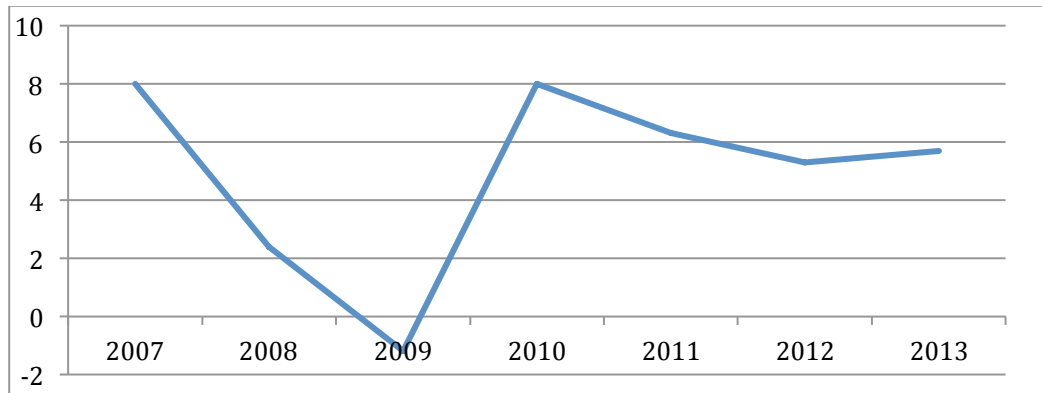
Market-based measures for airlines should be considered only as a secondary tool and as a part of a broader package of measures to cut greenhouse gases, Air India Chairman Nandan Rohit said.

They shouldn't be implemented unilaterally and "should only be applied within the national boundaries of a state and limited to the national carriers," he said at the meeting today. "If a state decides to implement market-based measures on air carriers of third states there should be a bilateral agreement in place."

Some economists however have argued that such a policy alone may not be effective to bring down pollution. Instead, they recommend another policy based on the polluter-pays-principle by placing a price on carbon dioxide and other greenhouse gases. Will these measures work to curb post-2020 pollution?

Source: Adapted from *Bloomberg*, 4 June 2013 and *The Guardian*, 31 January and 4 June 2013

Figure 1: Revenue Passenger Kilometers Growth (%)



*Revenue Passenger Kilometers (RPK) is a measure of sales volume of passenger traffic

Source: International Air Transport Association Report (IATA)

Table 1: US Airline Shares (September 2012-August 2013)

Carrier	Passengers ('000)	Share (%)
JetBlue	7,245	28.97
United	3,227	12.90
US Airways	3,209	12.83
American	3,025	12.10
Delta	2,709	10.83
Others	5,592	22.36
Total	25,007	100

*Figures based on passenger arrival and departure

Source: CAPA- Centre for Aviation, 2013

Questions

- (a) (i) Describe the trend in Revenue Passenger Kilometers from 2008 to 2013. [2]
- (ii) Suggest 2 reasons to account for the trend in Revenue Passenger Kilometers in (ai). [2]
- (b) Compare the likely price elasticity of demand values for short haul and long haul flights. Explain your answer. [2]
- (c) Explain how liberalisation of the EU aviation market has affected the survival of traditional carriers. [4]
- (d) Given the information in Table 1, identify the market structure of the US Airline industry. Justify your answer. [2]
- (e) Discuss the view that the merger between US Airways and American Airways is undesirable. [8]
- (f) Discuss the extent to which the market based mechanisms in Extract 3 are appropriate in addressing problem of pollution in the airlines industry. [10]

[Total: 30]

Question 2 Balancing growth and long term economic health**Extract 4: Resilient Dynamism**

The theme *Resilient Dynamism* perfectly captured the tenor of the global economy at the time of the 43rd Annual Meeting of the World Economic Forum. In the post-crisis world, resilience must be a goal for all countries if they are to endure another significant downturn. Achieving dynamism also has to be a priority now that crisis response has given way to the implementation of restructuring programmes.

Resilient dynamism means tackling immediate problems and long-term challenges at the same time. In a session on Europe, Young Global Leader alumnus Valdis Dombrovskis, Prime Minister of Latvia, described how, confronted by the crisis, his government had to implement an austerity programme while also taking steps that would improve the economy's competitiveness over time. Aiming for resilient dynamism goes hand in hand with the never-ending missions to achieve sustainability and competitiveness. Countries must restructure at home so they can compete in the world.

Source: Adapted from *World Economic Forum Annual Meeting 2013 Report*

Extract 5: China's reform plan to deliver 7.5 percent growth

China put its fast-growing consumer class at centre-stage as outgoing Premier Wen Jiabao set out a reform plan on Tuesday to spread the fruits of economic growth more evenly in the country of 1.3 billion.

Mr Wen said unleashing the power of China's consumers was vital to the future of the world's second biggest economy. "We should unswervingly take expanding domestic demand as our long-term strategy for economic development," Wen told delegates at the once-a-year meeting of China's National People's Congress (NPC).

Mr Wen made consumers the cornerstone of an economic strategy designed to deliver an overall growth target of 7.5 percent in 2013. Rebalancing growth away from the investment-driven, export-oriented model that has delivered three decades of double digit growth, lifted hundreds of millions of people from rural poverty and turned China into the world's biggest trading economy, has been a policy priority for much of Mr Wen's decade in office.

There are growing concerns that more fixed-asset investment - already worth about 50 percent of GDP - would simply add to the inefficiency of China's state sector.

Inefficiency in industry exacerbates China's horrific pollution problem, which has its origins in its factory-fuelled expansion. "The state of the ecological environment affects the level of people's well-being and also posterity and the future of our nation," Mr Wen acknowledged.

There has been widespread public anger and rare media criticism over pollution in China after choking smog enveloped large swathes of the north of the country recently, grounding flights, forcing people indoors and forcing emergency measures such as factory closures.

In addition, China needs about 40 trillion yuan (\$6.4 trillion) to pay for a 10-year urbanisation plan the Government hopes will close the chasm between the country's urban rich and rural poor. Beijing aims to bring 400 million people to cities as the Government seeks to turn China into a wealthy world power with economic growth generated by affluent consumers.

Despite its ranking as the second-largest economy globally after three decades of stellar growth, China remains an aspiring middle-income country with high income inequality and dependent on state-backed investment. About 13 percent of China's population still live on

less than \$1.25 per day, and average urban disposable income is just 21,810 yuan (US\$3,500) a year. Yet at the same time, the Hurun Report says China has 317 billionaires - a fifth of the total number in the world.

Urbanisation could cure China's economic imbalances, putting it on a path to domestic consumption-led growth to replace three decades of investment and export-driven development that stoked global trade tensions. The Government hopes 60 percent of China's population will be urban residents by 2020, from about half now, and will build homes, roads, hospitals and schools for them.

Source: *The Telegraph*, 5 Mar 2013

Extract 6: We've got growth - but it's the wrong sort

In Britain, Treasury officials can allow themselves a small sigh of relief. Barring any accidents, UK growth this year should be close to 2 per cent, with survey evidence pointing to a 3 per cent plus surge in output next year.

Low interest rates and improved credit conditions are finally working their magic on demand. Even the squeeze on living standards should, with a fast-improving jobs market, be over by late next year.

All good then, at least from the Government's perspective? Unfortunately not. It's still far too early to make that sort of judgment, for what we are seeing is very much the wrong sort of growth. "Low interest rates and rising house prices are the opposite to the UK's long-term needs," says Simon Wells, chief UK economist at HSBC. Much the same point is made by Michael Saunders at Citi: "The rebound is led by demand rather than supply-side improvements, and is not rebalancing the economy towards investment and exports."

Regrettably, the Government has not addressed the deep structural faults at the heart of the economy - the results of a decades-long failure to live within our means. It comes to something when splashing the cash takes priority over investment in the country's infrastructure and energy needs.

For evidence of what's gone wrong, there are two key statistics. One is the "current account deficit", which measures the shortfall between what the nation earns abroad and what it spends. Britain has not been in current account surplus for 30 years, and shows few signs of changing. Last year, the deficit was 3.8 per cent of GDP, and in the first quarter of this year, it was an astonishing 5.5 per cent. Despite a massive 20 per cent plus devaluation in the pound since the start of the financial crisis, which theoretically makes exports more competitive and imports less so, we cannot get over our addiction to all things foreign.

The other measure of economic ill-health is "gross fixed capital formation", which tells us how much of our economic output is being invested rather than consumed. At just 14 per cent of GDP, it's by far the lowest among the advanced countries, and has been for years. On both exporting and investment, Britain is failing on a monumental scale.

Policy-makers pay lip service to the idea of more balanced, sustainable growth, but act differently, with measures to boost demand in what remains in many sectors a profoundly supply-constrained economy.

Source: Adapted from Jeremy Warner, *The Daily Telegraph*, 18 Oct 2013

Table 2: Key Economic Indicators of the United Kingdom

	2009	2010	2011	2012	2013
Growth in GDP, constant prices (% change)	-4.3	1.9	1.6	0.7	1.7
Unemployment rate (%)	7.6	7.9	8.1	8.0	7.6
Current Account Balance (US\$ billion)	-64.8	-62.7	-43.4	-98.2	-119.9

Table 3: Key Economic Indicators of China

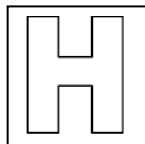
	2009	2010	2011	2012	2013
Growth in GDP, constant prices (% change)	9.2	10.4	9.3	7.8	7.8
Unemployment rate (%)	4.3	4.1	4.1	4.1	4.1
Current Account Balance (US\$ billion)	243.3	237.8	136.1	215.4	182.8

Source of Tables 1 and 2: World Economic Outlook database, International Monetary Fund

Questions

- (a) Compare the change in China's current account balance with that of the United Kingdom between 2009 and 2013. [2]
- (b) Explain **one** example of how a government's tackling of an immediate economic problem could lead to a challenge in the longer term. [2]
- (c) With reference to Extract 6, explain a possible reason why despite a massive devaluation of the pound, UK's current account deficit rose further. [2]
- (d) With reference to the data, explain how urbanisation would affect China's economic well-being. [6]
- (e) Discuss why the economic growth in the UK might be "the wrong sort of growth". [8]
- (f) According to Extract 4, "resilient dynamism means tackling immediate problems and long-term challenges at the same time." With reference to the data and your own knowledge, discuss the appropriate policy measures you would recommend for China to achieve "resilient dynamism". [10]

[Total: 30]



NATIONAL JUNIOR COLLEGE
SH2 Preliminary Examinations for General Certificate of Education Advanced Level
Higher 2

ECONOMICS

9732/02

Paper 2: Essay Questions

27 August 2015

2 hour 15 minutes

Additional Materials: Answer Paper

READ THESE INSTRUCTIONS FIRST

Write your name and subject class on all the work you hand in.

Write in dark blue or black pen.

You may use an HB pencil for any diagrams or graphs.

Do not use staples, paper clips, glue or correction fluid.

DO **NOT** WRITE IN ANY OF THE MARGINS.

Answer **three** questions in total, of which **one** must be from Section A, **one** from Section B and **one** from **either** Section A or Section B.

Start each question on a **new** piece of paper.

At the end of the examination, fasten all your work securely with the cover pages given [**one cover page for each question**].

Fill in the necessary information on the cover pages.

The number of marks is given in brackets [] at the end of each question or part question.

This document consists of **7** printed pages; including 1 blank page and 3 cover pages.

Answer **three** questions in total.

Section A

One or two of your three chosen questions must be from this section.

1 In recent years, prices of residential properties have risen at a much faster rate as a result of rapid economic growth. One of the cooling measures by the Singapore government is the release of more land for the development of private residential properties.

(a) Compare the possible effects of economic growth on the prices of different types of residential properties. [12]

(b) Discuss the usefulness of demand elasticity concepts in explaining how the above cooling measure might affect consumers' expenditure on different types of residential properties in Singapore. [13]

2 (a) Explain why prices in an oligopolistic market tend to be more stable than that in a perfectly competitive market when faced with an increase in costs of production. [10]

(b) Companies often find it more profitable to charge different prices for the same product to different groups of consumers.

Discuss whether it is beneficial to society for firms in an oligopolistic market to adopt the above approach. [15]

3 In the UK, primary and secondary education in the state schools is provided free of charge whereas in Singapore, all school pupils are required to pay school fees which are highly subsidised.

Explain why government intervention is advocated in the market for education and assess the economic case for the different approaches in the UK and Singapore. [25]

Section B

One or two of your three chosen questions must be from this section.

- 4 (a) Explain the trade-offs in macroeconomic objectives that Singapore is likely to face when it allows the exchange rate of the Singapore dollar to appreciate. [10]
- (b) Discuss the alternative macroeconomic policies that the Singapore government can adopt to tackle these trade-offs. [15]
- 5 “In a severe economic recession, such as that experienced by the US in 2008, households should not be encouraged to save and the use of monetary policy may lose its traction.”
- (a) Explain why households should not be encouraged to save during an economic recession. [10]
- (b) Discuss whether the use of monetary policy is the least appropriate in trying to pull the US economy out of a recession. [15]
- 6 Discuss the view that the extent to which countries benefit from globalisation depends mainly on the type of comparative advantage that the country has. [25]

National Junior College Economics Department

Preliminary Examination 2015 Answer Booklet

**Senior High 2
H2 Economics
(9732/02)**

Case Study 1 Suggested Answers:

(a)	(i)	<p>Describe the trend in Revenue Passenger Kilometers from 2008 to 2013.</p> <p>Revenue Passenger Kilometers shows an increasing trend [1m], with the exception of year 2009 where RPK fell. [1m]</p>	[2]
	(ii)	<p>Suggest 2 reasons to account for the trend in Revenue Passenger Kilometers in (ai).</p> <p>Demand factor: Increasing world income → Demand increases → Volume of air travel increases [1m]</p> <p>Supply factor: In Extract 1-More carriers entering the market—Increase in supply of carriers → Volume of air travel increases [1m]</p>	[2]
(b)		<p>Compare the likely price elasticity of demand values for short haul and long haul flights. Explain your answer.</p> <p>Compare: Demand for short haul's flights are relatively price elastic ($PED > 1$) <u>while</u> demand for long haul's is relatively price inelastic ($PED < 1$) [1m] Reasons: Short haul flights have more substitutes available such as rail/sea <u>while</u> long haul flights have few/no substitutes. [1m]</p> <p>OR</p> <p>Compare: Demand for short haul's flights are relatively price inelastic ($PED < 1$) <u>while</u> demand for long haul's is relatively price elastic ($PED > 1$) [1m] Reasons: Short haul take up a relatively low proportion of income <u>while</u> long haul flights take up a large proportion of income. [1m]</p>	[2]
(c)		<p>Explain how liberalisation of the EU aviation market has affected the survival of traditional carriers.</p> <p>Traditional carriers and low cost carriers are substitutes in consumption [1m]</p> <p>Due to increasing competition from low cost carriers → Led to falling demand/ AR for traditional airlines as consumers are switching to low cost carriers. [1m]</p> <p>As revenue falls, assuming costs constant/increases, there is a possible <u>erosion of profits or a traditional airline makes losses</u> and hence, will not survive/ will shut down. [1m]</p> <p>If its total revenue is unable to cover total variable cost (or $AR < AVC$), the airlines will shut-down in the SR to minimize loss. [1m] OR</p> <p>Of its total revenue is unable to cover total cost ($AR < AC$), the airline will exit the industry in the LR. [1m]</p>	[4]
(d)		<p>Given the information in Table 1, identify the market structure of the US Airline industry. Justify your answer.</p> <p>Oligopoly [1m] Few dominant firms holding 80% of the market share [1m]</p>	[2]
(e)		<p>Discuss the view that the merger between US Airways and American Airways is undesirable.</p> <p>Introduction: The merger may bring about desirable and undesirable on different groups:</p>	[8]

consumers, producers and society.

Thesis: The merger between US Airways and American Airways is undesirable

Impact on Producers

Cost Disadvantage to American Airlines

When the airline firm expands beyond a certain size, costs per unit of output may start to increase despite the continued presence of sources of economies of scale. This is due to the increasing significance of sources of diseconomies of scales which are primarily managerial in nature. The sources of internal diseconomies of scale are identified as follows:

(Any one of the Dis-EOS below)

Loss of control

The problem of monitoring work performance of different sections in the airlines business such as pilots, cabin crew, maintenance of aircrafts, engineers, cleaners, customer service officers is a difficult task. It will also mean that staff who once worked for American/US airways will now be absorbed into one airlines-American Airlines. Extract 2 mentioned that challenges remain for the new airline as previous mergers have been hampered by difficulties in merging staff and technology that have taken years to iron out. These large number of workers may feel lost in the large new organisation and it may result in lower motivation → lower productivity and thus higher average costs → Decrease in profits

Lack of coordination and communication

As the airlines grow bigger, restructuring is bound to take place and there will be streamlining of job scopes resulting in a retrenchment of staff. The staff will need to take care of administrative matters of both institutions and thus might face difficulties with coordination and communication of new directives and policies between departments. This could potentially increase the average costs.

Revenue Disadvantage to American Airlines:

American Airlines had to give up the major gate slots and take-offs at major US airports. Hence there could be a fall in demand for their service since consumers may would prefer to use such major airports and gateslots. A fall in demand will mean a fall in total revenue for American Airlines.

Other rival airlines in the aviation industry:

The merger of 2 airlines to form the world largest airlines could result in American Airlines having great monopoly power or even dominated the US aviation industry. American airlines may be able to earn higher profits due to cost savings earned from IEOS and use it to innovate and do branding to attract large customers. As mentioned in Extract 2, the Justice Department gave the \$11bn merger the go-ahead only after the 2 airlines agreed to address the market dominance issue. In order to address anti-trust concerns, the 2 airlines gave up gate slots and take-offs at major US airports including Washington DC's Reagan national, New York's LaGuardia, Boston's Logan and LAX in Los Angeles. This showed that 2 airlines that merged had a huge consumer base that they had to give up slots so as not to take away the customer pie from other airlines the industry.

However, we may not be sure if these antitrust laws will hold in the future and

	<p>other airlines with smaller market share such as Delta, United may end up with lower revenues and profit ceteris paribus.</p> <p><u>Impact on consumers</u></p> <p>Extract 2 wrote that the merger may result in prices being driven up. Consumers may end up paying higher prices as American Airlines have the monopoly power after merger. They may exert market dominance and charge higher prices for flight tickets, lowering consumer surplus.</p> <p>Poor service could result as mentioned in extract 2 as they are able to have the monopoly power, lacking incentive to be different from their rival airlines.</p> <p><u>Impact on Society</u></p> <p>American Airlines may end up dominating the aviation after the merger as the extract said that consumer, rival groups and travel agents were against such a merger that may will create "irreparable injury" to the domestic airline industry. Thus, American Airlines may end up with the largest market share faces a relatively more price inelastic demand curve, is able to restrict output and charge a higher price. Thus the difference between Price and Marginal Cost would be widened, resulting in an outcome further away from the allocatively efficient output, increasing deadweight loss.</p> <p>If market power is exploited, there could also be greater inequity if Amercian Airlines reap excessive profits at the expense of consumers and other firms. The income of shareholders or top management of the airlines increases and thus results in greater income inequality.</p> <p>Anti-Thesis: The merger between US Airways and American Airways is desirable</p> <p><u>Impact on Producers</u></p> <p>Cost Advantage for American Airlines</p> <p><u>Reduction in costs and increase in profits:</u> As mentioned in Extract 2, the merger was vital for the 2 airlines to cut costs and it allowed the biggest airline in the world to be formed. The merger may allow for Internal Economies of scale (EOS) to be achieved. The significant average costs savings that can be reaped will allow American airlines to have an increase in profits, assuming total revenue increases/remains constant.</p> <p><i>(Any one of the EOS below will be acceptable)</i></p> <p><u>Indivisibilities</u> The aircrafts which are considered capital equipment come in a fixed productive capacity. With the merger, it will mean that the airlines can optimally utilize such indivisible capital equipment which they have ordered - 600 new aircrafts, and thus will be able to spread their cost over the large number of customers, thereby lowering average costs.</p> <p><u>Organizational Economies</u> With a larger airlines company, individual administrative departments can specialize in particular functions. There can also be centralized administration of the merged airlines; one human resources department could administer all the wages. Also when the 2 airlines merged, only one finance department and one human resource department is now needed instead of two. Hence, cost savings can be reaped when such rationalisation takes place.</p> <p><u>Risk-bearing economies</u></p>	
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	<p>The merged airlines can diversify its risks more efficiently due to its large scale operations and is more likely to have enough resources to deal with a potential contingency. The merger allowed for the American Airlines to operate in several routes and destinations as Extract 2 mentioned that there are 6,700 daily flights to more than 330 destinations in more than 50 countries. Hence losses in one market can be offset by gains in other markets. This reduces the average costs associated with uncertainty. For example, if Greece is facing a crisis and flights are reduced to this destination, losses can be offset by gains in other destinations such as UK, Germany.</p> <p>Managerial Economies Specialisation and division of labour</p> <p>Revenue Advantage for American Airlines</p> <p><u>Branding</u> From Extract 2, it mentioned that the merger created the largest airline in the world. This will improve their branding as an even more established and recognised airline that surpasses other smaller airlines such as United Airlines or Delta Airlines (Table 1). This will result in an increase in number of customers → Increasing demand for air travel with American airlines → Increasing total revenue → Increase in profits (assuming costs constant/decreases)</p> <p><u>Increase in Market Share</u> The 2 airlines will face less competition and will therefore gain greater market share after the merger. The customers who once took US airways or American airways will probably be now under American Airlines. It may encourage American airlines to continue to keep these customers through product innovation, or better airlines promotions. This will result in an increase in number of customers → Increasing demand for air travel with American airlines → Increasing total revenue → Increase in profits (assuming costs constant/decreases)</p> <p>Other rival airlines in the aviation industry: Due to the antitrust laws put in place by the US Justice Department, American airlines may not have that strong monopoly power. Instead they have to adhere to certain laws such as not fighting with other rivals at the airport for gate slots as mentioned in extract 2. This will still allow rival firms like Delta, United to gain market share to increase revenue and profits ceteris paribus.</p> <p><u>Impact on consumers</u> More variety and accessibility: Consumers will have easier and more access to destinations due to more frequency of flights as well as more destinations available. This is supported in Extract 2 where merger will a global network of nearly 6,700 daily flights to more than 330 destinations in more than 50 countries.</p> <p>Higher profits earned by American airlines could be used for innovation to provide better quality products such as in flight entertainment, flight chairs, towels, better services, products etc.</p> <p>Lowered prices due to cost savings being passed down by the producers, hence higher consumer surplus.</p> <p><u>Impact on Society</u></p>	
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	<p>Antitrust laws stipulated by the US Justice Department such as taxing American airlines if they have excessive profits could reduce the equity issue.</p> <p>Evaluative Conclusion:</p> <p>The merger of US and American Airways has both positive and negative impacts on consumers, various producers and society.</p> <p>Whether the entry is desirable or not depends on the level of competition in the market after merger and the market share of each firm.</p> <p>It also depends on whether the anti trust laws put in place by the US Government will have an effect of mitigating or minimising the negative effects of the merger e.g: Taxation in order to redistribute the excessive profits.</p> <p>It should also be noted that without the merger, US Airways and American Airways may not be able to survive and should they eventually close down, it could also have adverse impact on society such as less competition, loss of jobs and increase in prices.</p> <p>Mark Scheme</p> <table border="1"> <thead> <tr> <th>Level</th> <th>Descriptors</th> </tr> </thead> <tbody> <tr> <td> <p>L3 5-6</p> </td> <td> <ul style="list-style-type: none"> • Well explained impact on all 3 groups, both thesis and antithesis. • Consistent use of case materials to support answer. </td> </tr> <tr> <td> <p>L2 3 – 4</p> </td> <td> <ul style="list-style-type: none"> • Balanced argument on at least 2 groups which considers both positive and negative effects. However, gaps in analysis. • Some use of case material to support answer </td> </tr> <tr> <td> <p>L1 1 – 2</p> </td> <td> <ul style="list-style-type: none"> • A few valid points made incidentally in an irrelevant context OR • Well-explained impact on only 1 group (consumers, producers or society) OR • Briefly explained impact on 2 groups. • Argument may be one-sided (i.e. either positive or negative impact) • Little or no use of case material. </td> </tr> <tr> <td> <p>E2 (2m)</p> </td> <td> <ul style="list-style-type: none"> • Judgment based on analysis on the impact of merger between the 2 airlines. i.e: Good discussion of either which group benefits more or whether there are more positive or negative effects using appropriate criteria. For e.g. if the level of competition in the industry and the market share of each firm. </td> </tr> <tr> <td> <p>E1 (1m)</p> </td> <td> <ul style="list-style-type: none"> • Mainly unexplained judgment on the impact of merger between the 2 airlines i.e: Attempts to consider which group benefits more or whether there are more positive or negative effects. </td> </tr> </tbody> </table>	Level	Descriptors	<p>L3 5-6</p>	<ul style="list-style-type: none"> • Well explained impact on all 3 groups, both thesis and antithesis. • Consistent use of case materials to support answer. 	<p>L2 3 – 4</p>	<ul style="list-style-type: none"> • Balanced argument on at least 2 groups which considers both positive and negative effects. However, gaps in analysis. • Some use of case material to support answer 	<p>L1 1 – 2</p>	<ul style="list-style-type: none"> • A few valid points made incidentally in an irrelevant context OR • Well-explained impact on only 1 group (consumers, producers or society) OR • Briefly explained impact on 2 groups. • Argument may be one-sided (i.e. either positive or negative impact) • Little or no use of case material. 	<p>E2 (2m)</p>	<ul style="list-style-type: none"> • Judgment based on analysis on the impact of merger between the 2 airlines. i.e: Good discussion of either which group benefits more or whether there are more positive or negative effects using appropriate criteria. For e.g. if the level of competition in the industry and the market share of each firm. 	<p>E1 (1m)</p>	<ul style="list-style-type: none"> • Mainly unexplained judgment on the impact of merger between the 2 airlines i.e: Attempts to consider which group benefits more or whether there are more positive or negative effects. 	
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(f)	<p>Discuss the extent to which the market based mechanisms in Extract 3 are appropriate in addressing the problem of pollution in the airlines industry.</p>	<p>[10]</p>												

Identify the market failure in the airlines industry:

Negative externalities from carbon emissions: some of the costs associated with the production or consumption of airline service 'spills over' onto third parties, that is, to parties other than the immediate seller or buyer, for which no compensation was paid.

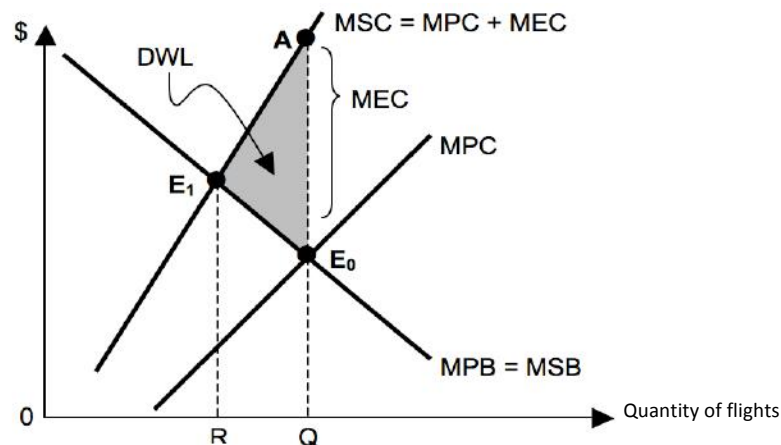
Explain the market failure in the airline industry in detail:

Negative externalities from Production occur when private production creates an external cost to society that affects third parties as a 'spill-over effect' that is not internalised by private households and/ or firms. This results in a divergence between marginal private cost and marginal social cost.

Explain how 3rd parties are affected as a result:

Air travel may release harmful carbon and greenhouse gas emissions, which pollutes the air and cause global warming. For instance, 3rd parties not involved in the production nor consumption of airtravel such as farmers living near coastal areas may suffer from rising sea levels as a result of global warming and experience loss of agricultural output.

Identify the MPB and MPC of producing air flights.



Producers maximise their profits by producing at the point where their marginal private benefit is equal to their marginal private cost. With reference to figure 1 above, the free market equilibrium would be 0Q units of flights where MPB=MPC.

0Q units of flights however is not the socially optimal level of output. This is because the firm only considers the marginal private cost that it incurs such as the cost of the petrol, the cost of employing pilots and air stewardess as well as the cost of the aircraft required to produce the air travel.

The firm has not considered the external costs such as the release of carbon and greenhouse gases into the air as it produces the air travel. These costs are however incurred by the general public and hence there is a divergence between the marginal private cost and the marginal social cost. The full opportunity cost to society is represented by the MSC, which lies above the MPC curve by the amount of the additional external cost. (i.e. MSC=MPC+MEC).

Assuming that the external benefit (MEB) in the private exchange of air travel is negligible, then MSB=MPB+MEB and MEB=0; MSB=MPB.

The socially optimal level of air travel production would actually be where $MSB=MSC$ at the level of OR units.

The free market has actually resulted in an **overproduction** of air travel by RQ units. Society would actually be better off if these units of air travel were not produced & consumed. At the free market equilibrium, the marginal social cost of producing OQ units of air travel is given by point A but the marginal social benefit to society is lower at E_0 . This means that society actually values the production of the OQ^{th} unit of air travel less than what it costs society to produce it. This is true for all units of air travel from $R-Q$ where the value that society places on the air travel is less than the costs to society.

The welfare loss to society due to the overproduction is thus represented by area E_1AE_0 in figure 1 above. The firm has failed to internalise the external costs, hence there is an overproduction, which results in allocative inefficiency causing a dead-weight loss to society. (i.e. total welfare to society is less than it should be). To achieve allocative efficiency, output should be reduced to OR units.

Discuss the extent to which the market based mechanisms in Extract 3 is appropriate in addressing the market failure in the airlines industry

The market based mechanisms mentioned in Extract 3 refer to “carbon credits” and “placing a price on carbon dioxide and other greenhouse gases” through taxation.

Explain how the market based mechanism (carbon credits) is appropriate in addressing the market failure in the airlines industry.

The system of tradable permits is a combination of command-and-control and market-based system of resolving externalities. Each firm is given a permit to produce a given level of pollution. If the firm produces less pollution than what they are legally permitted to produce, the firm is given a credit. This credit can then be sold to another firm, allowing the other firm to exceed its original limit. Similar to Pigovian taxes, polluting firms internalise the externality of pollution as there is an opportunity cost of polluting (i.e. what they could receive by selling their permits).

The overall level of emissions is determined by a command-and-control method, whereas their distribution is determined by the market.

This mechanism is appropriate in addressing the market failure in the airline industry because the principle of tradable permits can be used as the basis of international agreements on pollution reduction. Each airline could be required to achieve a certain percentage reduction in a pollutant (e.g. CO_2 or SO_2), but any airline exceeding its reduction could sell its right to these emissions to other (presumably richer) airlines.

This mechanism would offset growth in airlines’ greenhouse gases to tackle pollution from the industry, which is responsible for about 2 percent of greenhouse gases globally.

Limitation of carbon credits:

As mentioned in Extract 3, airline companies can top up their permit quota with carbon credits – awarded by the UN to projects that cut emissions in developing countries, such as solar panels or windfarms. As such, this allow airlines simply to buy cheap carbon credits to offset their emissions, instead of making real reductions in the aviation sector itself, resulting in a greater amount of greenhouse gases emitted by airlines than what they are emitting currently.

There seems to be an oversupply of carbon permits, causing them to be sold at rock bottom prices. This does not give producers the incentive to find new ways to cut down on their emissions.

The market-based mechanism of carbon credits is mainly supported by the EU and its inability to get the needed support from all airlines and countries to collectively reduce carbon emissions as an industry poses a challenge to the extent to which the market failure can be addressed. For instance, countries like China and India voiced concerns about implementing “a resolution in favour of a market-based mechanism to help address airlines’ emissions.”

Explain how the market based mechanism (taxation) is appropriate in addressing the market failure in the airlines industry.

The government can levy a **specific tax at the socially optimal level of output** that approximates the value of external costs (MEC) generated per unit of output. Through this tax, the government attempts to make the offending firm(s) *internalise the external costs*.

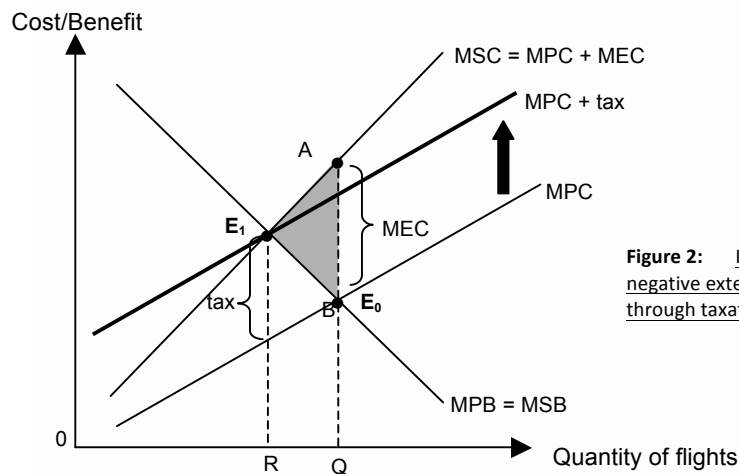


Figure 2: Internalising negative externality through taxation

In Figure 2, a specific tax that is equal to BE_1 per unit will increase the firm's unit cost, shifting the MPC curve upwards to $(MPC + tax)$, which coincides with the socially optimal equilibrium of E_1 . The result is that the private equilibrium output will decline so that it corresponds with the socially optimum level of output of OR units. There would therefore be no over-production of the good as $MSB = MSC$ and allocative efficiency is attained.

The reduction in production and consumption results in the removal of the dead-weight loss to society represented by area AE_0E_1 – the gain due to the reduction in production (area E_1AQR) offsets the loss due to the reduction in consumption represented by area E_1E_0QR .

Taxation is appropriate in addressing the market failure in the airline industry because it gives incentives to firms to find cleaner ways of production. The tax acts as an incentive over the longer run to reduce pollution.

Limitation of taxation:

Firstly, there is a problem of assessing the exact monetary value of external costs at the socially optimal level of output (e.g. measuring the external costs generated by negative externalities like air pollution), which in turn implies that the appropriate level of tax is difficult to determine. Too high a tax amount

would lead to a less than optimal level of output, while too low a tax amount would still result in over-production. For instance, a tax imposed at output OQ (where tax amount = AE_0) will result in over taxation and underproduction.

Secondly, the administrative costs of collecting the tax may be very high. Firms may also have the incentive to evade such taxes.

Thirdly, a tax may have a regressive effect on lower income groups. Long-haul air travel that have a price-inelastic demand would lead to the lower income groups having to pay more due to the tax.

Conclusion

These market based mechanisms aim to achieve a socially optimum level of output by making producers internalise the external cost of the pollution. However, there are limitations which may make the actual implementation and enforcement of these measures difficult. Whether these market based mechanisms are appropriate in addressing the market failure depends on whether there can be agreed details as to how governments should implement a market-based mechanism to cover all airlines, and not just within EU itself and agreeing on a global limit on greenhouse gas emissions from air travel. It also depends on the enforcement of these measures which may differ from country to country.

These market based mechanisms should also be complemented with non-market based measures such as legislations to curb emissions of carbon dioxide into the air.

Mark Scheme

L3	6-8 marks	<ul style="list-style-type: none"> • Excellent explanation of negative externality of production as the source of market failure in the airline industry. • Excellent rigour of elaboration (e.g. inclusion of -ve externalities diagram) • Excellent balance in elaboration of the market based mechanism in addressing the market failure and its limitations. • Depth of content and rigour of analysis are excellent. • Excellent reference to case material in explanation.
L2	4-5 marks	<ul style="list-style-type: none"> • Good explanation of negative externality of production as the source of market failure in the airline industry. • Good rigour of elaboration (e.g. inclusion of -ve externalities diagram) • Good balance in elaboration of 1 market based mechanism in addressing the market failure and its limitations. • Some rigour of analysis. • Some reference to case material in explanation.
L1	1-3 marks	<ul style="list-style-type: none"> • Limited knowledge on the source of market failure in the airline industry with either mere listing or limited explanation. • Limited scope of discussion in market based mechanism in addressing the market failure and its limitations. • Weak rigour of elaboration

			<ul style="list-style-type: none"> No or minimal reference to case material in explanation.
	E2	2 marks	<ul style="list-style-type: none"> Well-reasoned overall assessment of whether the market-based mechanisms are appropriate supported by analysis
	E1	1 mark	<ul style="list-style-type: none"> Some attempt at assessing whether the market-based mechanisms are appropriate

Case Study 2 Suggested Answers:

- (a) Compare the change in China's current account balance with that of the United Kingdom between 2009 and 2013. [2]**

China's current account balance shows a decrease in its surplus [1 mark] over the period whereas the UK's current account balance shows an increase in its deficit [1 mark] over the same period.

Marking tip:

No marks if student states that the current account balance has "decreased/declined" without mentioning surplus/deficit.

Can accept if students state that China's CA balance is in surplus while UK's CA balance is in deficit throughout the period and both worsened.

Examiner comments:

- Use the term "increase/decrease surplus/deficit rather than improve/worsen.
-

- (b) Explain one example of how a government's tackling of an immediate economic problem could lead to a challenge in the longer term. [2]**

Several possible answers:

- Using expansionary fiscal policy to tackle the immediate problem of recession could lead to excessively high government debt. By increasing government spending and reducing taxes to stimulate the economy, the government may end up with a large budget deficit which has to be financed by borrowing. This leads to an increase in the government debt. This could pose a challenge in the future as the government might have difficulty repaying the debt and thus trigger a debt crisis.
- Using expansionary monetary policy such as quantitative easing to tackle a current recession could lead to an excessive increase in money supply. This could lead to high inflation in the longer term when the economy has recovered and there are supply constraints, resulting in "too much money chasing too few goods", thus causing prices of goods and services to increase rapidly. If inflation becomes too high in the future (eg. hyperinflation), it can be difficult to control. (Can also explain in terms of increase in AD reaching full employment resulting in DD-pull inflation eventually)
- Government encouraging investment in high skill and high technology industries to tackle an economic slowdown could lead to structural unemployment in the longer term, as unemployed workers do not have the right skills to be redeployed to the growth sectors and become structurally unemployed in the long term.
- Government adopting protectionistic policies eg tariff barriers to correct a current trade deficit or protect domestic industries to save jobs could

lead to uncompetitiveness of domestic industries, greater inefficiency and wastage of resources in the longer term.

Any reasonable example and explanation which has the following:

1. A government action/policy to tackle a current economic issue
2. A problem in the future caused by the government action/policy. The problem in the longer term should be fairly serious and long term in nature (hence a “challenge”) and not just a short term cyclical movement that can be easily tackled by stabilisation policies.

1 mark for giving a correct example. 1 mark for the explanation.

- (c) With reference to Extract 3, explain a possible reason why despite a massive devaluation of the pound, UK’s current account deficit rose further. [2]**

One possible reason for the increasing current account deficit is that UK’s expenditure on imports continued to rise despite the devaluation of the pound. This could be due to UK’s demand for imports being price-inelastic which causes the fall in quantity demanded to be less than proportionate to the increase in price of imports, resulting in an increase in import expenditure. As mentioned in Extract 3, the British seem to have an “addiction for all things foreign”, suggesting that their demand for imports may be price-inelastic.

(Can also accept if students explain the dd for imports may have increased due to their preference for foreign goods)

1 mark for identifying the rise in imports as the possible reason

1 mark for the explanation.

- (d) With reference to the data, explain how urbanisation would affect China’s economic well-being. [6]**

Urbanisation refers to an increase in the proportion of people living in urban areas (ie cities and towns) compared to rural areas (ie the countryside). According to Extract 2, the China government has embarked on a 10-year urbanisation plan with the aim of bringing 400 million people to the cities, and increasing the proportion of the population living in urban areas from 50 percent to 60 percent by 2020.

One of the main effects of urbanisation is a reduction of income inequality. As mentioned in Extract 2, China currently has high income inequality, with 13 percent of China's population living on less than \$1.25 per day and average urban disposable income just 21,810 yuan (US\$3,500) a year. People living in rural areas tend to be poor due to the relatively backward and undeveloped state of these areas, where many may be unemployed or underemployed in traditional farms. By moving to the urban areas, they will be able to find better-paying jobs and increase their income. This helps to reduce the income gap between the rich and poor, and thus increase the economic welfare of the

people.

Another effect is the increase in consumption which will then contribute to the growth of the economy. As mentioned in Extract 2, urbanisation could help to put China “on a path to domestic consumption-led growth to replace three decades of investment and export-driven development.” As people move from rural to urban areas, they not only experience an increase in their income through getting better-paying jobs, they are also likely to spend more on consumption as a result of the change in lifestyle and greater variety of goods and services available. This increase in consumption means an increase in AD which would help to generate further increases in income through the multiplier process, resulting in a more than proportionate increase in national income. The increase in economic growth generated by the rising consumption would also mean an increase in the economic well-being.

In addition, urbanisation also helps to generate economic growth through the increase in government spending. As mentioned in Extract 2, the government “will build homes, roads, hospitals and schools” to cater to the increasing urban population. The increase in government spending leads to an increase in AD which will result in a multiplied increase in national income through the multiplier effect. This also means an increase in per capita income and thus an increase in the economic well-being of the people. Also, government spending on public goods and merit goods such as transport and recreational facilities can be said to improve the material aspect of standard of living directly and thus economic well-being. Moreover, the government spending on infrastructure also increases the productive capacity of the country, thus increasing the potential growth of the economy and hence future economic well-being as well.

Marking Tip:

2 marks for each effect explained with reference to Extract.

Max 1 mark for each correct effect with no reference to Extract.

Max 5 for 2 effects well explained.

No credit for discussion of non-material/qualitative aspects of SOL (or social well-being)

- (e) **Discuss why the economic growth in the UK might be “the wrong sort of growth”.** [8]

Introduction:

Define economic growth – increase in real national income or GDP over a period of time.

Explain that economic growth comprises actual growth and potential growth.

Actual growth – actual increase in real output or equilibrium national income.

Can be due to increase in AD or SRAS

Potential growth – rate of increase in potential output or productive capacity.

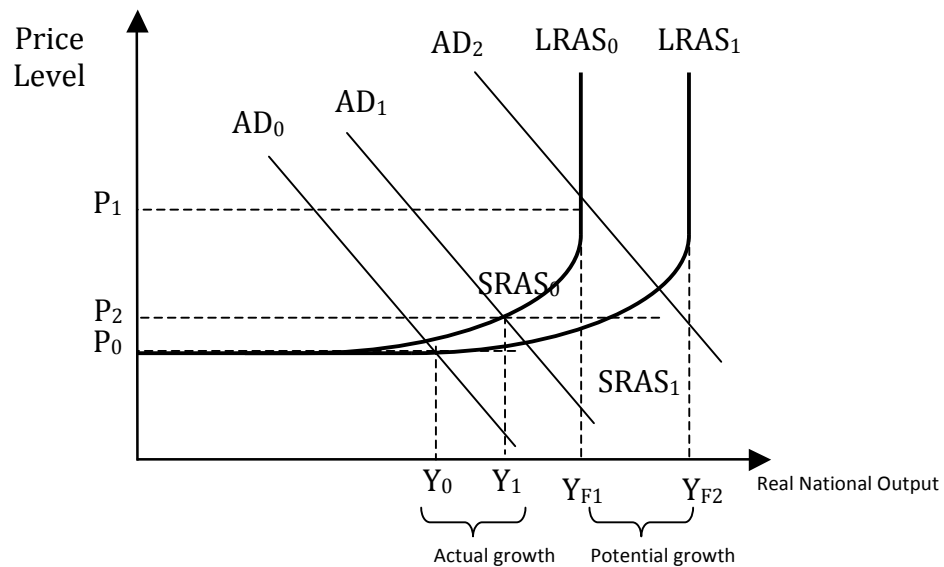
Shown by increase in LRAS.

- Explain the significance of actual and potential growth

For economic growth to be sustainable in the long term, actual growth should keep pace with potential growth. If actual growth is too low and falls below potential growth, there will be increase in spare capacity and unemployment. If actual growth exceeds potential growth, it could lead to increase in inflation as the economy eventually reaches full employment and there is a lack of capacity to increase output to meet rising demand.

Illustrate using AD/AS model:

Figure 1: Actual vs. Potential Growth using AD/AS model



As shown in Fig 1, the increase in AD from AD_0 to AD_1 and increase in SRAS from $SRAS_0$ to $SRAS_1$ leads to an increase in real output from Y_0 to Y_1 , which represents actual growth. Without any increase in productive capacity, the increase in AD from AD_1 to AD_2 will lead to inflationary pressure causing price level to increase from P_0 to P_1 . However, with potential growth shown by the increase in LRAS from $LRAS_0$ to $LRAS_1$, there will be an increase in spare capacity, bringing the price level down to P_2 . Hence, increase in potential growth enables an economy to achieve sustained economic growth without inflationary pressure.

Thesis: Explain why UK's economic growth is the "wrong sort of growth"

- UK's economic growth is driven mainly by demand, particularly consumption, without improvements in supply conditions. As mentioned in Extract 3, low interest rates and improved credit conditions have helped to fuel an increase in demand, driving house prices up in the process. This leads to an increase in the actual growth of the economy. However, without any increase in productive capacity or potential growth, the economy will face a lack of capacity to increase output, leading to inflationary pressure.

This is evident from the statement that the government has introduced "measures to boost demand in what remains in many sectors a profoundly supply-constrained economy."

- Economic growth that is driven only by consumption demand may also conflict with external stability. The increase in consumption may mean that the country is spending more on imports resulting in a balance of trade deficit. This seems to be the case in the UK as the current account deficit has been increasing over the years as shown in Table 1. According to Extract 3, the British appears to have an "addiction to all things foreign" as they continued to increase spending on imports despite the devaluation of the pound which makes imports more expensive.
- Another indication that the UK is having the wrong sort of growth is the relatively low level of investment measured by gross fixed capital formation. At just 14 per cent of GDP, it is by far the lowest among the advanced countries. The low level of investment means that there is little growth in productive capacity, which aggravates the supply constraints faced by the economy. This means that actual growth is likely to outstrip potential growth, resulting in increase in inflationary pressure.

Anti-Thesis: Explain why UK's economic growth might not be the "wrong sort of growth"

- As shown in Table 1, UK's unemployment rate is still relatively high at around 8%, while its growth rate has been weak since the recession in 2009. This suggests that there is still spare capacity in the economy as it has not reached its full employment equilibrium yet. The supply constraints could be applicable only to certain sectors rather than to the whole economy, and may be tackled by improving factor mobility. Hence, stimulating actual growth by increasing demand may not be wrong based on the current economic conditions in the UK. When the unemployment rate has fallen and the economy approaches full employment, the government can then focus on supply-side policies to increase the productive capacity of the economy.
- Consumption-led growth can also be appropriate as it reduces the country's vulnerability to external factors compared to growth that is driven by exports. For example, China's export-driven economic growth has resulted in global trade tensions, which prompted the government to focus on increasing domestic consumption as the new driver of economic growth. In a global recession, most countries will likely reduce their spending on imports, thus causing the UK's exports to fall. Hence, the government may have to rely on increasing consumption spending to stimulate economic growth, as export demand will likely be weak. In this case, UK's consumption-led economic growth might not be the wrong sort of growth.

Conclusion & Evaluation:

Whether UK's economic growth is the wrong sort of growth depends on the economic conditions and the time period. In the short-run, as the economy is still recovering from the global recession and unemployment is still relatively high, it may not be wrong to stimulate economic growth by increasing

consumption demand to tackle the immediate problems. However, in the long run, consumption-led growth alone will not increase productive capacity and the lack of potential growth could result in higher inflation instead. It also depends on the openness of the economy and its balance of payments position. If the country is highly import reliant and is experiencing a high current account deficit, then consumption-driven economic growth such as that of the UK may not be appropriate as it could worsen the country's current account deficit. However, if the country has been experiencing a persistent and high balance of payments surplus, it may not be wrong to increase consumption to drive economic growth even if it reduces the balance of payments surplus.

Mark Scheme

<p>L3 5-6 marks</p>	<ul style="list-style-type: none"> • Excellent two-sided discussion of why UK's economic growth might or might not be the wrong sort of growth • Excellent depth and rigour of analysis based on analytical framework such as AD/AS diagram to distinguish between actual and potential growth • Excellent breadth and scope of analysis covering a variety of arguments for both thesis and anti-thesis (at least 3 different arguments eg. 2 for thesis + 1 for antithesis or 1 for thesis and 2 for anti-thesis) • Arguments are contextualised and well supported by examples and reference to case materials
<p>L2 3-4 marks</p>	<ul style="list-style-type: none"> • Two-sided discussion of why UK's economic growth might or might not be the wrong sort of growth, but may not be well-developed <p>OR</p> <p>the discussion may one-sided but fairly well-developed with well-substantiated arguments</p> <ul style="list-style-type: none"> • There is some rigour of analysis in distinguishing between actual and potential growth, although depth may be limited • Some breadth and scope of analysis covering a variety of arguments for both thesis and anti-thesis (at least 2 different arguments eg. 1T + 1A or 2T or 2A) • Some reference to case materials to support arguments
<p>L1 1-2 marks</p>	<ul style="list-style-type: none"> • A brief or superficial answer that is not well-developed and lacking in analysis • Or largely irrelevant answer with a few relevant points that are incidental rather than coherently argued • There may be conceptual errors in the explanation • Little reference to case materials
<p>E2</p>	<p>A reasoned conclusion and judgement supported by analysis</p>

E1	Some attempt at an evaluative conclusion not supported by analysis
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- (f) **According to Extract 1, “resilient dynamism means tackling immediate problems and long-term challenges at the same time.” With reference to the data and your own knowledge, discuss the appropriate policy measures you would recommend for China to achieve “resilient dynamism”.** [10]

Introduction

To achieve “resilient dynamism,” China will need to tackle its immediate economic problems while at the same time looking into the longer term challenges. The appropriate policy measures will thus need to address the current economic issues and the long term challenges faced by China.

1. Current economic issues faced by China

- High income inequality

One of China’s main economic issues is the high income inequality. As mentioned in Extract 2, about 13 percent of China's population still live on less than \$1.25 per day, but yet China has one fifth of the world’s billionaires. It can be seen that despite the high double-digit growth enjoyed by China over the past few decades, poverty is still quite prevalent especially in the rural areas. It is hence the government’s priority to “spread the fruits of economic growth more evenly in the country of 1.3 billion” and “close the chasm between the country's urban rich and rural poor.”

- Growth slowdown

It can be seen from Table 1 that China’s growth has been slowing down to 7.8% in 2013 compared to the double-digit growth rates in the previous decades. Given China’s large population of 1.3 billion, this could have an adverse impact on the economic well-being of its people. Unemployment, however, remains stable at around 4% which is possibly close to full employment level.

- Worsening Current Account balance

China’s current account surplus has been declining in recent years, indicating a worsening balance of payments position. However, it still has a fairly high current account surplus of over US\$180 billion in 2013, so this may not be a significant problem

2. Longer term challenges of China

- Re-balancing growth

China is facing the need to re-balance its growth away from the investment-driven and export-oriented model to one driven by domestic demand. Although investments and exports have helped to generate high economic growth in China, it could lead to longer term challenges in the form of inefficiency, wastage of resources, instability due to global trade tensions and vulnerability to external shocks. As mentioned in Extract 2, “there are growing concerns that more fixed-asset investment would simply add to the inefficiency of China's state sector”. Excessive investment can mean an over-expansion of productive

capacity resulting in underutilisation of capacity and wastage of resources. For example, over investment in property development has resulted in large numbers of apartments and offices being unoccupied, reflecting a misallocation and wastage of resources.

- Pollution

China's high growth has been fuelled by the rapid expansion of manufacturing industries which have contributed to a severe pollution problem, even forcing people indoors and factories to close temporarily. If not tackled, the pollution problem can have a severe impact on the well-being of future generations and affect the future economic health of the country.

1. Appropriate policy measures for dynamic resilience – the government will need to combine policies to address the current economic issues with measures to tackle the longer term challenges

2a) Addressing Current Economic Issues:

To tackle income inequality:

- Redistributive policies

To deal with the high income inequality, the government can implement redistributive policies such as giving more subsidies and welfare aid to the poor. At the same time, the government can increase the progressivity of the income tax structure, taxing the rich at a higher rate while reducing the rate of tax on the poor.

Evaluation:

- Giving more transfer payments to help the poor could be a strain on the government budget and divert public funds from other more productive uses such as spending on infrastructure.
- Giving more welfare payments to the poor may encourage a "dependency" attitude as people may rely on getting government aid rather than work hard to increase their own income.
- If the tax structure becomes over progressive, it may be a disincentive for people to work hard to increase their income. This could result in a fall in work effort and productivity.

- Urbanisation

The government can encourage urbanisation by building more homes, schools and hospitals and use public campaigns and information dissemination to persuade people to move from rural to urban areas. With better jobs available in the cities, people's income will increase and this will help to reduce the income gap between the rich and poor. The government can also set up job agencies in the urban cities to help migrants from the rural areas to find jobs in the cities.

Urbanisation also helps to tackle the longer term issue of rebalancing growth. With increased proportion of people living in urban cities, there will also be an increase in consumption spending, thus expanding domestic demand and reducing the economy's dependence on investment and exports for growth.

Evaluation:

- Spending on building infrastructure in the cities to promote urbanisation is also a strain on the government budget and could result in the government incurring a budget deficit and lead to high government debt
- Urbanisation also comes with its associated problems such as overcrowding, increased crime rate and social tensions. If there are insufficient jobs in the city for the migrants from the rural areas, it could result in more jobless and homeless people in the cities.

2b) Addressing Longer Term Challenges:

To promote economic growth and re-balance growth:

- Stimulate consumption spending

As mentioned in Extract 2, unleashing the power of China's consumers is vital to China's economic future. There is a need to rebalance growth by reducing the reliance on investments and exports and expanding domestic demand. The government can implement policies to increase the disposable income of consumers such as reducing taxes especially for the lower income (as mentioned above as part of redistributive policies). As lower income households tend to have higher marginal propensity to consume (mpc), their increase in disposable income will lead to an increase in consumption spending. The government can also put money directly into people's pockets by giving direct subsidies or transfer payments to the poor such as shopping vouchers or welfare grants. This increases their disposable income and will thus encourage them to spend more. Urbanisation as mentioned above will also help to increase consumption as the lifestyle in the urban cities could encourage people to spend more compared to living in rural areas.

At the same time, increasing consumption leads to an increase in AD which induces further increases in consumption through the multiplier effect and eventually results in a multiplied increase in national income, thus addressing the problem of economic slowdown.

Evaluation

While increasing domestic consumption can help to reduce the economy's reliance on investments and exports and thus reduce the inefficiency and instability caused by over-reliance on them, it must also be balanced with appropriate supply-side policies to increase AS. Over-expansion of consumption demand may bring the economy to the Classical range of the AS, resulting in high inflation without any increase in real output as the economy has reached its full employment level. Hence, the economy still needs to maintain a certain level of investment to increase its productive capacity and ensure there is potential growth to prevent inflationary pressure from building up.

To address the challenge of environmental degradation and pollution

- Taxation – Pigovian tax

The government can impose a Pigovian tax to make firms pay for polluting the

environment. This has the effect of internalising the negative externalities generated by firms as they have to pay a tax on every unit of the good they produce. If the tax is equivalent to the marginal external cost due to pollution, then it will help to bring the market equilibrium to the social optimal output, thus achieving allocative efficiency.

Evaluation:

- It is difficult to determine the right amount of tax to impose. If the tax is too high, it could lead to under-provision of the good and reduce consumer welfare. If the tax is too low, it fails to reduce pollution sufficiently and inefficiency will persist in the economy.
- The tax revenue can be used to fund R&D to encourage the development and adoption of cleaner and greener technology by the manufacturing industries.

- Regulation

The government may impose regulation to control pollution. Such regulations may include imposing a limit to the amount of pollution firms are permitted to emit and imposing a fine if they exceed the limit. For example, during the Beijing Olympics, the Chinese government introduced a road rationing regulation in which only cars with even-number license plates are allowed to enter the roads on one day while those with odd-number license plates are allowed to enter the following day. The policy helped to reduce vehicle emissions significantly.

Evaluation:

- While regulation can help to reduce pollution effectively, it can also cause distortions in the market and can lead to inefficiency. A blanket restriction of the amount of pollution allowed to be generated by firms does not encourage the more efficient firms to cut down their emissions. It may even induce firms with lower emissions to increase their pollution level as they see it as a right given to them.
- Regulation has to be properly enforced to be effective, resulting in enforcement costs to society. Resources will need to be spent on enforcing the regulation such as monitoring the pollution levels of firms, pressing charges and collecting the fines from the firms etc. The costs of enforcing the regulation need to be weighed against the benefits of the reduction in pollution.

Conclusion:

For China to achieve resilient dynamism, it will need to reduce its high income inequality and stimulate economic growth, while at the same time rebalancing its growth to focus more on increasing domestic demand and addressing the longer term challenge of reducing pollution and improving their living environment. A combination of different policy measures will thus be required to address these issues and challenges. For example, redistributive policies such as progressive income tax may help to reduce income inequality but will not address the challenge of reducing inefficiency of investments and

environmental pollution. It thus needs to be supplemented by policies such as regulation or taxation to reduce pollution from factories and thus ensure the long term sustainability of its economy. Moreover, each policy has its own limitations and will not be able to address both the short term issues and long term challenges of the country at the same time. Hence a mix of policies is recommended to tackle both the short term and long term issues faced by the country.

Mark Scheme

<p style="text-align: center;">L3 6-8 marks</p>	<ul style="list-style-type: none"> • Excellent discussion of appropriate policy measures to address both current economic issues and longer term challenges faced by China • Good explanation of the current economic issues and longer term challenges faced by China with reference to case materials (at least one short term issue and one long term challenge) • The policy measures are well explained and evaluated. (At least 3 policies well explained) • Effective use of case materials as well as 'own knowledge' to support arguments and/or discuss the policies.
<p style="text-align: center;">L2 4-5 marks</p>	<ul style="list-style-type: none"> • Good discussion of appropriate policy measures to address both current economic issues and longer term challenges faced by China • Correct identification of the current economic issues and longer term challenges faced by China with reference to case materials but may not be well developed • The policy measures are appropriate but may not be well explained or may not be evaluated. (At least 2 policies well explained) • Limited use of case materials as well as 'own knowledge' to support arguments and/or discuss the policies.
<p style="text-align: center;">L1 1-3 marks</p>	<ul style="list-style-type: none"> • The answer is largely irrelevant with a few relevant points that are not clearly explained' • Current economic issues and/or longer term challenges may not be accurately identified • Policies may be inappropriate and/or do not address the issues and challenges directly • No reference to case materials or lack of recognition of context.
<p style="text-align: center;">E2</p>	<p>Well-reasoned evaluative conclusion supported by analysis</p>

	and examples
E1	Attempt at a reasoned conclusion that is not supported by analysis.

Paper 2**Essay Question 1**

In recent years, prices of residential properties have risen at a much faster rate as a result of rapid economic growth. One of the cooling measures by the Singapore government is the release of more land for the development of private residential properties.

- (a) Compare the possible effects of economic growth on the prices of different types of residential properties. [12]
- (b) Discuss the usefulness of demand elasticity concepts in explaining how the above cooling measure might affect consumers' expenditure on different types of residential properties in Singapore. [13]

Suggested answers for part (a)**Introduction**

- Depending on the different income elasticity of demand and price elasticity of supply values of the different types of residential, the effects of economic growth on the prices of different types residential properties would be different.

Body 1: Given different price elasticity of supply, explain how economic growth might likely affect the prices of residential properties that are considered to be of inferior good nature.

- An economy enjoying economic growth suggests lower willingness to buy goods they considered to be of inferior nature e.g. smaller public residential units such as 1-room or 2-room Housing Development Board (HDB) flats. This would result in a decrease in demand for smaller public residential units as illustrated by the shift of the demand curve from D_0 to D_1 in Diagram 1.

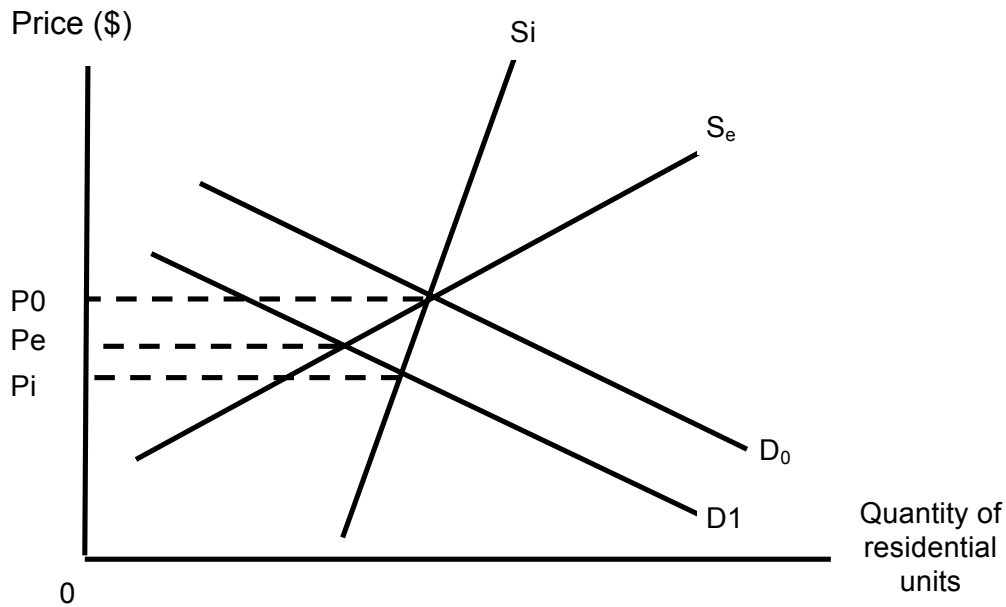


Diagram 1: Market for residential properties of inferior good nature

- The supply of, for example, 1-room HDB flat in the resale housing market would be relatively price elastic as illustrated by S_e . The prices of 1-room Housing Development Board (HDB) flats are likely to decrease insignificantly as illustrated from P_0 to P_e .
- For residential properties with relatively price inelastic supply (e.g. 2-room HDB flats in the new housing market) as illustrated by S_i , the decrease in prices would be significant as illustrated from P_0 to P_i .

Body 2: Assuming same price elasticity of supply, explain how economic growth might likely affect the prices of residential properties that are considered to be of normal good nature.

- The demand for residential properties of normal good nature (i.e. $YED > 0$) would increase and the increase would be large for those of luxury good nature (e.g. private residential units) as illustrated from D_2 to D_4 in Diagram 2, and small for those of necessity good nature (e.g. as 3-room or bigger HDB flats) as illustrated from D_2 to D_3 .

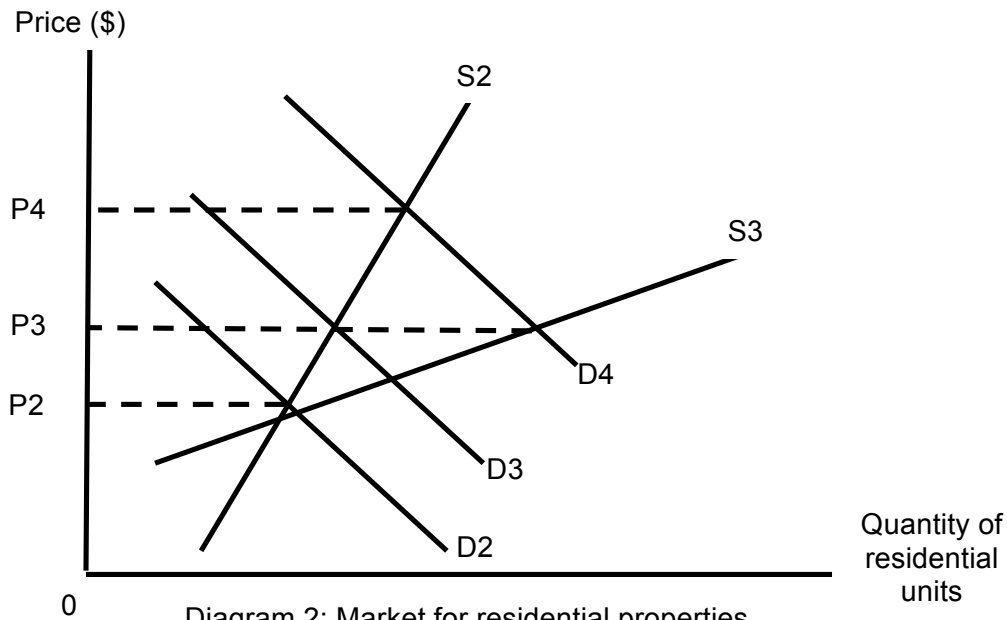


Diagram 2: Market for residential properties of normal good nature

- Assuming a price inelastic supply as illustrated by S₂, the prices of private residential units are likely to increase from P₂ to P₄ and the increase in prices of 3-room or bigger HDB flats from P₂ to P₄.

Body 3: Assuming different price elasticity of supply, explain how economic growth might likely affect the prices of residential properties that are considered to be of normal good nature.

- However, the magnitude of the increase in prices would also depend on the values of price elastic of supply (PES). For example, when the economy is enjoying economic growth, the increase in prices might be the same (i.e. from P₂ to P₃) for private residential units (e.g. private residential units in the resale market) as illustrated by S₃ and 3-room or bigger HDB flats (e.g. 3-room or bigger HDB flats in the new housing market) as illustrated by S₂.

Conclusion

- Depending on the different income elasticity of demand and price elasticity of supply values, the effects of the economic growth would be different on the prices of different residential properties.

Mark Scheme

Levels	Descriptors
<p>High L3 11-12</p>	<ul style="list-style-type: none"> • For an answer that shows: <ul style="list-style-type: none"> ➤ Excellent depth in analysis. <ul style="list-style-type: none"> ✓ Accurate, precise and clear use of economic concepts and analysis in all explanations. ➤ Excellent breadth in analysis. <ul style="list-style-type: none"> ✓ YED values are considered. ✓ PES values are considered. Supported by <ul style="list-style-type: none"> ➤ Well-labelled and well referred to diagrams. ➤ Contextualised examples. ➤ Logical structure.
<p>Low L3 9-10</p>	<ul style="list-style-type: none"> • For an answer that shows: <ul style="list-style-type: none"> ➤ Very good depth in analysis. <ul style="list-style-type: none"> ✓ Accurate and clear use of economic concepts and analysis in most explanations. ➤ Very good breadth in analysis. <ul style="list-style-type: none"> ✓ YED values are considered. ✓ PES value is considered. Supported by <ul style="list-style-type: none"> ➤ Well-labelled and well referred to diagrams. ➤ Contextualised examples. ➤ Reasoned structure.
<p>L2 6-8</p>	<ul style="list-style-type: none"> • For an answer that shows: <ul style="list-style-type: none"> ➤ Sufficient depth in analysis. <ul style="list-style-type: none"> ✓ Accurate use of economic concepts and analysis in most explanations. ➤ Sufficient breadth in analysis. <ul style="list-style-type: none"> ✓ YED values are considered. Supported by <ul style="list-style-type: none"> ➤ Well-labelled and well referred to diagrams. ➤ Examples are provided.

High L1 4-5	<ul style="list-style-type: none"> • For an answer that shows: <ul style="list-style-type: none"> ➤ Insufficient depth in analysis. <ul style="list-style-type: none"> ✓ Accurate use of economic concepts and analysis in some explanations. ➤ Insufficient breadth in analysis. <ul style="list-style-type: none"> ✓ YED is value considered.
Low L1 1-3	<ul style="list-style-type: none"> • For an answer that: <ul style="list-style-type: none"> ➤ Is largely irrelevant. <ul style="list-style-type: none"> ✓ Cause(s) of change is not related to economic growth. ✓ Effect(s) of change is not related to prices of different types of residential properties. ➤ Contains fundamental conceptual errors in analysis.

Examiners' Comments:

General Comments:

- This question was fairly attempted, with majority of the candidates scoring L2 marks. Candidates who were able to interpret the question fully and correctly with the relevant elasticity concepts will generally be able to score L3 marks.

Lack contextualisation or/and contextualized examples

- A number of candidates gave rather theoretical answers on the different types of residential properties in Singapore. These students tend to just write private and public housing, while some will just stated inferior, necessities and luxury goods with little contextualised examples.

Question Analysis/Extract Analysis:

- A number of candidates made changes to the supply of private houses. While the preamble stated that the supply of private residential land has increased, this was to be used in part (b) and not part (a). These candidates failed to read question carefully which only required the effects of "economic growth", affecting only the demand for different types of housing.

Content:

- A large majority of candidates did not analyse the effects of prices using Price Elasticity of Supply (PES). The effects of prices does not just depend on Income Elasticity of demand (YED) alone, but also the PES of the different housing types in Singapore.
- While most of the candidates brought in Income Elasticity of Demand (YED), there was a lack of justification of YED values. These candidates will just state that condominiums are luxury goods, without giving reasons. A better candidate will explain that condominiums are considered luxury goods as it has facilities such as swimming pools, tennis courts, privacy due to security guards present as compared to 4-room HDB flats which are necessities as these flats provide the basic functions of housing.
- A worrying number of candidates still have incorrect justification of YED values. It is incorrect to use proportion of income as justifications of YED values. These candidates used incorrect justification that bungalows are luxury goods because it takes up a large proportion of income while inferior goods such as 1 -room flat takes up a low proportion of income.
- A handful of students had a misconception that increase in demand of housing will increase the supply as producers will want to meet the increase in demand. This is

incorrect when we go back to the fundamentals of non-price determinants of supply. Instead, the correct explanation should be when demand increases for housing, it is quantity supplied that increases (movement along the supply curve) which accurately shows that suppliers do produce more now.

- *Some brought in PED which is irrelevant for part (a). This shows that they fail to read question carefully.*
- *A handful of students made changes to demand with no application to elasticity concepts at all.*

Structure/organization:

- *There was generally a clear structure for most scripts.*

Phrasing:

- *Candidates still tend to use inappropriate phrasing such as housing has elastic supply. Instead they should use proper phrasing such as the supply is price elastic or the house is price elastic in supply.*

Suggested answer to part (b)

Introduction

- The release of more land for the development of private residential properties which increases the supply of private residential properties would affect consumers' expenditure on private residential properties differently depending on the absolute value of their price elasticity of demand (PED). Given the decrease in prices of private residential properties which is a substitute in consumption to public residential properties, the demand and hence consumers' expenditure on public properties would decrease.

Body 1: Explain how consumers' expenditure on private properties with price elastic and price inelastic demand would change given an increase in supply of private properties due to the release of more land for the development of private residential properties.

- The release of more land for the development of private residential properties is likely to reduce the prices of land for the development of private residential properties. This would in turn result in an increase in supply of private properties which can be illustrated by the shift of the supply curve from S_4 to S_5 in Diagram 3.

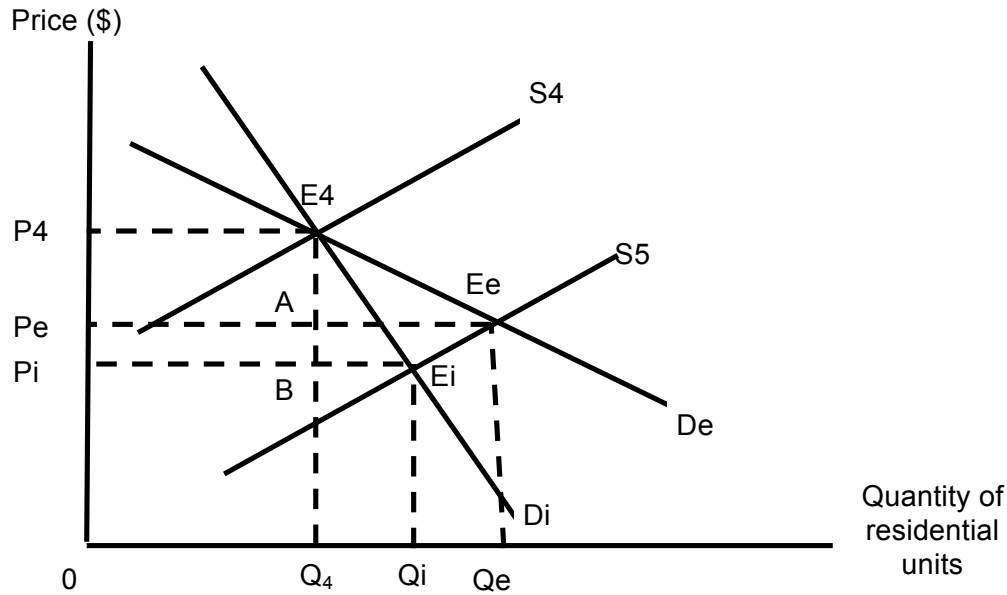


Diagram 3: Market for private residential properties

- Given a relatively price inelastic demand illustrated by D_i , the percentage decrease in price illustrated by distance P_4P_i would be more than the percentage increase in quantity demanded illustrated by distance Q_4Q_i and hence total expenditure on private residential properties with $PED < 1$ would decrease.
- However, if the demand is relatively price elastic illustrated by D_e , the percentage decrease in price illustrated by distance P_4P_e would be less than the percentage increase in quantity demanded illustrated by distance Q_4Q_e and hence total expenditure on private residential properties with $PED > 1$ would increase.

Body 2: Explain how the decrease in prices of private properties would lead to different magnitude of decreases in demand and therefore different magnitude of decreases in consumers' expenditure on public residential properties with different XED values.

- Private residential properties and public residential properties can be considered as substitutes in consumption. Therefore, the demand for public residential properties is likely to decrease as consumers of public residential properties switch to buying private residential properties.

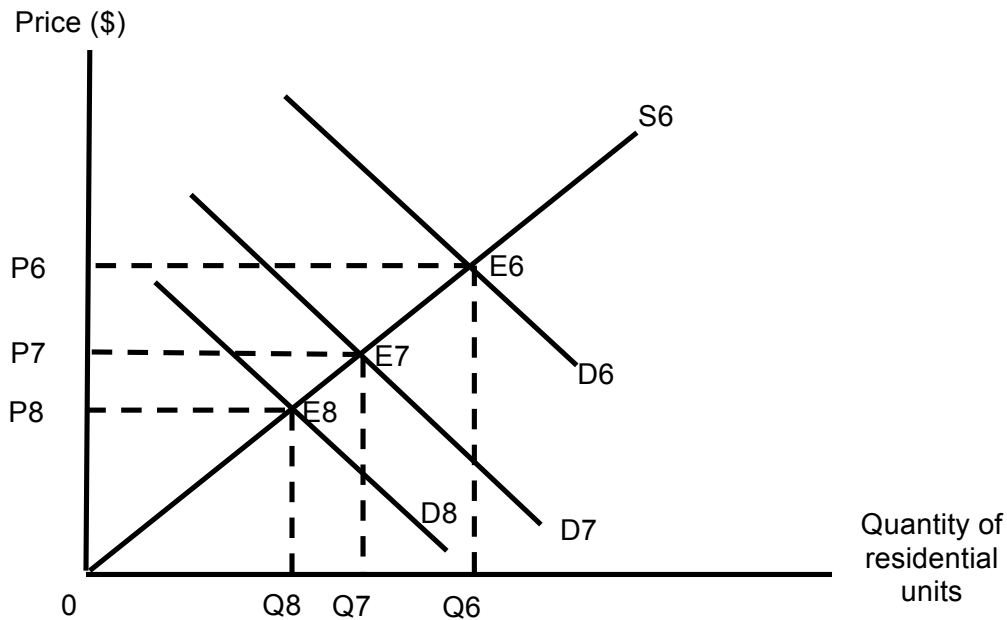


Diagram 4: Market for public residential properties

- For public residential properties which are relatively close substitutes in consumption, the demand would decrease significantly as illustrated from D_6 to D_8 in Diagram 4 resulting in a relatively significant fall in consumers' expenditure.
- For public residential properties which are relatively distance substitute in consumption, the demand would decrease insignificantly as illustrated from D_6 to D_7 resulting in a relatively insignificant fall in consumers' expenditure.

Body 3: Explain the limitations of using PED and XED in explaining how the cooling measure affects consumers' expenditure on different private and public residential properties in Singapore.

- Elasticity values are at best estimates. Therefore, this might lead to inaccuracy in determining the changes in consumers' expenditure as a result of the release of more land for private residential development.
- For simplicity, the analysis in the earlier paragraphs assumes ceteris paribus meaning that other factors remain constant and therefore total expenditure of consumers on the different residential properties are affected only by the release of more land for development of private residential properties. However, the assumption of ceteris paribus for simplicity in analysis might lead to inaccuracy in determining the change in consumers' expenditure as it does not really hold in the real world.

(Any other appropriate limitations would also be acceptable.)

Evaluative conclusion

- Despite being useful and therefore necessary in explaining how the cooling measure might affect consumers' expenditure on different private and public residential properties in Singapore, the use of PED and XED are subjected to limitations and thus other factors have to be incorporated to have a more accurate conclusion.

Mark Scheme

Levels	Descriptors
L3 7-9	<ul style="list-style-type: none"> • For an answer that shows: <ul style="list-style-type: none"> > Excellent depth in analysis. <ul style="list-style-type: none"> ✓ Accurate, precise and clear use of economic concepts and analysis in all explanations. > Excellent breadth in analysis. <ul style="list-style-type: none"> ✓ PED values are considered. ✓ XED values are considered. ✓ Limitations are considered. • Supported by <ul style="list-style-type: none"> > Well-labelled and well referred to diagrams. > Contextualised examples. > Logical structure.
L2 5-6	<ul style="list-style-type: none"> • For an answer that shows: <ul style="list-style-type: none"> > Sufficient depth in analysis. <ul style="list-style-type: none"> ✓ Accurate use of economic concepts and analysis in most explanations. > Sufficient breadth in analysis. <ul style="list-style-type: none"> ✓ PED value is considered. ✓ XED value is considered. • Supported by <ul style="list-style-type: none"> > Well-labelled and well referred to diagram(s). > Examples are provided.
High L1 3-4	<ul style="list-style-type: none"> • For an answer that shows: <ul style="list-style-type: none"> > Insufficient depth in analysis. <ul style="list-style-type: none"> ✓ Accurate use of economic concepts and analysis in some explanations. > Insufficient breadth in analysis. <ul style="list-style-type: none"> ✓ PED or XED is considered.
Low L1 1-2	<ul style="list-style-type: none"> • For an answer that: <ul style="list-style-type: none"> > Is largely irrelevant <ul style="list-style-type: none"> ✓ Cause(s) of change is not related to the cooling measure. ✓ Effect(s) of change is not related to consumers' expenditure on different private and public residential properties. > Contains fundamental conceptual errors in analysis.

Levels	Descriptors
E2 3-4	<ul style="list-style-type: none"> • For a well-explained judgment.
E1 1-2	<ul style="list-style-type: none"> • For an unexplained judgment.

Essay Question 2

- (a) Explain why prices in an oligopolistic market tend to be more stable than that of a perfectly competitive market when there is an increase in costs of production. [10]
- (b) Companies often find it profitable to charge different prices for the same product to different groups of consumers. [15]

Discuss whether it is beneficial to society for firms in an oligopolistic market to adopt the above approach.

Suggested answers for Part (a)

Introduction:

- The traditional objective of firms is to profit maximise and hence when setting prices, firms will choose to set a price where their marginal revenue (MR) which is the increase in revenue from selling an additional unit of the product, is exactly equal to their marginal cost (MC) which is the cost of producing an additional unit of the product.
- When there are changes in the cost of production for firms, the prices of goods and services are likely to change due to changes in the marginal costs. However, the price changes in an oligopoly tend to be less volatile and prices are observed to be “sticky”. In a PC industry however when there are changes in marginal costs, prices will change accordingly.

Body:

Price determination in Perfectly Competitive markets

- In a perfectly competitive market, there exist a large number of small firms selling a homogeneous product. As a result, each has an insignificant share of the total market output and this leads to each firm being a price taker that has no influence over the price that they can set. Prices are thus determined by the market demand and supply for the product.
- There are no barriers to entry and hence firms can easily enter and exit a market and firms will earn only normal profits in the long run.
- With a given increase in costs of production, the market supply for the product will decrease as firms find it less profitable to produce the same amount of output. Some firms may decide to leave the market while others may decide to cut back on production. Supply would fall and this would lead to an increase in prices. This is illustrated in Figure 1 below.

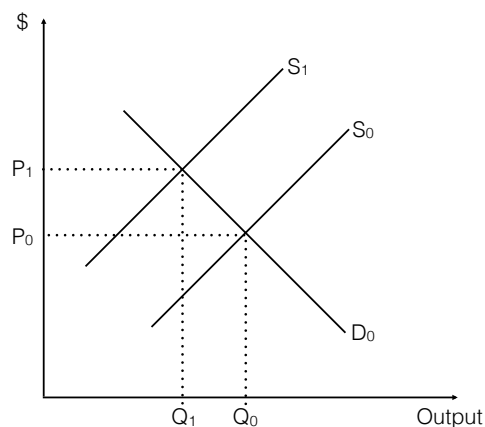
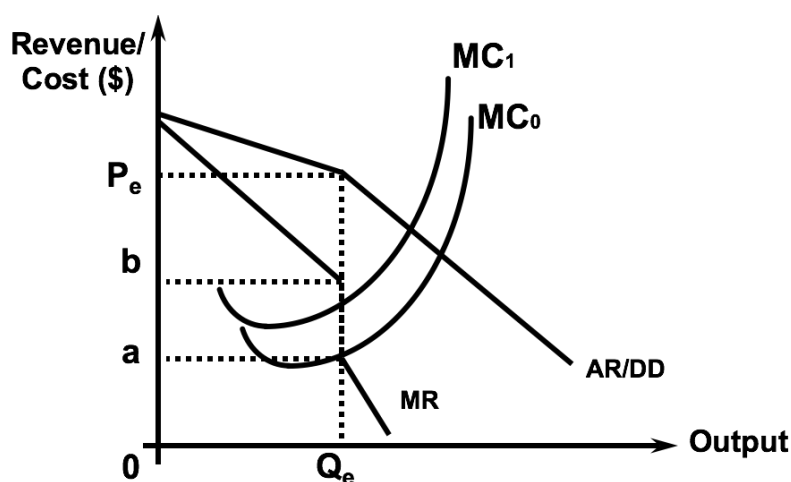


Figure 1

- With reference to Figure 1 above, when there is an increase in cost of production, the supply curve for the industry will decrease and shift to the left from S_0 to S_1 . At the original price of P_0 , there will be a shortage as Q_d is greater than Q_s . This results in an upward pressure on prices from P_0 to P_1 .
- Since firms in PC industry are price takers, when prices increase from P_0 to P_1 , the price of the product for individual firm will also increase.
- Hence with a given change in costs of production, prices in a PC industry are less stable.

Price determination in a Competitive Oligopoly

- An oligopolistic market structure exists when there are a few large sellers, each with a significant share of the total market output, dominating a market. Each firm has considerable market power to influence the price of the product.
- There tends to be high barriers to entry, which can be either natural or man-made, and these deter new firms from entering the market easily. Hence existing firms are able to continue to earn supernormal profits in the long run.
- Examples of these industries include the telecommunications industry and Public Transport.
- Oligopolistic firms are mutually interdependent. Mutual interdependence is where a firm is affected by its rival's decisions and its own decisions affect its rivals. Since each firm in an oligopoly has a significant market share, the decision of any one firm to either raise or lower price will have an impact of the other firms in the industry. There is thus a need to consider the actions of rivals. Prices in an oligopolistic market therefore tend to be more stable. This can be illustrated by the kinked demand curve below.



- Assuming a competitive oligopoly, when one firm lowers its price, all other firms are likely to match this price fall rather than risk losing a share of the market, hence the firm will experience a less than proportionate increase in quantity demanded. Thus the demand curve facing the firms if it lowers the price is very

price inelastic. On the other hand, when one firm raises its price and no one follows, its sales will fall rapidly as the decrease in quantity demanded is more than proportionate. Thus the demand curve facing the firm if it raises its price is very elastic. Other firms will not follow suit, because by keeping their prices constant, they can capture a larger market share. Hence, the demand curve is kinked at the current price P_e , demand being significantly more price elastic above the current price than below.

- The price and output of the oligopolistic firm is less sensitive to increases in production cost as a result. The MC curve can rise from MC_1 to MC_2 , but the firm continues to profit-maximise and equate $MC=MR$, to determine the profit-maximising output Q_e . At Q_e , the maximum price that consumers are willing and able to pay is given by P_e . Hence, the oligopolistic firm would price its good in this manner. This price rigidity reflects that the oligopolistic firm has little incentive to increase or decrease prices and hence even with an increase in costs of production, prices are stable.

Conclusion

- Due to the mutual interdependence of firms in an oligopoly, prices tend to be sticky as each firm has to consider the reaction of rival firms to changes in their price. As a result, when there is an increase in cost of production prices tend to be rigid so long as the increase in MC are within the discontinuous range of the MR.
- In contrast, perfectly competitive firms are price takers and there is no need for any individual firm to consider the actions of their rivals. Once there is an increase in marginal costs, this would be reflected by changes in the market supply and each firm will now face a higher price. Hence price changes will take place more frequently to reflect changing cost considerations.

Mark Scheme

L3	7-10	<ul style="list-style-type: none"> • Excellent knowledge of how prices are determined in BOTH perfectly competitive markets and competitive oligopolies. (Depth) <ul style="list-style-type: none"> ○ Answer includes brief explanation on the condition for profit maximisation. (i.e how firms decide to set prices) • Excellent explanation of why prices in both competitive oligopolies (with real-life examples) are more stable than that of a perfectly competitive market due to the mutual interdependence. • Excellent diagrammatic analysis of the kinked demand curve. Diagram is accurately drawn and used to explain why price rigidity occurs. (Depth) • Good explanation of how changes in costs of production would lead to increases in marginal costs and hence prices. • Good explanation of the features of BOTH oligopolies and perfectly competitive markets to account for the pricing behaviour of the firms.
L2	5-6	<ul style="list-style-type: none"> • Good knowledge of how prices are determined in BOTH perfectly competitive markets and competitive oligopolies.

		<p>(Depth)</p> <ul style="list-style-type: none"> ○ Answer may not includes brief explanation on the condition for profit maximisation. (i.e how firms decide to set prices) • Good explanation of why prices in either competitive oligopolies are more stable than that of a perfectly competitive market due to the mutual interdependence. • Good diagrammatic analysis of the kinked demand curve. Diagram is may not be accurately drawn but explanation of how price rigidity occurs is still evident in words. (Depth) • Some recognition of how changes in costs of production would lead to increases in marginal costs and hence prices. • Some recognition of the features of oligopolies OR perfectly competitive markets to account for the pricing behaviour of the firms.
L1	1-4	<ul style="list-style-type: none"> • Some knowledge of how prices are determined in perfectly competitive markets OR oligopolies. (Depth) <ul style="list-style-type: none"> ○ Some recognition of how prices are determined by firms • Some explanation of why prices in competitive oligopolies are more stable than that of a perfectly competitive market due to the mutual interdependence. • Diagrammatic analysis of the kinked demand curve may not be present or may be incorrectly drawn. Explanation of price rigidity may not be clear/ No explanation of diagram. (Depth) • No recognition of how changes in costs of production would lead to increases in marginal costs and hence prices OR recognition of changes in costs of production as increases in average costs and hence no impact of changes in prices. • No or brief recognition of the features of oligopolies OR perfectly competitive market to account for the pricing behaviour of the firms

Part (b)

Introduction:

- The practice of charging different prices for the same product to different groups of consumers is often associated with price discrimination if we assume that the different prices charged are not associated with differences in costs.
- Oligopolies would be able to make use of this strategy due to the significant market power that it possesses. The most common form tends to be 3rd degree price discrimination where consumers are segmented into different groups and prices are charged according to the group. This allows oligopolies to earn higher revenue by charging different prices in markets due to the differing price elasticities of demand present.
- While this would result in a loss of consumer surplus and inequity for society, there are several benefits that would benefit society such as that of increased production and cross subsidisation.

Body:

Explaining 3rd degree price discrimination

- In the case of 3rd degree price discrimination, if the oligopolist is able to segment consumers into two distinct markets and charge a different price in each of the markets, the oligopolist would choose to charge a higher price in a market with a relatively inelastic demand and a lower price in a market with a relatively price elastic demand. This would enable them to increase the revenue earned.
- With reference to Figure 3 below, market A has a relatively price inelastic demand while market B has a relatively price elastic demand. Each of the markets will thus have different MR and AR curves. Together, market A and market B form the total market and this can be reflected by AR_c and MR_c which is the horizontal summation of the AR and MR curves in market A and market B.

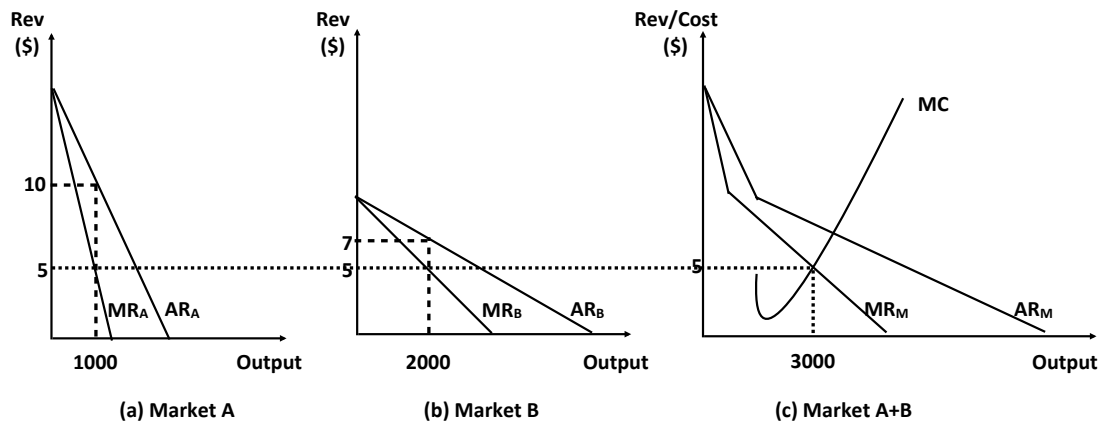


Figure 3 Third Degree Price Discrimination

- Referring to Figure 3(c), the producer maximises his profit where MR = MC i.e. at 3000 units in total. This output must then be divided between the two markets so that MC is equal to MR in each market: i.e. MC = MR = \$5 in each market. MR must be the same in both markets; otherwise revenue could be increased by switching output to the market with the higher MR.
- The profit-maximising price in each market will be given by the relevant demand curve. Thus, in market A, 1000 units will be sold at \$10, and in market B, 2000 units will be sold at \$7 each. The higher price is charged in the market with the **less** price elastic demand curve. If the Oligopolist were to charge a single price of \$10, it would not be able to sell any units in market B.

Thesis: It is beneficial for Oligopolistic firms to practice price discrimination

From the Firm's Perspective

- Higher profit for the firm
 - As the Oligopolist is able to price discriminate, it would be able to sell its products in market B. The resulting effect is that the firm is now able to increase the output produced due to the existence of market B as opposed to only being able to sell in market A before price discriminating. The increase in scale of production would allow the oligopolist to reap internal economies of scale and experience lower average costs.
 - By charging a higher price in markets with a relatively price inelastic demand and a lower price in the market with a relatively price elastic demand than

charging a profit-maximising single price. There would be an increase in total revenue earned by the oligopolist from the combined markets.

- The combined effect of lower average costs and higher revenues would lead to higher profits for the firm.
- These higher profits would allow the oligopoly to have more ability to invest their profits to develop new products or to carry out research to lower its cost of production.

From the Consumers' Perspective

- Possibility of cross subsidisation, benefiting **some** consumers
 - Consumers who end up paying a higher price will have a lower consumer surplus than if a uniform price were charged. However, those who pay a lower price will have a greater consumer surplus.
 - Those paying the lower price may be able to obtain a good or service they could not otherwise afford, for instance, concessionary bus fares for the elderly. Price discrimination is likely to increase output and make the good or service available to more people in such instances
 - Furthermore, with price discrimination, certain essential services would also then be provided to those with lower ability to pay, thus increasing their welfare. For example, certain otherwise unprofitable bus routes can be kept running because of cross subsidization using price discrimination.
- Greater variety of products
 - The higher profits earned by the oligopolist would provide an added ability to conduct research and development to come up with better quality products or more innovative products for the consumers.
 - This is especially true considering how the oligopolistic market structure is characterised by high levels of barriers to entry and that there is fierce non-price competition that exists. Both of these factors would provide the incentive for oligopolist to product innovate.

Anti- Thesis: Oligopolistic firms that practice price discrimination results in costs to society

From Society's and Consumer's Perspective

- Loss of consumer surplus
 - A firm which practises price discrimination will be able to increase its revenue, at the expense of consumers who end up paying a higher price. The gain in revenue for firms is at the expense of loss of consumer surplus for some groups of consumers.
 - However, if an oligopolistic firm innovates and as a result, the price that consumers are willing to pay for the product increases but at the same time, the price charged for the product remains the same, then the consumer surplus to consumers would actually increase. In such a case, the consumer may not suffer from a loss of consumer surplus.
- Inequity
 - As price discrimination raises a firm's profits, the higher profits tend to be concentrated in the hands of business owners and hence this would worsen the income inequality.
 - However, if the government intervenes to reduce the market power of the firm, then the issue of income distribution will not be so severe.
- Less competition and higher prices

- A price discriminating oligopolist may be able to drive competitors out of business if they are able to charge higher prices in the market with a relatively inelastic demand for the product and make use of the profits to charge a very low price in another market. If the prices charged by the oligopolist are lower than the average cost of producing that unit of good, this would be considered as predatory pricing.
- If firms in a domestic market making use of the higher profits earned domestically to artificially charge a lower price for their exports in a foreign market. This could lead to dumping of products by the domestic oligopolist in other countries.
- If the firm is able to drive their competitors out of business in the foreign market, they would have greater market share and monopoly power to charge higher prices and earn greater total revenue and assuming the increase in revenue is greater than the increase in costs, profits would increase.

Conclusion:

- Whether it is beneficial to society for an oligopolist to charge different prices to different groups of consumers depends on what the firms do with the additional profits that they earn. In the context of an oligopoly, due to the high incentive to product differentiate their products, it is likely that the additional profits earned by charging different prices would be used to create new products for consumers and hence consumers would be able to benefit.
- At the same time, the loss of consumer surplus would only affect some groups of consumers and benefit others and hence overall, the loss of consumer surplus would benefit some while causing some to lose out.

Mark Scheme

L3	9-11	<ul style="list-style-type: none"> • Excellent analysis of BOTH benefits and costs to society when oligopolies price discriminate with excellent explanation of how 3rd degree price discrimination works (Depth) • Excellent consideration of firms and consumers, including the differing impact of price discrimination on different groups of consumers (Scope) • Contextualisation of different oligopolistic markets considered • Excellent diagrammatic analysis to explain how price discrimination works and to illustrate effects on society (Depth)
L2	6-8	<ul style="list-style-type: none"> • Good analysis of benefits and/or costs to society when oligopolies price discriminate with clear explanation of how 3rd degree price discrimination works (Depth) • Good consideration of firms and/or consumers. (Scope) • Some use of diagrammatic analysis to explain how price discrimination works and to illustrate effects on society
L1	1-5	<ul style="list-style-type: none"> • Some recognition of benefits OR costs to society when oligopolies price discriminate. (Depth) • Some consideration of firms OR consumers and/or society. (Scope)
Evaluation		
E2	3-4	<ul style="list-style-type: none"> • For a judgement based on criteria to weigh if it is beneficial for an oligopolist to practise price discrimination.

E1	1-2	<ul style="list-style-type: none"> For a conclusion on the benefits and costs of price discrimination but may not have made use of criteria to weigh if it is beneficial or not.
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Essay Question 3

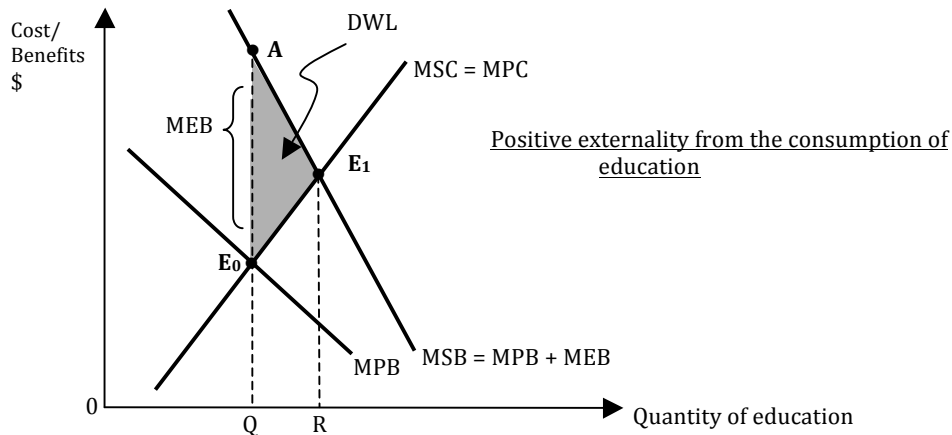
In the UK, primary and secondary education in the state schools is provided free of charge whereas in Singapore, all school pupils are required to pay school fees which are highly subsidised.

Explain why government intervention is advocated in the market for education and assess the economic case for the different approaches between the UK and Singapore. [25]

Suggested answer:

Government intervention is advocated to address under-consumption due to education being a merit good (positive externality and information failure)

- Private individuals only take into account of private costs and private benefits, because they pursue only their self-interest and failed to internalize the external benefits of consuming education
 - Private cost: school fees, cost of uniform and books, foregone earnings.
 - Private benefits: Education allows an individual to enjoy better job prospects (higher future earnings and career progression) which leads to a higher standard of living.
- However, from the society's point of view, there is a divergence between social and private benefits so that MSB is higher than MPB (difference being the MEB).
MSB = MPB + MEB
- External benefits due to education: Equips children with basic literacy and numeracy; possibly increase in employment and growth rates. This drives economic competitiveness of the economy as it spurs innovation and entrepreneurial abilities. In the case of Singapore, education promotes peace and stability in the nation by inculcating national values and social instincts. Need to emphasize how it affects 3rd parties who are not involved directly in the consumption/production of education.
- Education is considered a merit good as it usually possesses positive externalities when consumed by the economy and is deemed socially desirable. The government feels that people would under-consume education without any form of government intervention (such as subsidies or free provision), possibly because of information failure, where individuals lack information of the full benefits of consumption (actual and perceived MPB may differ) where they have lower perceived benefits of education to self.



- Free market equilibrium level of education is OQ where $MPB = MPC$
- Socially optimal level of education is OR where $MSB = MSC$
- Under-consumption of education by QR units
- Results in allocative inefficiency and deadweight loss to society (Area AE_0E_1) (which is the sum of the excess of MSB over MSC for the quantity of education under-consumed).

Government intervention is advocated to address the issue of income inequality

- Since the market responds to the “dollar votes” or demand cast by the consumers, resources may be allocated mainly to the production of goods and services demanded by the rich. Thus, the total welfare of the community may not be maximised. The rich may pursue their own interest, rather than the interest of the community.
- If left to the free market, those who are unable to afford the high cost of private education may not get a chance to attend school.
- Thus government intervention is advocated to address the issue of income inequality via subsidies or direct provision to ensure poor but talented children get a chance to attend school and help students from low income families to break the poverty cycle and narrow the gap between the rich and the poor. This helps to foster a more equal society.

*Note:

- Students may consider market power as the source of market failure in the private education sector and thus government intervention is advocated.

Assess the economic case for the different approaches between the UK and Singapore

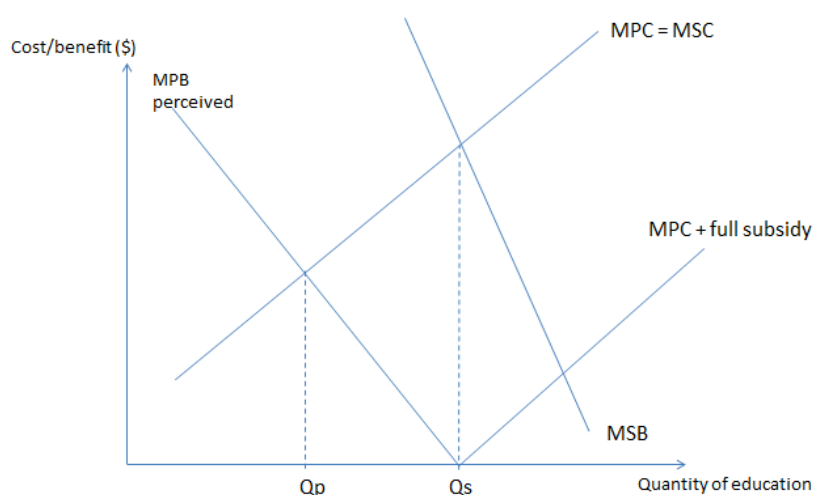
Reason for the different approaches between the UK and Singapore

- Differences in how each country views the perceived and actual private benefit differently.
- To resolve equity issues

Case for UK in providing education free/ Argument against Singapore for providing high subsidy

- Primary and secondary education in UK state schools are free

- Largely for equity reasons to ensure all children in the UK to attend school and help students from low income families to break the poverty cycle and narrow the gap between the rich and the poor.
- In addition, the perceived private benefit in UK may be lower than Singapore. There may be a lower value placed on education in the UK compared to Asian culture where education is placed a high emphasis. This means that there is lower perceived MPB because of information failure where the individual fails to take into account all the full benefits of education to themselves.
- In the question, we assume MSB for 2 countries is the same, meaning that value of externalities/social benefits same.
- *(Alternatively, students may argue for that the UK government may place a larger value on the external benefits of primary and secondary education than the Singapore government. Thus the different approach between free and highly subsidised)*
- Increase the quantity of education to the greatest for primary and secondary education in UK.
- With reference to the graph below, the socially optimum level of consumption is where $MSB = MSC$ at OQ_s . If left to the free market, the level of consumption would be where $MPB_{perceived} = MPC$ at OQ_p .
- The level of under-consumption would be $Q_s - Q_p$.
- If the UK government gives free education (i.e. total subsidy), the MPC curve shifts to $MPC + subsidy$. The level of consumption would be where $MPC + subsidy = MPB_{perceived}$ which is equal to $MSB = MSC$ at OQ_s . The subsidy allows the consumers to internalise the positive externality.
- To achieve allocative efficiency where $MSB = MSC$ at OQ_s , this is the level where $MPB = 0$.



Argument against providing free education in the UK

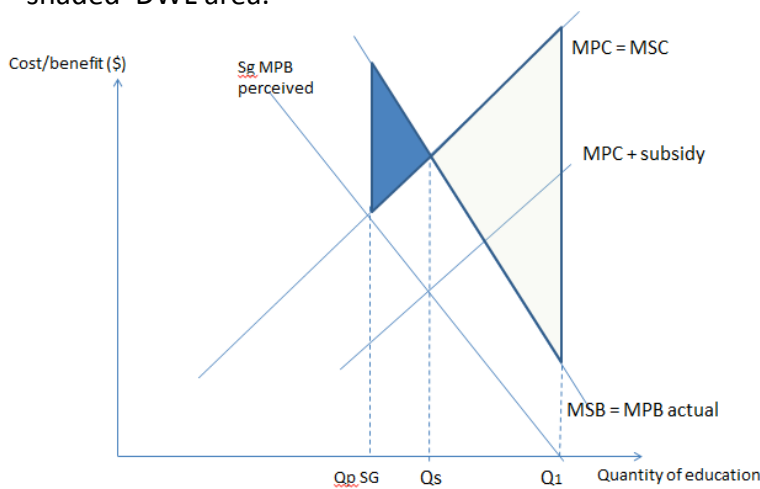
- The limitations of free provision to resolve the externalities also depend on how the increased government expenditure can be financed. The opportunity cost of subsidising education might be very high if government has to limited funds for all its competing uses. There is always opportunity cost incurred in government

spending on education. Something has to be given up in order for more funding to be made available for subsidising education. Hence, a reliable cost-benefit analysis should be carried out to ensure that the precious tax payers' are put to effective use in maximising society's welfare.

- UK government faces high government debt and therefore subsidising education may worsen their debt burden.
- In addition, education is not a public good as it is rivalrous and excludable
- Rivalrous: Additional people who consume education depletes the benefits available for others to enjoy
 - ➔ Marginal cost is not zero, i.e. there is opportunity cost involved in providing education to an additional student, if it is free then the price is lower than the opportunity cost of providing the last unit of the good)
 - ➔ Hence, education should not be free provision. There should a fee charged for education
 - ➔ Note: Discussion on excludability is not required to determine the different approaches between Singapore and the UK.

Case for Singapore in providing high subsidies

- The perceived MPB is higher in Singapore than the UK, therefore the DWL arising from free provision (where $MPB=0$) (shown by the grey area) may be more than the DWL of no government intervention (the blue area). Level of subsidy in Singapore is $MPC + \text{subsidy}$ such that it is equal to MPB_{sg} , and it coincides with $MSB=MSC$ at OQs .
- The reason for co-payment (highly subsidised rather than totally free) is to ensure that education is not overconsumed. This is shown at $OQ1$ and the grey shaded DWL area.



- Singapore provides targeted subsidies through Financial Assistance Scheme (FAS) to help the low income families who may face difficulty in paying for education fees, standard miscellaneous fees and basic schooling expenses such as textbooks and school attire. This helps to address the equity issue.
- However, Singapore does not provide free education for all, though it is highly subsidised.

Argument against free provision/ giving high subsidy for both countries

- Difficulties lie in measuring the exact size of the MEB and hence the exact amount of subsidy or taxes needed to correct the market failure. Government failure may itself lead to problems if they over-subsidise education, leading to inefficiency in the allocation of scarce resources (in this case, tax payers' money) to the market for education.

Evaluation/Conclusion:

- The different approaches arise because of the different valuation of MPB (perceived MPB_{sg} > perceived MPB_{uk}). In addition, perceived MPB for UK is zero at the socially optimum level of education unlike the case for Singapore where it is above zero.
- The economic case for the two approaches depends on the budget of the respective governments and whether their government has high fiscal debt. In the case of Singapore, there are large reserves and it is in a better position to offer high subsidies and to continue to invest in developing its human capital. In contrast, the UK government has high fiscal debt and thus has lesser ability to offer free education.
- It also depends on the importance of investing in human capital in the respective countries. In Singapore, given the lack of natural resource, labour is our most valuable factor of production and thus stresses the importance to invest in education to train up a skilled workforce and the external benefits brings positive externalities to society, for example, through the skills they bring to the workplace which increase overall productivity and output. In contrast, the UK has greater endowment of factors of production, and thus, lower need to rely solely on human capital to drive its economic growth. Thus, the different approaches adopted may not be justified totally.
- Given the high quality of students generated by Singapore schools as shown by international tests and being a relatively effective social leveller in the society, this method of highly subsidising majority of the students and giving targeted subsidies to the low income students have worked well for Singapore, such that Singapore's fiscal position is relatively healthy.

Level	Descriptors
Level 3 High L3 18-21	For an answer that shows: <ul style="list-style-type: none"> - Excellent depth in analysis: <ul style="list-style-type: none"> o accurate use of economic concepts and analysis throughout - Excellent breadth in analysis: <ul style="list-style-type: none"> o Answer demonstrates a thorough analysis and explanation on why government intervention is advocated with reference to 2 sources of market failure o Answer includes a two-sided analysis of why the approaches differ for both UK and Singapore by considering the cases for and against free provision and high subsidy.
	For an answer that shows: <ul style="list-style-type: none"> - Very good depth in analysis <ul style="list-style-type: none"> o Accurate use of economic concepts and analysis in <u>most</u>

<p>Low L3 15-17</p>	<p>explanations</p> <ul style="list-style-type: none"> - Very good breadth in analysis: <ul style="list-style-type: none"> o Answer demonstrates a very good analysis and explanation on why government intervention is advocated with reference to at least 1 source of market failure. o Answer includes a two-sided analysis of why the approaches differ for both UK and Singapore by considering the cases for and against free provision and high subsidy.
<p>High L2 12-14</p>	<p>For an answer that shows:</p> <ul style="list-style-type: none"> - Good depth in analysis <ul style="list-style-type: none"> o Accurate use of economic concepts and analysis in most explanations. Use of economic concepts and analysis may not be precise. Some use of economic analysis and tools is evident. - Good breadth in analysis: <ul style="list-style-type: none"> o Answer demonstrates a good analysis and explanation on why government intervention is advocated with reference to at least 1 source of market failure. o Answer includes analysis of why the approaches differ for both UK and Singapore by considering the cases for and against free provision and high subsidy or it may be a one-sided analytical explanation but both countries' approaches considered.
<p>Low L2 10-11</p>	<p>For an answer that shows:</p> <ul style="list-style-type: none"> - Sufficient depth in analysis <ul style="list-style-type: none"> o Accurate use of economic concepts and analysis in most explanations. Use of economic concepts and analysis may not be precise. - Sufficient breadth in analysis: <ul style="list-style-type: none"> o Answer demonstrates a sufficient analysis and explanation on why government intervention is advocated with reference to at least 1 source of market failure. o Answer includes sufficient analysis of why the approaches differ for both UK and Singapore by considering the cases for and against free provision and high subsidy or it may be a one-sided explanation but both countries' approaches considered.
<p>High L1 6-9</p>	<p>For an answer that shows:</p> <ul style="list-style-type: none"> - Insufficient depth in analysis <ul style="list-style-type: none"> o Inaccurate use of economic concepts and analysis in most explanations. - Insufficient breadth in analysis: <ul style="list-style-type: none"> o Some analysis and explanation on why government intervention is advocated but only addressed <u>one part</u> of the answer i.e. the market failure well. For example, why government intervention is advocated in education by examining at least 1 possible source of market failure with good analysis. o OR Largely a one-sided explanation with either both countries'

	approach considered or only 1 country considered but a 2-sided argument.
Low L1 1-5	For an answer that <ul style="list-style-type: none"> - Is largely irrelevant - Contains fundamental conceptual errors in analysis. - Largely descriptive answer
E2 3-4	<ul style="list-style-type: none"> - Judgment based on analysis - Ability to evaluate which economic case is preferred with analysis/elaboration
E1 1-2	<ul style="list-style-type: none"> - Unexplained judgment - May have discussed the limitations of the approaches

Essay Question 4

- (a) Explain the trade-offs in macroeconomic objectives that Singapore is likely to face when it allows the exchange rate of the Singapore dollar to appreciate. [10]
- (b) Discuss the alternative macroeconomic policies that the Singapore government can adopt to tackle these trade-offs. [15]

Suggested answers to part (a)

Introduction

- An appreciation of Singapore dollar might result in trade-offs among Singapore's economic growth, inflation, unemployment, and balance of payment.

Body 1: Explain how an appreciation of Singapore dollar might lower inflation but worsen balance of payment, decrease actual growth and increase demand deficient unemployment in Singapore.

Body 1A: Explain how an appreciation of Singapore dollar might lower inflation in Singapore.

- Allowing Singapore dollars (SGD) to appreciate is likely to lower inflation in Singapore.
- This is because Singapore is heavily reliant on imports for consumption and production given its lack of resources. The strengthening of SGD would thus resulting in the lowering of costs for businesses illustrated by the shift of the short run aggregate supply (SRAS) curve from $SRAS_1$ to $SRAS_2$ as shown in Diagram 1. Businesses are likely to pass on the lower costs in terms of lower prices to consumers thus resulting in a decrease in general price level as illustrated from P_1 to P_2 (given AD_3) and hence lowering cost push inflation in Singapore.

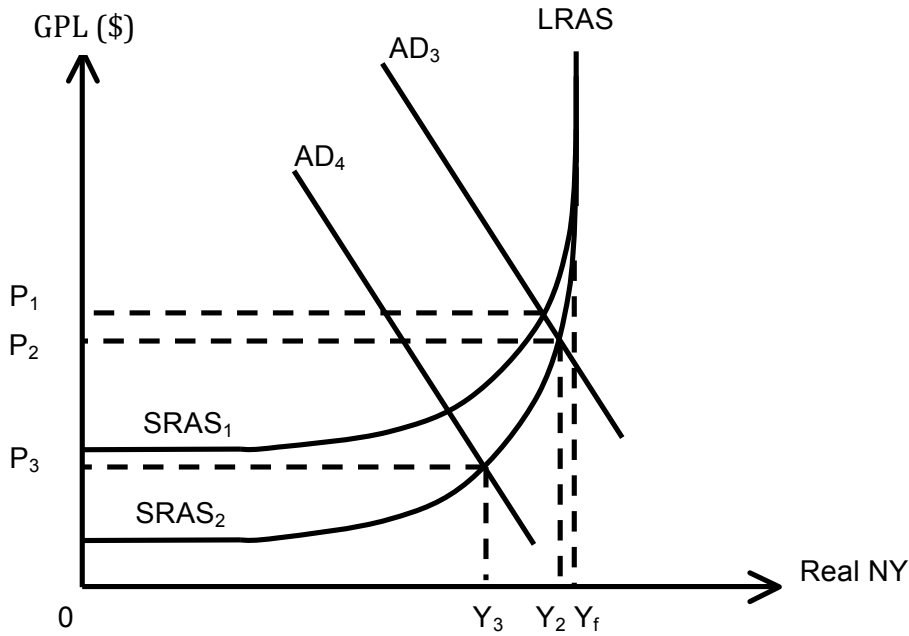


Diagram 1

- Moreover, because Marshall-Lerner condition holds, the appreciation of SGD would result in a decrease in Singapore's aggregate demand (AD). Marshall-Lerner condition holds for Singapore because the demand for Singapore's export is price elastic (i.e. $PE_{D_x} > 1$) due to the wide availability of substitutes for Singapore's export. The decrease in AD illustrated from AD_3 to AD_4 would result in a decrease in general price level illustrated from P_2 to P_3 and hence lowering demand pull inflation in Singapore.

Body 1B: Explain how the appreciation of Singapore dollar might in the short term worsen balance of payment, decrease actual growth and increase demand deficient unemployment in Singapore.

- The appreciation of SGD would however worsen Singapore's balance of trade and hence worsen Singapore's balance of payments.
- In addition, firms are likely to decrease the derived demand for labour thus resulting in an increase in demand deficient unemployment and hence a decrease in real national income as illustrated from Y_2 to Y_3 in Diagram 1. As production decreases, real national output and hence actual growth decreases.

Body 2: Explain how the appreciation of Singapore dollar might in the long term improve balance of payment, increase potential growth and actual growth, and lower demand pull inflation, but might increase structural unemployment in Singapore.

Body 2A: Explain how the appreciation of Singapore dollar might lead to an inflow of foreign direct investment and thus in the long term improve balance of payment, increase potential growth and actual growth, and lower demand pull inflation.

- Nevertheless, the appreciation of SGD might incentivise an inflow of foreign direct investment in search of higher returns. An inflow of FDI would be considered a credit entry in Singapore's capital-financial account and thus might improve Singapore's balance of payment.
- In addition, Singapore's productive capacity is likely to increase in the long term. This can be illustrated by the shift of the LRAS curve from $LRAS_4$ to $LRAS_5$ as shown in Diagram 2, increasing full employment level of output from Y_f to Y'_f hence increasing potential growth.
- Actual growth is also likely to increase as illustrated from Y_f to Y_5 and demand deficient unemployment is likely to decrease given an increase in derived demand for labour to increase production. Moreover, demand pull inflation is likely to decrease as illustrated by the fall in general price level from P_4 to P_5 .

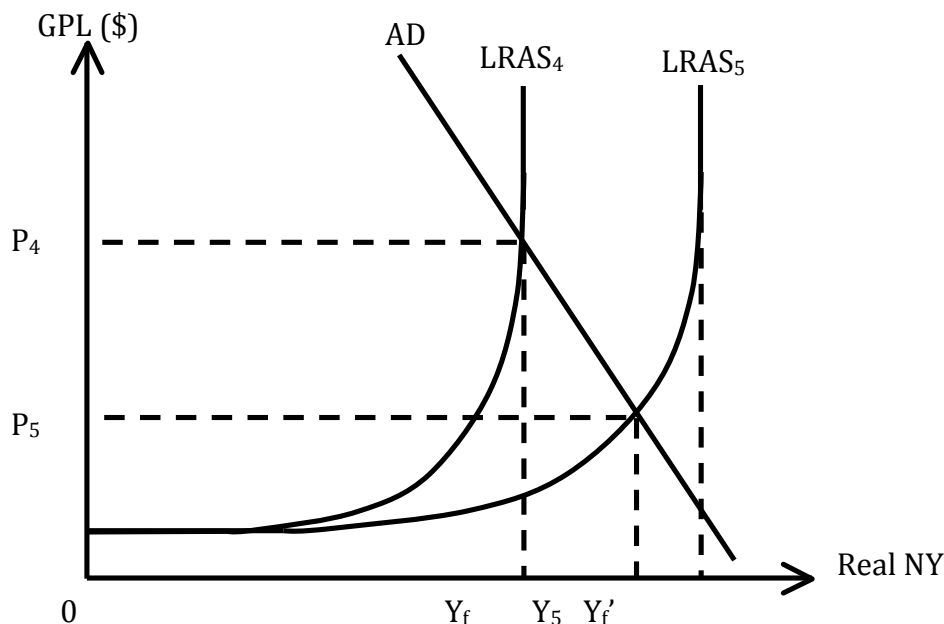


Diagram 2

Body 2B: Explain that the appreciation of Singapore dollar might increase structural unemployment in Singapore.

- However, Singapore may face an increase in structural unemployment due to the mismatching of skills of labour and skills requirements by businesses because of the investments Singapore derives from the inflow of FDI. Low skilled workers or workers who skills are outdated may be retrenched and may not be able to regain employment.

Conclusion

- An appreciation of SGD is likely to result in trade-offs among Singapore's macroeconomic objectives.

Mark Scheme

Levels	Descriptors
<p>High L3 9-10</p>	<ul style="list-style-type: none"> • For an answer that shows: <ul style="list-style-type: none"> ➤ Excellent depth in analysis. <ul style="list-style-type: none"> ✓ Accurate, precise and clear use of economic concepts and analysis in all explanations. ➤ Excellent breadth in analysis (all the 4 macroeconomic objectives are considered). <ul style="list-style-type: none"> ✓ Inflation. ✓ Economic growth. ✓ Unemployment. ✓ Balance of payment. • Supported by <ul style="list-style-type: none"> ➤ Well-labelled and well referred to diagrams. ➤ Contextualised examples. ➤ Logical structure.
<p>Low L3 7-8</p>	<ul style="list-style-type: none"> • For an answer that shows: <ul style="list-style-type: none"> ➤ Very good depth in analysis. <ul style="list-style-type: none"> ✓ Accurate and clear use of economic concepts and analysis in most explanations. ➤ Very good breadth in analysis (at least 3 out of the 4 macroeconomic objectives are considered). • Supported by <ul style="list-style-type: none"> ➤ Well-labelled and well referred to diagrams. ➤ Contextualised examples. ➤ Reasoned structure.
<p>L2 5-6</p>	<ul style="list-style-type: none"> • For an answer that shows: <ul style="list-style-type: none"> ➤ Sufficient depth in analysis. <ul style="list-style-type: none"> ✓ Accurate use of economic concepts and analysis in some explanations. ➤ Sufficient breadth in analysis (at least 2 out of the 4 macroeconomic objectives are considered). • Supported by <ul style="list-style-type: none"> ➤ Well-labelled and well referred to diagrams. ➤ Examples are provided.
<p>High L1 3-4</p>	<ul style="list-style-type: none"> • For an answer that shows: <ul style="list-style-type: none"> ➤ Insufficient depth in analysis. <ul style="list-style-type: none"> ✓ Accurate use of economic concepts and analysis in some explanations. ➤ Insufficient breadth in analysis (at least 1 out of the 4 macroeconomic objectives is considered).
<p>Low L1 1-2</p>	<ul style="list-style-type: none"> • For an answer that: <ul style="list-style-type: none"> ➤ Is largely irrelevant. <ul style="list-style-type: none"> ✓ Cause(s) of change is not related to an appreciation

	<p>of Singapore dollar.</p> <ul style="list-style-type: none"> ✓ Effect(s) of change is not related to the macroeconomic objectives. ➤ Contains fundamental conceptual errors in analysis.
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Examiners' Comments:**General Comments:**

- *Generally, the majority of the candidates were awarded L2 marks for this part-question. Candidates could have done better if the question was interpreted carefully and if they had provided greater depth of analysis in their explanation.*

Question Analysis/Extract Analysis:

- *A large minority of candidates simply explained the negative effects on Singapore's macroeconomic objectives without explaining the positive effects of the appreciation on Singapore's macroeconomic objectives.*

Content:

- *A majority of candidates used graphical illustrations to replace economic analysis.*
- *A minority of candidates gave more emphasis to secondary effects of the exchange rate appreciation, resulting in answers that were opposite to the expected effects on economic growth, unemployment and inflation. Such candidates highlighted that the appreciation of SGD might attract foreign investments due to the positive outlook and higher expected future returns. The increase in FDI inflow would then result in an increase in AD, leading to higher economic growth, lower unemployment and demand-pull inflation. Candidates should note that the primary effects of exchange rate changes are related to (X-M) as the exchange rate directly affects the prices of exports and imports. The effect on capital flows and FDI are only secondary in nature and less certain as there are many other factors that could affect the decisions of foreign investors.*

Structure/organization:

- *A minority of candidates gave answers which seem incoherent because they explained opposing effects on economic growth and unemployment and thus appeared to be contradicting themselves.*

Phrasing:

- *A significant minority of candidates were not precise in their use of economics terminologies. For example, instead of referring to the increase in demand deficient unemployment and lowering of demand-pull inflation, candidates simply referred to an increase in unemployment and lowering of inflation. Candidates are advised to use precise economic terminologies in their explanation for greater clarity.*

Suggested answers for (b)**Introduction**

- Singapore government can adopt aggregate supply policies, expenditure switching policies, signing of free trade agreements and fiscal policies with supply-side effects to tackle the trade-offs.

Body 1: Discuss the workings and limitations of aggregate supply policies in decreasing structural unemployment, increasing potential and actual growth, decreasing demand-deficient unemployment, and improving balance of trade.

- One of the trade-offs identified in part-question (a) is the increase in structural unemployment due to the inflow of skilled labour and/or capital intensive FDI when SGD appreciates. Singapore can adopt supply-side policies to incentivise and encourage skills upgrade to remain competitive rather than to discourage FDI of such nature. One such policy to develop human capital is the setting up of training institutions to provide relevant courses at affordable fees so that workers are more willing to go for skills upgrading.
- Some workers may however still be unwilling to go for training or would just attend the minimum amount of training despite the high level of subsidies given and hence resulting in a high level of fiscal burden and fund.
 - Evaluation
 - Nevertheless, it is critical for the development of human capital to be in tandem with economic restructuring (i.e. appreciation of SGD should not be the sole consideration). The calibration would definitely be challenging (but not impossible) for the Singapore government given Singapore's rapid rate of economic development and hence the rapid pace of economic restructuring.
- The use of appropriate supply-side policies is also likely to promote potential and actual growth, decrease demand deficient unemployment and improve balance of trade. This is because when productivity of, for example, labour increases, the productive capacity of the economy increases leading to an increase in the full employment level of output (i.e. increase in potential growth illustrated by the shift from $LRAS_6$ to $LRAS_7$ in Diagram 3) and more output produced (i.e. actual growth illustrated by an increase in real national output from Y_f to Y_7) given the same amount of input. Average cost of production is likely to decrease (illustrated by the shift from $SRAS_6$ to $SRAS_7$) and if the cost of production is passed to consumers in terms of lower prices (illustrated by the decrease in general price level), the increase in price of exports due to an appreciation of SGD might be offset and therefore balance of trade is likely to improve.

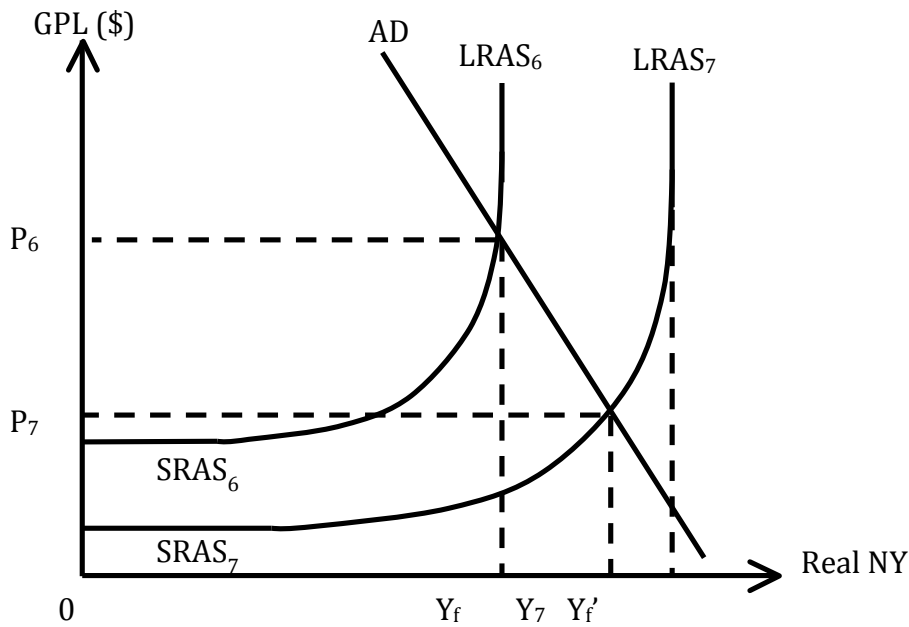


Diagram 3

Body 2: Discuss the workings and limitations of expenditure switching policies in improving Singapore's balance of trade, promoting actual growth and decreasing demand deficient unemployment.

- Although the use of supply-side policies mentioned above might also help to improve the quality of Singapore's export of goods and services and thus resulting in an improvement in Singapore's balance of trade as the demand for Singapore's exports are likely to increase which would in turn increase Singapore's aggregate demand to promote actual growth and to reduce demand deficient unemployment, the effects can generally be felt only in the long term.
- One example of expenditure switching policies Singapore government can adopt is to organise overseas trade fairs to promote goods made in Singapore especially in new markets resulting in an increase in demand for Singapore's exports. If successful, Singapore's export revenue would increase.
- However, to improve trade balances, it is equally important to decrease import expenditure on foreign produced goods and services. If successful, Singapore's import expenditure would decrease.
- Overall, if the expenditure switching policies are effective, Singapore's balance of trade is likely to improve and this would in turn increase aggregate demand in Singapore as illustrated from AD_8 to AD_9 in Diagram 4 and hence promote actual growth as illustrated from Y_8 to Y_9 and decrease demand deficient unemployment in Singapore.

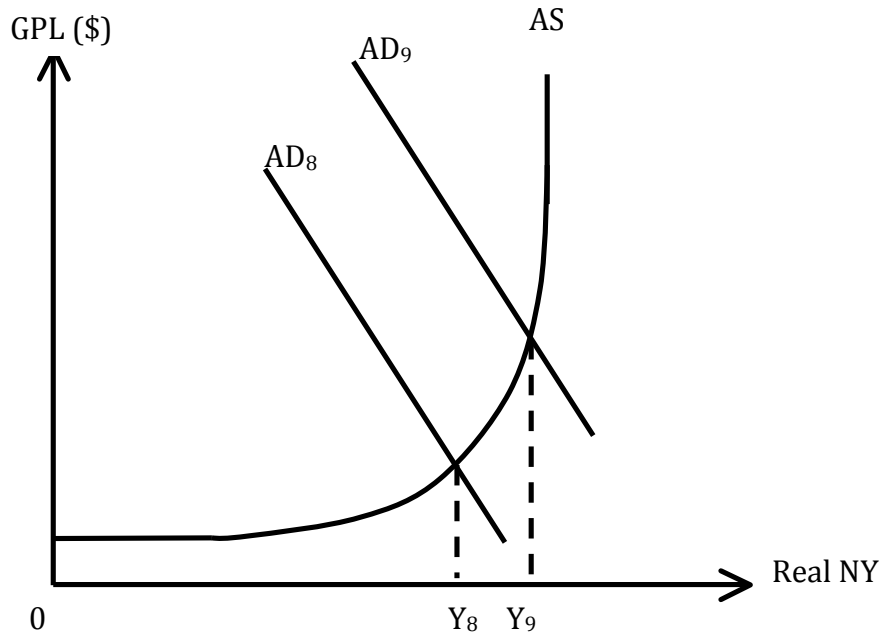


Diagram 4

- Despite successfully switching consumers from consuming foreign produced goods and services towards consuming goods and services produced by Singapore, the improvement in balance of trade might however be insignificant because of the high import content in goods produced by Singapore (including Singapore's exports to foreign countries) due to Singapore lacking in domestic resources. Coupled with the fact that Singapore has a small multiplier ($k = 1/MPW$) because of the high leakages due to having the high marginal propensity to withdraw (MPW), the increase in actual growth and hence the decrease in demand deficient unemployment might also be insignificant. Singapore's high MPW is largely due to the high marginal propensity to save as a result of compulsory savings (i.e. CPF), and high marginal propensity to import due to its lack of domestic natural resources.
 - Evaluation
 - Given the high level of international recognition for Singapore exports in terms of quality, it would not be too difficult to introduce Singapore's goods into new markets.

Body 3: Explain the workings and limitations of signing free trade agreements in improving Singapore's balance of trade and hence increase actual growth and decrease demand deficient unemployment.

- The signing of free trade agreements (FTA) reduce tariffs, and open up output and input markets. The opening up of export markets which are likely to increase demand for Singapore's export due to the larger consumers' base and thus Singapore's export revenue is likely to increase and thus improve Singapore's balance of trade.

- In addition, the increase in the volume of Singapore's export might suggest that the scale of production of exporting firms in Singapore increases. This would allow the firms to enjoy internal economies of scale such as long run cost savings arising from greater efficiency.
- The signing of FTA might open up new foreign markets that Singapore can purchase cheaper imports (e.g. raw materials hence Singapore's import expenditure is likely to decrease thus improve Singapore's balance of trade.
- Given the increase in Singapore's net export revenue as a result of the improvement in balance of trade, aggregate demand is likely to increase which would in turn lead to an increase in actual growth and decrease in demand deficient unemployment.
- Similar to the use of expenditure switching policies, the effectiveness of signing of FTA to increase aggregate demand to achieve actual growth and decrease demand deficient unemployment would be limited by the Singapore's small multiplier.
 - Evaluation
 - Nevertheless, the increase in net export revenue might increase significantly meaning that the increase in aggregate demand might be relatively larger thus even if the multiplier is small, the increase in actual growth and thus the decrease in demand deficient unemployment may not be that insignificant.

Evaluative conclusion

- Singapore government should adopt a mix of complementary policies to tackle the trade-offs because each policy has its own limitations.

• Mark Scheme

Levels	Descriptors
<p>High L3 11</p>	<ul style="list-style-type: none"> • For an answer that shows: <ul style="list-style-type: none"> ➤ Excellent depth in analysis. <ul style="list-style-type: none"> ✓ Accurate, precise and clear use of economic concepts and analysis in all explanations. ➤ Excellent breadth in analysis (at least 3 policies) <ul style="list-style-type: none"> ✓ Policies to increase aggregate demand to tackle the trade-offs are considered AND/OR <ul style="list-style-type: none"> ✓ Policies to increase aggregate supply to tackle the trade-offs are considered. ✓ Limitations of most policies are considered. • Supported by <ul style="list-style-type: none"> ➤ Well-labelled and well referred to diagrams. ➤ Contextualised examples. ➤ Logical structure.
<p>Low L3 9-10</p>	<ul style="list-style-type: none"> • For an answer that shows: <ul style="list-style-type: none"> ➤ Very good depth in analysis. <ul style="list-style-type: none"> ✓ Accurate and clear use of economic concepts and analysis in most explanations. ➤ Very good breadth in analysis (at least 3 policies). <ul style="list-style-type: none"> ✓ Policies to increase aggregate demand to tackle the trade-offs are considered AND/OR <ul style="list-style-type: none"> ✓ Policies to increase aggregate supply to tackle the trade-offs are considered. ✓ Limitations of most policies are considered. • Supported by <ul style="list-style-type: none"> ➤ Well-labelled and well referred to diagrams. ➤ Contextualised examples. ➤ Reasoned structure
<p>L2 6-8</p>	<ul style="list-style-type: none"> • For an answer that shows: <ul style="list-style-type: none"> ➤ Sufficient depth in analysis. <ul style="list-style-type: none"> ✓ Accurate use of economic concepts and analysis in some explanations. ➤ Sufficient breadth in analysis (at least 2 policies). <ul style="list-style-type: none"> ✓ Limitations of some policies are considered. • Supported by <ul style="list-style-type: none"> ➤ Well-labelled and well referred to diagrams. ➤ Examples are provided.
<p>High L1 3-5</p>	<ul style="list-style-type: none"> • For an answer that shows: <ul style="list-style-type: none"> ➤ Insufficient depth in analysis.

	<ul style="list-style-type: none"> ✓ Accurate use of economic concepts and analysis in some explanations. ➤ Insufficient breadth in analysis (only 1 policy considered).
Low L1 1-2	<ul style="list-style-type: none"> • For an answer that: <ul style="list-style-type: none"> ➤ Is largely irrelevant. <ul style="list-style-type: none"> ✓ Cause(s) of change is not related to appropriate macroeconomic policies. ✓ Effect(s) of change is not related to the trade-offs in macroeconomic objectives. ➤ Contains fundamental conceptual errors in analysis.

Levels	Descriptors
E2 3-4	<ul style="list-style-type: none"> • For a well-explained judgement.
E1 1-2	<ul style="list-style-type: none"> • For an unexplained judgement.

Essay Question 5

“In a severe economic recession, such as that experienced by the US in 2008, households should not be encouraged to save and the use of monetary policy may lose its traction.”

- (a) Explain why households should not be encouraged to save during an economic recession. [10]**
- (b) Discuss whether the use of monetary policy is the least appropriate in trying to pull the US economy out of a recession. [15]**

Part (a)

Candidates are expected to explain the contractionary effect of a fall in spending in the economy. An explanation of the reverse multiplier process and the paradox of thrift should be used to develop the answer fully.

Introduction:

- During a recession, households have a tendency to save and cut back on spending. However according to Keynes, this higher saving would lead to lower national income.
- Instead households should spend instead to pull the economy out of a recession.

Body:

- With lower national income, households may expect their future incomes to fall further due to the poor economic outlook. As a result, they would choose to cut back on their spending and save instead.
- This would lead to a fall in autonomous C and hence a fall in the aggregate expenditure (AE) of the economy. Aggregate expenditure or aggregate monetary demand is the total planned expenditure on goods and services in an economy

and consists of consumption expenditure by households (C), investment expenditure by firms (I), government expenditure (G) and net exports (X-M).

- An autonomous increase in household savings (at every income level) reduces consumption and shifts the AE curve downward. The fall in AE would lead to a more than proportionate decrease in national income.
- Draw a Y=AE diagram or AD-AS diagram to show the more than proportionate fall in national income.
- Explain the reverse multiplier process in full using a numerical example.

Conclusion:

- Hence increase in thriftiness by the economy during a time of economic recession will aggravate the situation. Households, businesses, government should instead be encouraged to spend more and not to save more.
- Consumption and high investment are important for raising national income and employment only in periods of less than full employment or depression. This can be done through various policies that a government can undertake.

Mark Scheme

L3	7-10	<ul style="list-style-type: none"> • Excellent explanation of how an increased in savings would lead to a fall in autonomous consumption. • Excellent explanation of the reverse multiplier process. <ul style="list-style-type: none"> ○ Making numerical example and/or diagrammatic analysis to show the process.
L2	5-6	<ul style="list-style-type: none"> • Good explanation of how an increased in savings would lead to a fall in autonomous consumption. • Good explanation of the reverse multiplier process. <ul style="list-style-type: none"> ○ Some attempt at providing a numerical explanation of the reverse multiplier process. (eg only providing one round of the process)
L1	1-4	<ul style="list-style-type: none"> • Some recognition of how an increased in savings would lead to a fall in autonomous consumption. • Some recognition of the reverse multiplier/multiplier process.

Suggested answers for Part (b)

Introduction:

- The US was in a severe recession during 2008 and as a result, the government undertook several policies to try and pull the economy out of the recession.
- The US government made extensive use of quantitative easing a form of monetary policy to try and increase spending in the economy as the use of interest rates was limited and unable to effectively stimulate the economy.
- The appropriateness of the use of monetary policy in the US depends on the type of monetary policy being used and whether the government has other policy options to help increase economic growth in the country.

Body:

Thesis: The use of monetary policy is the least appropriate to pull the US out of a recession because it is ineffective in increasing real NY AND other policies are more appropriate

Ineffectiveness of MP

- Monetary policy is the use of monetary policy tools by the Central Bank to manipulate interest rates or the money supply in order to influence the level of economic activity of the country.
- In order to pull the economy out a recession, the Federal Reserve increased the money supply in the economy, which led to a fall in interest rates.
- The fall in interest rates led to a fall in the cost of borrowing for households and firms.
 - Households should have increased their consumption expenditure on big-ticket items such as houses and cars in response to their lower monthly mortgages and loan repayments making these items more affordable.
 - At the same time, with the lowered interest rates and a given rate of returns on their investments, firms would find investment projects more profitable and hence investment expenditure should increase.
- The combined increase in C and I should have led to an increase in AD and a more than proportionate increase in national income via the multiplier effect. This would have pulled the economy out of the economic recession.
- However, as the US was likely to be operating in the liquidity trap, M^S increases but i/r is very low and expected not to fall further. Hence there will be no change in i/r and hence no change in planned investment and no change in AD.
- Real national income would thus not increase and hence the economy would still be in a recession.
- By 2009, the Fed had lowered rates to near zero. Given that nominal interest rates could not fall below zero, the Fed would have few other policy options to increase real nation income. Hence, there was a need to undertake economic stimulus in the form of fiscal policy.

Effectiveness of Fiscal Policy

- The use of fiscal policy may be more appropriate as given the current situation in the US where the economic recession is severe, the use of fiscal policy to directly increase the aggregate demand through increases in government expenditure. At the same time, reductions in taxes would lead to increases in consumption expenditure and investment expenditure.
- The government could increase spending on infrastructure such as the building of highways and the modernization of federal buildings. Spending could also be on new projects that would help to develop key industries in the US. For example, building of new scientific facilities and improvement of broadband infrastructures to improve access to the Internet in rural areas.
- Tax cuts for households resulted in an increase in disposable incomes for consumers and hence an increase in consumption expenditure. The reduction in corporate taxes also increased firms' after tax profits and allowed for an increase in investment expenditure.

- The combined effect of the increase in C, I and G would lead to an increase in AD and a more than proportionate increase in national income via the multiplier effect and hence help to pull the economy out of the recession.

Exchange rate policy- Switch to make use exchange rate instead

- Based on the open economy trilemma, the US can only control its domestic interest rates or money supply, have free capital mobility and/or control its exchange rate. In the US, the choice was to have control over domestic money supply and interest rates as well free capital mobility. Hence they have had to give up control over their exchange rate.
- In the context of the recession however, given that interest rates are already at such low levels and are likely to be ineffective, the US could consider switching its growth from one of internal consumption to making use of the external sector to drive their growth instead. This would mean giving up control over domestic money supply or interest rates.
- With a depreciation of the US\$, the price of exports in foreign currency would be cheaper. This would lead to an increase in demand for exports and hence export revenue. At the same time, imports would be relatively more expensive in US\$ leading to a fall in quantity demanded. Since the US is generally self sufficient and not very reliant on imports, the demand for imports is likely to be price elastic. Hence, with an increase in price of imports in US\$, import expenditure will fall. Assuming that Marshall-Lerner condition holds where $IPED_x + PED_M > 1$, $(X-M)$ would increase and hence AD would increase leading to a more than proportionate increase in national income via the multiplier effect. This would increase actual economic growth and pull the US out of recession and hence would make it more appropriate than monetary policy.

Protectionism

- The US government could also undertake protectionist measures to boost domestic demand for goods and services. Imposing taxes on imported goods and services, would increase the price of imports relative to the price of domestic goods, and services and hence US consumers would switch from the consumption of imports to domestic goods and services. This would reduce import expenditure assuming that demand for imports are relatively price elastic and hence increase $(X-M)$ and hence AD and national income.
- Another example could be protectionist measures that unfairly protect domestic producers by making it harder or by preventing the import of imports. For example, in 2009 as part of the Stimulus Package announced by President Barack Obama, there was a provision that would mostly bar foreign steel and iron from the infrastructure projects laid out by the \$819 billion economic package. Doing so would effectively protect US steel manufacturers from the imported steel of South Korea and China. This would increase demand for domestic goods and services and at the same time decrease demand for imports and hence import expenditure.
- This policy would be more appropriate than monetary policy as it helps to provide new markets that the US could depend on rather than its domestic market that is pessimistic in outlook.

Supply side

- The US government could consider undertaking policies to increase the SRAS by reducing the cost of production for firms or perhaps by reducing structural rigidities.
- The reduction of taxes to firms would create a greater incentive for them to innovate and become more efficient to lower their cost of production as they are able to keep a greater share of their profits due to the reduction of taxes. The increased efficiency would lower the cost of production and hence lead to an increase in SRAS as more output is being produced.
- An increase in SRAS would help to increase real national output and hence pull the US economy out of recession. This would be more appropriate as compared to monetary policy that focuses on increasing AD.

Anti-Thesis: The use of monetary policy is not the least appropriate to pull the US out of a recession because it can be effective AND other policies are less appropriate

Effectiveness of MP through the direct transmission mechanism

- However, the use of monetary could still work through the direct transmission mechanism. Given excess liquidity households and firms spend more on goods and services.
- An increase in the money supply means that at the initial interest rate, the quantity of money supplied exceeds the quantity demanded. People are therefore holding on to more of their wealth in the form of money than they would like to. They will tend to spend this surplus or switch to other forms of assets. As they attempt to reduce their money holdings, people increase their demand for all kinds of assets, including homes and other durable goods such as cars and televisions, as well as switching into other financial assets (shares, bonds).
- In particular, the US undertook a policy of quantitative easing. Quantitative easing is useful particularly when the economy is in a liquidity trap or when interest rate, already very low, cannot be cut further. The increase in money supply through quantitative easing can help to stimulate spending through the direct transmission mechanism, even without any fall in interest rate. Moreover, as people switch their money holdings to other types of assets, it will drive up the prices of other assets in general, resulting in an increase in wealth of asset owners and thereby creating a wealth effect which causes people to spend more on goods and services.
- The increase in C and I would lead to an increase in AD and hence increase in real national income.

Limitations of FP

- The huge amount of the fiscal stimulus would require heavy borrowing to finance. As a result this would lead to the US to be in debt. The US government was already heavily in debt prior to the financial crisis and continued borrowing to fund the fiscal package would lead to an increasing national debt.
- This means that the Government has to spend more each year in debt-interest payments to holders of government bonds and other securities. This results in an opportunity cost to society when the funds could have been put to other more productive uses.
- The problem is aggravated when the country faces an economic downturn causing tax revenues to fall, which reduces the government's ability to make its interest payments or repay its debt. This could trigger a debt crisis as the government may be forced to default on its debt repayment.

Limitations of Supply side policy

- Supply side policy may be more inappropriate than monetary policy as it does not tackle with the root cause of the recession which is an issue of aggregate demand deficiency.

- Supply side policy may even worsen the recession by creating a negative side effect of creating more spare capacity if the supply side policy increases the LRAS without a corresponding increase in AD.

Conclusion:

- Despite the ineffectiveness of traditional monetary tools of interest rates to spur spending, the use of quantitative easing to cause increases in consumption and investment expenditure would still make the use of monetary policy crucial in pulling the economy out of the recession.
- However, given that the scale of the economic recession is very severe, and the fact that the economy was at the liquidity trap, the need to implement fiscal policy to complement the use of quantitative easing is also necessary to give the economy an additional boost through the increase in G.
- Overall, the type of monetary policy being implemented is what determines whether or not it is the most appropriate. Also, given the fact that debt levels were high in the US, the ability of the government to increase its spending through increased borrowing would also pose a potential threat to future growth in the economy. Hence, it was necessary to use a combination of both fiscal policy and monetary policy to pull the US economy out of the recession.

Mark Scheme

L3	9-11	<ul style="list-style-type: none"> • Balanced argument that considers why monetary policy may be appropriate and why it is inappropriate. Answer should include a discussion on why other policies may be more appropriate and the limitations of other policies. • Excellent analysis of at least 3 policies (including monetary policy). There should also be a discussion of the possible limitations of at least 2 policies. • Excellent diagrammatic analysis to compare effectiveness of the different policies. • Attempts at comparing the appropriateness of different policies.
L2	6-8	<ul style="list-style-type: none"> • Balanced argument that considers why monetary policy may be appropriate and why it may be inappropriate. However the answer may not be well developed. OR One-sided answer that only considers why monetary policy is the least appropriate or why it is not the least appropriate. • Good analysis of at least 2 policies (including monetary policy). There should also be a discussion of the possible limitations of at least 2 policies.
L1	1-5	<ul style="list-style-type: none"> • Argument that considers why monetary policy may be appropriate OR why it may be inappropriate. However the answer may not be well developed. • Two-sided answer with limited development.
Evaluation		
E2	3-4	<ul style="list-style-type: none"> • Well-reasoned judgement supported by analysis.
E1	1-2	<ul style="list-style-type: none"> • Unexplained judgement that is not supported by analysis.

Question 6

Discuss the view that the extent to which countries benefit from globalisation depends mainly on the type of comparative advantage that the country has. [25]

Question Analysis:

Command word: Discuss the view

Concept(s): cause of effects of globalisation, type of comparative advantage (as a cause), discussion of different types of comparative advantage

Context: Open

Introduction**Key definitions**

- Globalisation: refers to the increasing integration of national economies in terms of financial flows, trade, movement of factors of production, ideas, and changes in information and technology.
- Benefits: Link to the 4 macroeconomic objectives, consumer welfare, Standard of Living (SOL) – both material and non-material
- While the type of comparative advantage (CA) plays a significant role in the extent to which countries benefit from globalisation, there are however other factors which play equally significant roles in determining the benefits of globalisation.

Body:

Thesis: Extent which countries benefit from globalisation depends on the type of comparative advantage that the country has

Explain Comparative Advantage and effects on Trade

- **The Theory of Comparative Advantage** states that trade can benefit all countries if they specialise in (and export) the goods in which they have a comparative advantage.
- Looking at the example of Singapore and China, suppose each country has 10 units of resources which are divided equally to produce the 2 goods: Electronic Equipment and Cloth (i.e. 5 units of resources in wheat and 5 units of resources in cloth).
- The output is as follows:

Table 1: Production and consumption before specialisation (with 5 units of resources in Electronic Equipment and Cloth)

Country \ Good	Electronic Equipment (units)	Cloth (units)
Singapore	50	200
China	10	100
Total	60	300

- This means that 1 unit of resource in Singapore can produce 10 units of electronic equipment or 40 units of cloth; while 1 unit of resource in China can produce 2 units of electronic equipment or 20 units of cloth.

Table 2: Opportunity Cost Ratios for Singapore and China

Country \ Good	1 unit of resource can produce	
	Electronic Equipment (units)	Cloth (units)
Singapore	10	or 40
China	2	or 20

- Singapore therefore has absolute advantage in both electronic equipment and cloth.
- A country is said to have absolute advantage in the production of a good if it can produce more of the good with the same amount of resources (or uses less resources to produce the same quantity of the good) compared to another country
- However, the countries can still gain from trade if they specialize according to their comparative advantage, which is determined by their opportunity cost in production, or relative efficiency in producing the good. As seen above in Table 2, the opportunity cost of producing 1 unit of Electronic Equipment for Singapore is 4 units of clothes while the opportunity of producing 1 unit of Electronic Equipment is 10 units of clothes. Thus Singapore has the comparative advantage in producing Electronic Equipment while China has the comparative advantage in producing clothes.
- As shown in Fig. 1, Singapore will choose to specialise completely in Electronic Equipment. Before Trade, the consumption possibility frontier (CPF_a) is identical to that of its production possibility frontier (PPF_a). Singapore can then trade with China based on the prevailing terms of trade which will see an outward shift of the consumption production frontier, from CPF_a to CPF_b, which reflects the gain from trade, with the countries specialising in the respective goods in which they have the comparative advantage.

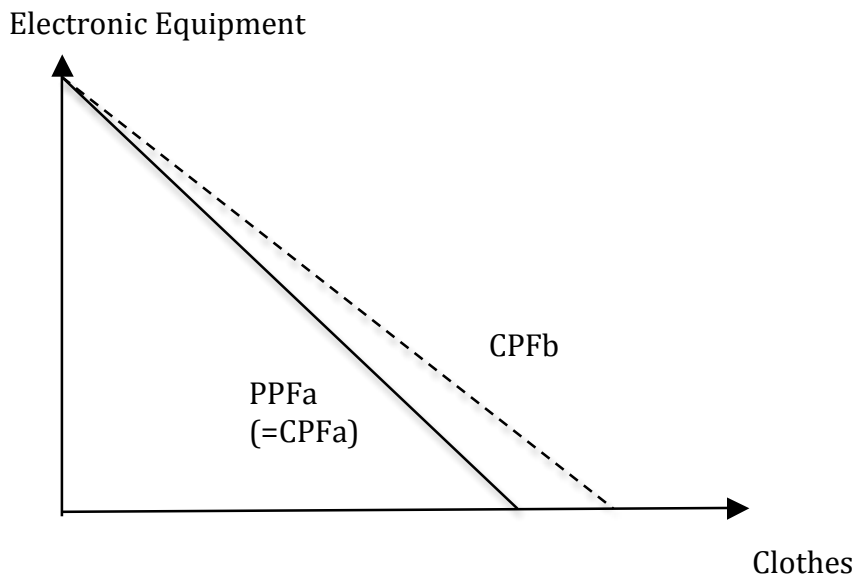


Figure. 1 Production Possibility Frontier and Consumption Possibility Frontier of Singapore

Explanation of why different countries have different types of comparative advantage

Countries have different comparative advantages due to:

- i) Resource endowment of the country (Heckscher-Ohlin Model)
 - According to Heckscher Ohlin Model, a country with a huge population (relative to other factors of production) will have a comparative advantage in labour-intensive production e.g. China and India. They also tend to be developing countries. On the other hand, a country with a huge capital base and high-skilled labour will have a comparative advantage in capital-intensive production. E.g. USA and Singapore They also tend to be developed countries.
 - The countries can each benefit from the gains of specialisation and trade based on terms of trade that lie between the opportunity cost ratios of the 2 countries.
 - The gains from trade may differ based on the different types of comparative advantages that the countries possess as this may affect the bargaining power of the countries.
 - Looking at the examples of Singapore and China, with China having comparative advantage in clothes, tends to have a lower income elasticity of demand due to it being a necessity while for electronic equipment, the good tends to have a high income elasticity of demand due to its status as a luxury good thus over time, given increases in global incomes, the terms of trade tends to worsen for clothes manufacturers like China while the terms of trade improves for electronic equipment manufacturer like Singapore.

- Thus with increased trade due to globalisation, countries with comparative advantages in capital-intensive industries (Singapore) would have benefited more than countries with comparative advantage in labour-intensive industries.

Effect on Investment and Outsourcing/Offshoring

- With globalisation and the ease of communication and removal of barriers on movement of goods and services and factors of production, the principle of comparative advantage is extended to intermediate goods (rather than just final goods) – For example, many companies in developed countries (with CA in capital goods) have tended to outsource production to developing countries (with CA in labour-intensive goods) This is especially for the assembly of final consumer products which tend to be labour intensive and is usually located in countries with a huge population such as China.

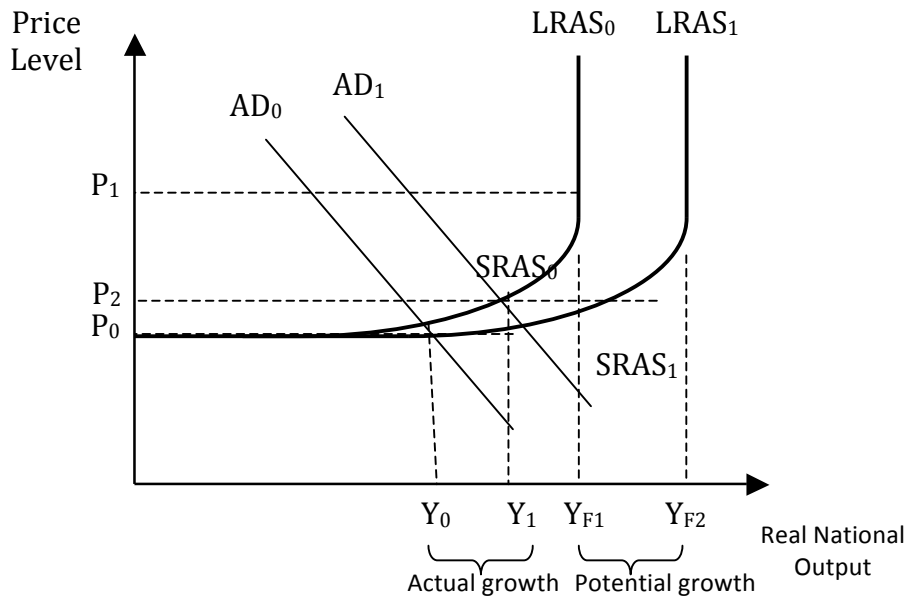
Note: Students can choose to compare between any 2 different types of comparative advantage for analysis and illustration.

Analysis for countries with CA in labour-intensive production

- Outsourcing leads to increased inflows of foreign direct investment (FDI) and increasing investment (I) leads to an increase in aggregate demand (AD) . Assuming that the increase in FDI facilitates the growth of the export sector which increases overall export revenue, this will result in an overall increase in AD from AD_0 to AD_1 as shown in Figure 2.
- The investment, coupled with the transfer of ideas, information and technology will increase the long-run aggregate supply (LRAS) of the economy as shown in the increase from $LRAS_0$ to $LRAS_1$ (*The investment may also introduce production techniques that lowers the cost of production, resulting in an increase in short-run aggregate supply – illustrate in diagram*)
- With the increase in AD and increase in LRAS, there is an increase in real national income from Y_0 to Y_1 , resulting in actual economic growth.

Diagrammatic analysis

Figure 2: Actual vs. Potential Growth using AD/AS model



- At the same time, there is also an increase in employment as more labour is required with the increase in production. The influx of foreign direct investment will improve capital and financial account and the increase in net exports will improve the current account, leading to an overall improvement in the balance of payment.
- As there will be increased employment of low-skilled workers, this is likely to close the income gap between them and high-skilled workers/ capital owners and result in greater income inequality. However, this also depends on whether the low-skilled workers will be exploited, especially by the multi-national companies.

Analysis for countries with CA in capital-intensive production

- Likely that with outsourcing (with outflows of FDI), the countries will be better able to focus on capital-intensive industries which they have comparative advantage in. However, problem of structural unemployment for low-skilled workers due to transition of economy to focus on high-skilled, capital-intensive industries. Result in higher income inequality between the low-skilled workers and high-skilled workers/capital owners.

Effect on movement of labour

- With globalisation, there will be outflow of high-skilled labour from countries with CA in labour-intensive industries to countries with CA in capital-intensive industries to take up labour shortages. These countries tend to be developed countries. This will result in serious brain drain problems for developing countries, which has huge populations and CA in labour-intensive industries.

Evaluation: With globalisation, economic migrants of all types (high-skilled and low-skilled alike) have taken advantage of the increased communication and transport accessibility to move from developing countries to developed countries due to the perceived higher standard of living in developed countries. Thus, CA is not the only factor explaining migrant flows and the pursuit of a higher standard of living may be a better factor at explaining migrant flows.

Anti-Thesis: Extent which countries benefit from globalisation does not depend on the type of comparative advantage that the country has

(Discussion of 3 factors would suffice)

Limitations of comparative advantage as a theory

1. Transport cost and location

- Although globalisation has reduced communication and transport costs, transport costs still play a significant factor, especially if the country has a comparative advantage in goods that are bulky, low-valued and/or perishable products which limit the number of markets that the country can export to and thus the benefits of globalisation. For example, agricultural products of Malaysia.
- The extent to which countries benefit from globalisation also depends on the distance to the main markets (such as USA). Countries nearer major markets (e.g. USA) will have a natural advantage over countries located further away.
- Thus this will be a factor that will limit the gains of trade by countries wishing to specialise based on their comparative advantage

Other factors that influenced benefits from globalisation

2. Trade not based on CA: Intra-industry Trade (Horizontal)

- Inter-industry trade (based on comparative advantage) is just one type of trade whose volume will increase due to globalisation.
- With globalisation, there will also be an increase in intra-industry trade which is not based on comparative advantage.
- Theory of Comparative Advantage assumes that goods are homogenous in nature. However, in the real world, there are different varieties of the same product and thus taste and preference of consumers is important as a demand factor that affects trade flows and facilitates intra-industry trade rather than inter-industry trade based on CA.
- Intra-industry trade allows consumers to enjoy a variety of products without sacrificing the cost advantage of economies of scale arising from large scale production.
- Intra-industry trade, however may also bring about increased competition for domestic industries, leading to their closure, thus reducing domestic employment and economic growth.
- Comparison with Type of CA as a factor: Intra-industry constitutes a large portion of overall trade, especially for manufactured products thus with globalisation, the presence of intra-industry may play a bigger factor in determining whether countries benefit from globalisation.

3. Use of government policies

Different countries may benefit differently from globalisation due to the adoption of differing policies by them.

- Trade Liberalisation vs. Protectionism: Some countries may pursue trade liberalisation policies (through the signing of Free Trade Agreements) which allows them to gain from increased exports (using exports as an engine of growth) and to attract Foreign Direct Investment.
- E.g. Singapore has signed a myriad of FTAs with different countries in order to develop Singapore as an integrated manufacturing centre and attract firms to invest in Singapore (FDI) and use Singapore as an export hub (with low tariffs and trade restrictions), which in turn increases exports.
- Laws on immigration may also differ between countries, limiting the gains from globalisation. E.g. Singapore's tightening of foreign labour flows
- Protectionistic policies adopted by some countries can limit the gains from trade of other countries or even cause the other countries to be adversely affected due to unfair trading practices. Eg. restrictions on import of agricultural products by developed countries to protect domestic farmers reduce the agricultural exports of developing countries, thus reducing their benefit from trade.
- Governments may also play a role in determining the type of comparative advantage the country will have. Type of comparative advantage is not static and may change over time. Governments may encourage the development of new comparative advantages, especially in moving up the production chain, as part of their development strategy. For example, the Chinese government plays an instrumental role in providing subsidies and other forms of help in developing the solar panel industry, a capital-intensive industry, even though it is not a comparative advantage that China traditionally has.

4. Nature of economies

- Size of countries as a factor: Smaller countries may better benefit more from bigger countries.
- For small countries such as Singapore, gains from specialisation may only appear when coupled with gains from economies of scale. Small markets like Singapore will not be able to support large-scale industries and rely on market access to large markets in order to reap the cost advantages from these large-scale industries. This is however also dependent on whether the goods that the country specialises in allows internal economies to be reaped. For example, if the country specialises in cottage industries that suffer from internal diseconomies of scale at a relatively small output, then globalisation will not bring about the benefits that it should.

Small countries also depend on trade for their imports of necessities thus a key determinant of whether countries benefit also depends on the size of the country.

Conclusion/Synthesis

- Significance of transport costs/locations as a limitation of comparative advantage

- CA is ultimately a theory that explains the supply side of why countries trade and demand factors such as intra-industry trade are equally important in determining the extent of benefits from globalisation.
- Finally, governments themselves also play a significant role in determining the extent of benefits of globalisation with the policies adopted as well as the different nature of economies often playing a more significant role
- Thus, type of comparative advantage plays a significant role but is not the main reason that determines the extent of benefits from globalisation.

Mark Scheme

Level	Descriptors
<p>Level 3 High L3 18-21</p>	<ul style="list-style-type: none"> • For an answer that shows: <ul style="list-style-type: none"> - Excellent depth in analysis: <ul style="list-style-type: none"> ○ Accurate use of the concepts of comparative advantage & globalisation and thorough examination of the different types of comparative advantage between countries ○ Detailed examination of benefits based on a criteria encompassing the 4 macroeconomic objectives and standard of living/consumer welfare - Excellent breadth in analysis: <ul style="list-style-type: none"> ○ Answer demonstrates a thorough examination of increased trade flows and other different aspects of globalisation (at least 2 including trade) and how benefits from globalisation are affected by different types of comparative advantage as well as at least 3 other factors - Supported by <ul style="list-style-type: none"> ○ Well labelled and well referred AD-AS diagram and opportunity cost tables or PPF diagram ○ Contextualised examples based on the different types of comparative advantage and other factors ○ Logical structure
<p>Low L3 15-17</p>	<ul style="list-style-type: none"> • For an answer that shows: <ul style="list-style-type: none"> - Very good depth in analysis <ul style="list-style-type: none"> ○ Accurate use of the concepts of comparative advantage & globalisation and thorough examination of the difference in types of comparative advantage between countries. ○ Some examination of benefits based on a criteria encompassing at least 3 macroeconomic objectives and/or standard of living/consumer welfare - Very good breadth in analysis: <ul style="list-style-type: none"> ○ Answer demonstrates a very good examination of increased trade flows and other aspects of globalisation (at least 2, including trade) and how benefits from globalisation are affected by both different types of comparative advantage as well as at least 2 other factors - Supported by <ul style="list-style-type: none"> ○ Well labelled and well referred AD-AS diagram and/or

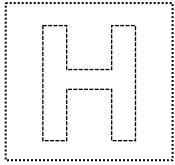
	<ul style="list-style-type: none"> ○ opportunity cost tables or PPF diagram. ○ Contextualised examples based on the different types of comparative advantage or other factors ○ Logical structure
High L2 12-14	<ul style="list-style-type: none"> • For an answer that shows: <ul style="list-style-type: none"> - Good depth in analysis <ul style="list-style-type: none"> ○ Accurate use of the concepts of comparative advantage & globalisation and some examination of the difference in types of comparative advantage between countries. ○ Some examination of benefits based on at least 3 macroeconomic objectives and/or standard of living/consumer welfare - Good breadth in analysis: <ul style="list-style-type: none"> ○ Answer demonstrates a good analysis of increased trade flows and other aspects of globalisation (at least 2, including trade) and some examination of how benefits from globalisation are affected by both different types of comparative advantage as well as at least 2 other factors - Supported by <ul style="list-style-type: none"> ○ Use of AD-AS diagram or opportunity cost tables. ○ Contextualised examples based on the different types of comparative advantage or other factors ○ Logical structure
Low L2 10-11	<ul style="list-style-type: none"> • For an answer that shows: <ul style="list-style-type: none"> - Sufficient depth in analysis <ul style="list-style-type: none"> ○ Some use of the concepts of comparative advantage & globalisation with possible inaccuracies and some examination of the difference in types of comparative advantage between countries. ○ Some examination of benefits based on at least 2 macroeconomic objectives and/or standard of living/consumer welfare - Sufficient breadth in analysis: <ul style="list-style-type: none"> ○ Answer demonstrates a sufficient analysis of increased trade flows but superficial examination of other aspects of globalisation ○ Some examination of how benefits from globalisation are affected by different types of comparative advantage but other factors are insufficiently examined (One-sided analysis) - Supported by <ul style="list-style-type: none"> ○ Contextualised examples ○ Some logical structure
High L1 6-9	<ul style="list-style-type: none"> • For an answer that shows: <ul style="list-style-type: none"> - Insufficient depth in analysis <ul style="list-style-type: none"> ○ Inaccurate use of the concepts of comparative advantage & globalisation and why differences in types of comparative advantage between countries exist.

	<ul style="list-style-type: none"> ○ Little reference to a criteria of what constitutes benefits - Insufficient breadth in analysis: <ul style="list-style-type: none"> ○ Answer demonstrates some understanding of the effects of globalisation at a superficial level. ○ Attempt at examining how benefits from globalisation are affected by different types of comparative advantage and other factors
Low L1 1-5	<ul style="list-style-type: none"> • For an answer that <ul style="list-style-type: none"> - Is largely irrelevant - Contains fundamental conceptual errors in analysis. - May have only addressed one part of the answer and little else. For example, why different countries have different types of comparative advantages.
E2 3-4	<ul style="list-style-type: none"> - Judgment of significance of types of comparative advantage based on analysis
E1 1-2	<ul style="list-style-type: none"> - Unexplained judgment

Name: _____

Centre No. / Index No.: _____ / _____

Class: _____



PIONEER JUNIOR COLLEGE, SINGAPORE
JC2 PRELIMINARY EXAMINATION 2015
Higher 1

ECONOMICS

Additional Materials:

Answer Paper

8819/01

Paper 1

18 Sep 2015

3 hours



READ THESE INSTRUCTIONS FIRST

Write your Centre number, index number and name on all the work you hand in.

Write in dark blue or black pen on both sides of the paper.

You may use a soft pencil for any diagrams, graphs or rough working.

Do not use staples, paper clips, highlighters, glue or correction fluid.

Section A

Answer **all** questions.

Section B

Answer **one** question.

Please begin your answer to each question on a fresh piece of writing paper.

At the end of the examination, fasten your work for Questions 1, 2 and 3 or 4 separately.

The number of marks is given in brackets [] at the end of each question or part question.

This document consists of **8** printed pages.



Pioneer Junior College

8819/01/ PJC Prelim Exam / 2015



Ministry of Education
[Turn over

Section AAnswer **all** questions in this section.**Question 1****Education and Growth****Table 1: Government Spending on Education in Singapore (Annual % Change)**

	2009	2010	2011	2012	2013
Total Government Expenditure On Education*	5.5	13.7	8.8	-2.3	10.5
Primary Schools	1.3	16.9	-1.0	6.9	13.6
Secondary Schools & Junior Colleges	2.8	14.9	-2.0	6.5	10.2
Universities	11.4	14.4	29.0	-14.7	15.1

* Figure includes other expenditure such as Development Expenditure, Polytechnics that are omitted.

Source: Singapore Department of Statistics, www.singstat.gov.sg, 2014**Table 2: Median Gross Monthly Income from Work (Exclude Employer CPF) of Full-Time Employed Residents (Aged 15 Years & Over) by Highest Qualification Attained**

	Median Gross Monthly Income(\$)
Primary & Below	1,463
Secondary	2,500
Diploma & Professional Qualifications	3,500
Degree	5,976

Source: Ministry of Manpower, <http://stats.mom.gov.sg>, June 2014**Extract 1: Importance of Education in Singapore**

From Singapore's beginning, education has been seen as central to building both the economy and the nation. The objective was to serve as the engine of human capital to drive economic growth.

Education spending rose to 3.6% of GDP in 2010, approximately 20% of total government expenditure and second only to defence. The linkage to economic development is close-fitting. As Singapore evolved from an economy based on port and warehousing activities, through a low-wage, labour-intensive manufacturing economy, and then to a more capital and skill-intensive industry and finally to its current focus on knowledge intensive industrial clusters, the education system was expected to ramp up the quality of its education and the supply of specific skills needed to make Singapore globally competitive.

Source: Organisation for Economic Co-operation and Development (OECD)
<http://www.oecd.org/countries/singapore/46581101.pdf>

Extract 2: Increasing Investments in Higher Education - A Global Shift in Focus

Tertiary education systems have been expanding worldwide, with total enrolment increasing at an estimated 5% annually over the period 1991-2004. In countries where the higher education sector is more developed, there has also been a growing awareness of the need for close links between higher education institutions and industry, and a simultaneous diversification in the range of occupational qualifications provided by these institutions.

Singapore's higher education sector is already recognised as one of the best in the region. Nonetheless, as the emphasis on higher education grows worldwide, we will need to constantly improve our universities, polytechnics, and ITE, to ensure that our higher education sector remains world-class. NUS said the average operating cost per student has risen globally and the increase in tuition fees will "defray higher costs of talent, supplies and services". At the same time, we must move into more complex areas of study and collaboration with Industry, to reap maximum returns from our investment in higher education.

People who invest in higher education tend to receive greater private returns in the form of higher wages and higher employability. There are social returns to higher education, in terms of lowering poverty and crime rates. Many studies have suggested that numerous productivity externalities arise from higher education. For instance, economists hypothesise that a city with more human capital would be able to generate more knowledge capital, and the productivity gains from that would then spill over and raise wages among the rest of society. These effects create a compelling case for higher education subsidies.

Source: Singapore 2010 Budget Highlights

Extract 3: When things are free... What will it cost us?

Education is an essential service some governments have chosen to provide free of charge to all citizens and even residents of their countries. It is the one of pillars of the welfare systems in the Nordic countries and in Britain, which is both boon and bane. For instance, Finland sees free tuition as conferring a competitive advantage in helping it lure top foreign professionals. But it poses a real risk of over-consumption because of moral hazard, a term economists use to describe the incentive to consume more when someone else is paying.

Free higher education in Europe has been a bane to governments there, with students keen to remain in the cocoon of the school system, rather than enter the marketplace of a debt-ridden continent in which jobs are hard to come by. In Denmark, the situation is exacerbated by students getting stipends (Internship Salary) for six years, though their tuition-free degrees take five years to finish. Many take an even longer time to graduate, going for internships or holidays so they can delay their entry into the job market.

The Singapore system avoids that. Yes, compulsory education is free at primary schools, where parents pay only a monthly miscellaneous fee of a few dollars. And while there are fees at the secondary level, a carefully calibrated scheme of subsidies and bursaries ensures that the needy are not denied the chance to study as far as they can go. But the system's structure removes any incentive for students to stay longer than necessary, yet ensures that everyone at least gets access to basic education. There have been occasional calls to tweak the system to make higher education free, but this will result in a greater tax bill.

Source: Straits Times, 1 July 2013

Questions

- (a) With reference to Table 1, compare how government spending on primary schools and on universities increased in 2013 relative to total government spending on education? [2]
- (b) Using demand and supply analysis, explain two possible reasons for the increase in university tuition fees as highlighted in Extract 2. [4]
- (c) Explain how the “need for close links between higher education institutions and industry” affects unemployment. [2]
- (d) With the help of an AD/AS diagram, explain the impact of education on the macroeconomic performance of the Singapore economy. [5]
- (e) Comment on the impact of higher education on the standard of living of graduates. [4]
- (f) (i) Explain what is meant by the term positive externality. [2]
- (ii) With the help of an example, explain how positive externalities arise in education. [3]
- (iii) In Britain, Denmark and Finland, education is free. In contrast, the Singapore system avoids this. Assess the economic case for these two different approaches. [8]

[Total: 30]

Question 2

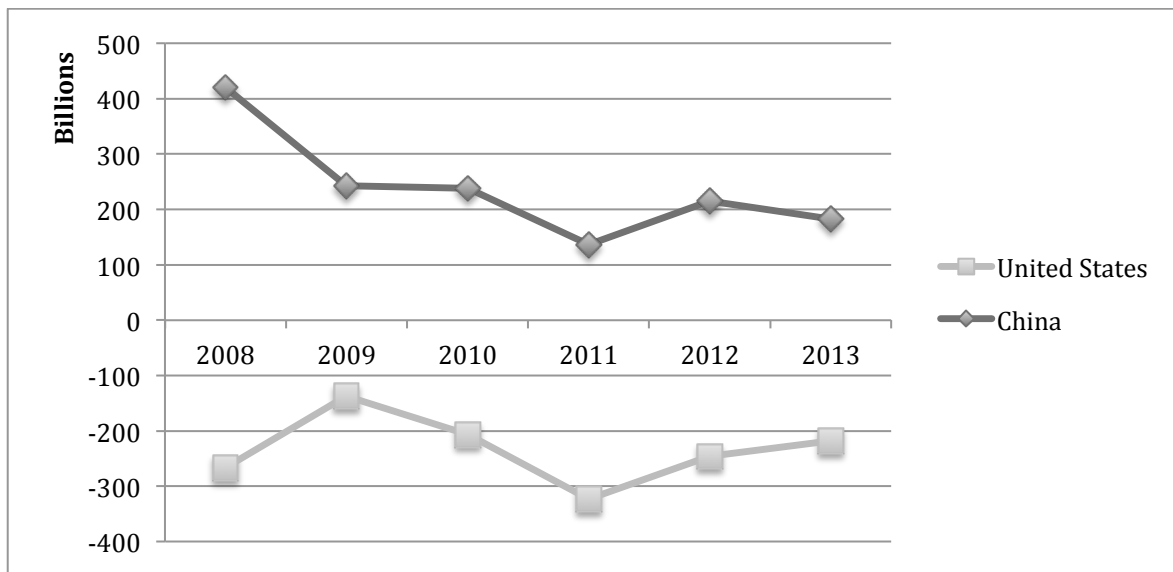
Economic Challenges that China Faces

Table 3: China: selected economic indicators 2009 – 2013

Economic indicators	2009	2010	2011	2012	2013
Growth in real gross domestic product (% change per annum)	9.2	10.6	9.5	7.8	7.7
Consumption Expenditure (% of GDP)	48.5	49.6	50.8	49.9	49.6
Gross Savings (% of GDP)	52	51	49	50	50
Gross Capital Formation (% of GDP)	48	47	47	47	48
Exports of Goods and Services (% of GDP)	23.7	26.2	25.5	24.2	23.3
Imports of Goods and Services (% of GDP)	19.9	23.2	23.4	21.5	20.6

Source: World Trade Organization and World Bank

Figure 1: China and U.S. Current Account Balance (in billions US Dollars)



Source: World Bank

Extract 4: The slow boat in China is good for the region

China's economy is showing clear signs of slowing down.

China's economic growth on the demand side is mainly investment driven. But excess capacities in its many heavy industries, coupled with the cooling housing market, have recently depressed domestic investment. For more stable long-term growth, domestic consumption must be boosted. Currently, China's consumption level is too low, at about 40 per cent of GDP (compared with 55 per cent for India and 70 per cent for the US). Domestic consumption has not risen fast enough to compensate for the decline in domestic investment. At the same time, it is crucial for China to reduce its dependence on exports as external demand plummeted due to the erosion of China's export competitiveness as wages rise and the Yuan appreciates.

On the supply side, economic growth has been fuelled by an expanding labour force and productivity increases. However, China's growth is facing demographic constraints which is of immediate concern. Due to its ageing population and declining population growth, China will see the number of 20- to 35-year-olds decline. In order to maintain or increase productivity growth, there is a need for more investment in human capital and research and development.

It is important to note that "low growth" for China is actually not low at all by regional and global standards as growth rate stands around 7 per cent to 8 per cent, easing to 6 per cent or 5 per cent in the 2020s. China's transition from double-digit hyper expansion to more sustainable growth levels is a desirable phenomenon, not only for the country, but also for its neighbours.

Lower growth provides an opportunity to achieve better quality and more sustainable growth. Growth will go hand in hand with macroeconomic restructuring and rebalancing, hence slower growth also means more inclusive growth and less pressure on the environment. China's economic rebalancing can be a positive factor for ASEAN's development. There will be, for example, less competitive pressures on ASEAN's labour-intensive manufactured exports. More FDI may also find its way back to Southeast Asia. Meanwhile, China remains the main economic growth engine for the region. Slower growth will not diminish China's growing geo-economic predominance in the region.

Source: *Straits Times*, 1 June 2013

Extract 5: Losers of China's 'Rebalancing Act'

As China rebalances its economy from exports driven to a more consumer-oriented society, there will be growing pains. Successful rebalancing largely depends on the ability of household consumption to pick up but it has not been able to do that so far. Losers of the rebalancing China economy in the global economy are commodities exporters like Brazil and South Africa.

As China turns inward, the effects for the world is especially clear for the big commodities producers. With a rise in income in China, Chinese consumers are expected to buy more luxury goods than anyone else; more cars; take more business trips and buy homes abroad in increasing numbers. But none of this requires metal such as iron ore pellets or copper wire from the global commodities markets. Boeing won't need to build additional airplanes to take these Chinese to Paris. Beijing will not be building a bridge to Malibu. Overall commodity prices have dropped significantly and China is one of the reasons why.

Source: *Forbes*, 15 August 2013

Extract 6: China warns of 'grim' trade outlook after surprise exports fall

The world's second-largest economy is expected to be faced with a slowed down in GDP growth to 7.5 percent as weak demand dented factory output. In particular, exports to the United States, China's biggest export market, fell 5.4 percent in June, while exports to the European Union dropped 8.3 percent.

The external environment remains weak, rising labor costs and a stronger Yuan had eroded China's exports competitiveness. A customs spokesman in China stated that the economy faces relatively stern challenges in trade, and exports in the next quarter is forecasted to continue to be sluggish.

Source: *Reuters*, 10 July 2013

Extract 7: Protectionists pick your pocket again

In late 2012, a handful of American companies that make hardwood plywood in the U.S. lodged a complaint with the Commerce Department that Chinese suppliers selling hardwood plywood to U.S. have an unfair advantage because they supposedly receive Chinese-government subsidies and also that these Chinese suppliers sell at an unfairly low price.

Following the complaint, the Commerce Department levied a punitive penalty on every Chinese exporter of the plywood. Plywood is a vital raw material for U.S. manufacturers – for making cabinets, furniture, boats, paneling and in home construction, crating and packaging, store fixtures, flooring underlayment and countless other products. They depend on a steady, affordable supply of this plywood for the products they will sell at home and abroad.

The plywood tariffs have jolted supply chains, pushing up cost of imported plywood and resulting in shortages due to a lack of domestic supply. The first to suffer will be American jobs in manufacturing and woodworking. Many U.S. manufacturers that depend on imported Chinese hardwood plywood fear that the tariffs will force the production of cabinets, furniture and other products now made in the U.S. to sites overseas such as Canada and Mexico. Households will also suffer the consequences as the current U.S. plywood manufacturers already control 80% of the market for domestic hardwood plywood and now they're seeking to further exploit their stronghold by edging out overseas competition.

In conclusion, when the Commerce Department imposes tariffs on China plywood, it raises prices on the many to benefit the protected few.

Source: *Wall Street Journal*, 15 September 2013

Questions

- (a) (i) Compare the change in China's current account balance with that of US between 2009 and 2013. [2]
- (ii) With reference to Table 3 and Figure 1, explain how far the data might show that China has made progress in rebalancing the economy away from export. [4]
- (b) Explain why China's "demographic constraints" is of "immediate concern"? [4]
- (c) Identify one injection and one leakage (or withdrawal) shown in Table 3 that would change if consumption became the "main engine of growth" in China in the future. [2]
- (d) Explain why a subsidy given by the Chinese government to their plywood suppliers is deemed unfair to the American plywood companies? [2]
- (e) Extract 7 highlights that "when the Commerce Department imposes tariffs on China plywood, it raises prices on the many to benefit the protected few".
- Discuss whether the US government's policy of protection for the plywood industry benefits the minority and penalises the majority? [8]
- (f) Extract 4 and 5 describe China's rebalancing as moving away from export-driven growth to consumption driven growth. Assess the impact of such rebalancing on China and her trading partners, using both the case study and your own relevant knowledge. [8]

[Total: 30]

Section B

Answer **one** question from this section.

- 3 (a) Explain, using examples, what is meant by:
(i) a public good.
(ii) negative externalities. [10]
- (b) Negative externalities arising from production of a good gives rise to market failure. Discuss the extent to which the price elasticity of demand for a good affects the effectiveness of using indirect taxation to correct this market failure. [15]
- 4 (a) Explain the possible effects of rising inflation. [10]
- (b) Most agree that inflation can create uncertainties and undermine confidence in the economy. That is why most Central Banks are tasked with keeping a lid on inflation through interest rate and exchange rate. Discuss the extent to which Central Banks could keep a lid on inflation. [15]

PJC 2015 H1 Prelim Q1

- (a) With reference to Table 1, compare how government spending on primary schools and on universities increased in 2013 relative to total government spending on education? [2]

Suggested answer:

Both government spending on primary schools and universities have increased by a larger extent relative to the increase in total government spending on education. (1)

However, government spending on universities increased by a larger extent than that of primary schools relative to total government spending on education. (1)

√ 1 mark for similarity and 1 mark for difference

- (b) Using demand and supply analysis, explain two possible reasons for the increase in university tuition fees as highlighted in Extract 2. [4]

Suggested answer:

As highlighted in Extract 2, there is an increase in university tuition fees which refers to the price of university education. This can be accounted by an increase in demand and a fall in supply.

SS Factor - COP

With reference to Extract 2, average operating cost per student is rising in institutions such as NUS due to higher costs of talent, supplies and services. Hence, this reflected a rise in COP, reducing the education institutions willingness to supply education services at each and every price level. To maintain profitability, higher education providers will pass on the rise in COP to students in the form of higher university fees. (2)

DD Factor – T&P

In addition, Extract 2 also mentioned that total enrolment for tertiary education is increasing annually. This could be due to a rise in preference for pursuing higher education as it possessed close links to future income and career prospects. Furthermore, with Singapore's higher education sector gaining recognition in the region, it could greatly influence the population's decision to study more and result in a rise in demand for university education, leading to a rise in university fees. (2)

Another possible reason: PED

Singapore's education sector is recognised as one of the best in the region which means that the demand for education in Singapore is price inelastic. Thus, when supply falls, price (tuition fees) will rise by a large extent. (2)

√ 2 marks for supply factor

√ 2 marks for demand factor/PED

- (c) Explain how the “need for close links between higher education institutions and industry” affects unemployment. [2]

Suggested answer:

Education from higher education institutions must be aligned with industry needs as failure to do so will result in students gaining skills and knowledge that are not what the different

sectors of the economy require. This results in a mismatch of skills and job requirements, leading to structural unemployment.

✓ 1 mark for identifying type of unemployment

✓ 1 mark for explaining need for close links between higher education institutions and industry due to mismatch of skills

- (d) **With the help of an AD/AS diagram, explain the impact of education on the macroeconomic performance of the Singapore economy.** [5]

Suggested answer:

Impact on AS

- Extract 1 indicated that education is necessary to develop human capital to drive economic growth. Education allows the economy to build up a highly skilled workforce that has a direct impact on AS. With a well-educated and skilled workforce, productivity rises and this leads to an increase in potential output, raising the level of potential economic growth.
- The increase in AS in the long run also allows the economy to alleviate inflationary pressures through lowering of GPL and accommodate greater increase in AD, resulting in price stability
- With greater spending on education by the government, this also increases the G component of her AD. This leads to a rise in AD and a multiplied increase in national income via the multiplier process. This raises level of actual growth and employment.

Impact on AD

- Extract 2 mentioned that there are social returns to higher education. With a well-educated society, there will be lower chance of poverty which will result in lower crime rates, leading to a higher non-material SOL as the society is more gracious and stable.
- An economy that is socially and politically stable coupled with a well-education population are also important factors for attracting FDIs. The influx of FDIs will result in a significant increase in I as there are benefits to both the designated industry and complementary industries. The rise in I will result in a rise in AD and via the multiplier process, increasing the actual growth of the economy, increasing level of national income and employment.

Some other possible points to consider:

With a well-educated workforce and higher efficiency, it may also help improve the balance of payment through more competitive exports and a draw to investments. This will aid in increasing long term economic growth as well.

However, with higher education, the demand for imports may be higher due to higher wages earned as imports are income-induced and there may be the possibility of lowering long term economic growth instead.

**1 mark for a correctly drawn AD/AS diagram*

✓ 2 marks for effect of rise in AD on macroeconomic performance

✓ 2 marks for effect of a rise in AS on macroeconomic performance

- (e) **Comment on the impact of higher education on the standard of living of graduates.** [4]

Suggested answer:

SOL refers to the economic and social well-being of a population assessed through the material and non-material aspects.

Armed with a tertiary qualification, an individual is able to gain access to better paying jobs and opportunities. This should allow the individual to earn a higher level of income compared to others. Table 2 also reflected that workers with professional qualifications and degrees do earn a higher level of wage compared to workers with lower qualification. Hence, this will mean that workers with degrees possessed higher purchasing power, allowing them to purchase a higher quantity and variety of goods and services and fulfilling more of their needs and wants. Thus, material living standards for workers with higher education qualifications tended to be higher.

However, having a degree may not necessarily imply a higher level of SOL. It is highly dependent on economic conditions and the nature of jobs undertaken by workers with degrees. For instance, if the economy is not vibrant and doing well, job creation could be low and this affects employment (Extract 3 – which jobs are hard to come by). Furthermore, if the degree possessed by the worker does not match the expectations and requirements of employers, they could be structurally unemployed instead (Extract 2 – need for close links between higher education institutions and industry). Lastly, workers with degrees may be taking up jobs of a more complex and stressful nature that adversely affects health. Thus, lower non-material SOL is lowered and overall living standards may not be higher for workers with degrees.

√ 2 marks for explaining how higher education **may** lead to a higher SOL of graduates

√ 2 marks for explaining how higher education **may not** lead to a higher SOL of graduates

- (f) (i) **Explain what is meant by the term positive externality** [2]

Suggested answer:

Positive externality refers to benefits borne by individuals or society who are not directly involved in the production or consumption of a good. They are known as third party benefit.

- (f) (ii) **With the help of an example, explain how positive externalities arise in education.** [3]

Suggested answer:

From Extract 2: There are social returns to higher education, in terms of lowering poverty and crime rates. Many studies have suggested that numerous productivity externalities arise from higher education. For instance, economists hypothesise that a city with more human capital would be able to generate more knowledge capital, and the productivity gains from that would then spill over and raise wages among the rest of society.

Education also enlarges the pool of productive workers in a country. As workers are more productive (more human capital), industries (3rd parties) become more efficient and profitable. This would have a knock on effect on other sectors (retail industry) which results in greater economic growth for the country. There will be greater job creation which would increase jobs and wages (lower poverty) among the rest of the society.

In addition, as people become more educated and are more likely to hold jobs, the crime rates in the country would fall and this benefits third parties who are not educated too as their non-material SOL will increase.

√ 1 mark for identifying private consumer does not consider external benefits and under consume.

√2 marks for any one explanation of the external benefits to society that will be gained through the consumption of education by a private consumer.

- (f) (iii) In Britain, Denmark and Finland, education is free. In contrast, the Singapore system avoids this. Assess the economic case for these two different approaches. [8]

Suggested answer:

Introduction

Due to the presence of positive externalities, education tends to be under-consumed in the free market and thus leading to market failure. To correct the market failure, governments will usually provide subsidies to make education more affordable and accessible to the population.

Why some countries provide education free?

In countries like Britain, Denmark and Finland, education is provided free, meaning that the government provides full subsidies. This is because these countries deem education to be an essential good that brings social mobility and drives economic growth. From an economic perspective, the provision of free subsidies is to ensure that education is made available to everyone and therefore promoting equity. In addition, making education free will raise the consumption of education and allows the market to internalize the external benefits. Education is also seen by Finland to be critical in luring top foreign professionals (Extract 3) to the country which will subsequently benefit the country greatly in terms of productivity and growth.

Drawbacks of providing education free

However, providing education free may bring about over-consumption instead. (Extract 3) There is an incentive to consume more education than what is required and unnecessary resources are wasted in the process, leading to greater welfare loss to society. In Denmark, since education is free, there are students who delay their entry into the labour market when the economy is not doing well and this will come at the expense of tax payers who have to fund this expenditure. Higher taxes are detrimental as it dampens incentive to work, economic growth, politically unfavourable and may cause inter-generational inequity.

The Singapore Model

In Singapore, partial subsidies are provided as the government believes in a scheme of co-payment that promotes a small degree of personal responsibility though the amount of education to consume. Ideally, the amount of subsidy provided should be equivalent to the MEB of education. This will allow the MPC to converge towards MSB and internalize the external benefits of education. Welfare loss to society is eradicated and consumption of education increases, moving to the socially desirable level of consumption whereby $MSC=MSB$. In addition, the government also provides funding for schools to lower their costs of running programmes for students, shifting the MPC rightwards and ensuring that education is more affordable and accessible. Consumption thus moves towards the socially desirable level. This system of co-payment removes incentive for student to consume education beyond what is necessary, preventing wastage of resources.

Drawbacks of the Singapore system

It is not easy to estimate the right amount of subsidies to be given as the MEB of education may not be entirely quantifiable, such as the impact it creates on creating a safer and more gracious Singapore. Wrong amount of subsidies given may mean that market failure remains and government resources are wasted which could otherwise be better used in other areas of priority.

Assessment of the two approaches

- Western countries' approach generally unsustainable and may the fact that many of these countries are in debt now verifies this argument

- In addition, despite higher spending on education (as a % of GDP), the education outcomes of the western nations are comparable to Singapore.
- In Singapore, our system of co-payment promotes personal responsibility in deciding how much education we should pursue and also responsible decision making in choosing the courses we want to study. Resources may be better allocated with students making more well-informed decision and taking personal responsibility. Availability of scholarships and bursaries also ensure that no student will fall through the cracks or be denied of education (equity).
- Hence, to a large extent, the Singapore Model is more effective and sustainable in correcting the market failure in the market for education.

PJC 2015 H1 Prelim Q2

- (a) (i) Compare the change in China's current account balance with that of US between 2009 and 2013. [2]

Suggested answer

China's current account balance is in a surplus and the surplus fell from 2009 to 2013 whereas US current account balance is in a deficit and the deficit reduces over the same time period.

- (ii) With reference to Table 3 and Figure 1, explain how far the data might show that China has made progress in rebalancing the economy away from export. [4]

Suggested answer

- China's current account surplus worsened from 2009 to 2013, indicating that net exports has likely fallen (Figure 1). Nevertheless Table 3 shows that the growth in real GDP remained relatively stable from 2008 to 2013. This suggests that China's growth could have been supported by domestic consumption instead of exports. [2]
- However, overall consumption has risen by a mere 1% point of GDP. Hence, China's growth could have been due to a rise in government spending instead of a rise in domestic consumption. In this case, no rebalancing of the economy would have taken place. [2]

- (b) Explain why China's "demographic constraints" is of "immediate concern"? [4]

Suggested answer

Due to its ageing population and declining population growth, the supply of labour is no longer unlimited. This means that there will be a loss of easy availability of abundant cheap labour that fuelled China's massive industrial expansion. This is of immediate concern as this means a fall in potential output and growth and a rise in GPL as represented by a leftward shift of the long run AS curve on a constant AD curve. In order to maintain or increase productivity growth, there is a need for more investment in human capital, research and development, and institutional reforms.

Suggested mark scheme

Explain meaning of 'demographic constraints' – 1m

Explain why it is a concern (using AD/AS analysis) – 3m

- (c) Identify one injection and one leakage (or withdrawal) shown in the tables that would change if consumption became the "main engine of growth" in China in the future. [2]

Suggested answer

1 injection – Gross capital formation or exports

1 withdrawal – gross savings or imports

- (d) Explain why a subsidy given by the Chinese government to their plywood suppliers is deemed unfair to the American plywood companies? [2]

Suggested answer

A subsidy given by the Chinese government to their plywood suppliers helps lower their cost of production. This will lead to an increase in supply of plywood, represented by a rightward shift of the supply curve, leading to a fall in equilibrium price and an increase in equilibrium quantity. This will lead to an increase in export competitiveness of plywood from China and hence deemed as unfair to the American plywood companies.

- (e) Extract 7 highlights that “when the Commerce Department imposes tariffs on China plywood, it raises prices on the many to benefit the protected few”.

Discuss whether the US government’s policy of protection for the plywood industry benefits the minority and penalizes the majority? [8]

Suggested answer

In the US, punitive tariff was imposed on plywood imported from China. This has benefited producers and suppliers in the plywood industry in the US.

Benefits the minority: Causal links for effects of tariff on plywood producers in US

Price of imported plywood from China \uparrow in USD \rightarrow quantity demanded for China’s plywood \downarrow as consumers and businesses that used to import China’s plywood will switch to domestically produced plywood \rightarrow domestic plywood producers will have an \uparrow in revenue \rightarrow \uparrow in profit (if costs unchanged) \rightarrow rise in employment in the US plywood industry.

Penalizes the majority:

1. COP for many other industries (such as construction and woodworking/furniture producers) will \uparrow \rightarrow \downarrow in SS \rightarrow \downarrow in equilibrium Q in the respective markets \rightarrow a \downarrow in production will lead to a \downarrow in derive demand for FOPs including labour \rightarrow rise in unemployment in these markets/industries (higher COP might result in these firms to resort to cutting corners to save costs \rightarrow adversely affect the quality of their products \rightarrow consumer welfare will be compromised)

2. Tariff \rightarrow SS of plywood in the US market \downarrow \rightarrow shortage \rightarrow upward pressure on P \rightarrow \downarrow in consumer surplus (on top of that, according to the extract, the US plywood suppliers already control 80% of market share in the domestic market, their complaint to demand for tariff to protect them will further allow them to exploit their strong market share/ monopoly power)

Hence, due to the fact that plywood is widely used in the United States, households and many industries use plywood. When the US government imposed punitive tariff on Chinese plywood, this will only benefit the producers and suppliers of the US plywood industry. Businesses in other markets which require plywood as FOP, and households will be penalized.

- (f) Extract 4 and 5 describes China’s rebalancing as moving away from export-driven growth to consumption driven growth. Assess the impact of such rebalancing on China and her trading partners. [8]

Suggested answer

In view of the current challenging external environment, there is a need for China to rebalance her economy from export driven growth to consumption driven growth. This move results in both positive and negative impact on China as well as her trading partners.

Impact on China

- 1. Less vulnerable to external shocks, thus preventing large fluctuations in national income**

In view of the slowing global economy (Extract 4), by reducing the reliance on exports and encouraging domestic consumption, China could mitigate the fall in national income as she will be less vulnerable to external shocks, thus preventing large

fluctuations in national income.

2. More stable long-term growth

Extract 4 mentions that China is suffering from over-investment as many large industries are suffering from excess capacity. While there is ample capacity, there seems to be a lack of demand to utilise the capital goods. Given the poor global economy, the demand for exports may be lacking. Hence increasing domestic consumption will increase the utilisation of the capital goods, bringing about actual growth which is likely to be more stable compared to one relying on external sector. However, successful rebalancing largely depends on the ability of household consumption to pick up but it has not been able to do that so far.

3. Increase current standard of living

Increasing domestic consumption increases current standard of living (SOL). As seen in Extract 5, 'with a rise in income.....' and Table 3 Consumption expenditure increases (marginally) from 2009 to 2013. This increases the purchasing power to consume more goods and services, thus increasing the quantitative aspect of SOL. Moreover, rebalancing slows down the economic growth, which slows down production and leads to less environmental degradation (Extract 4). This may improve the quality of air as less air pollutants are emitted, hence improving the qualitative aspect of SOL. China's aim of rebalancing from export to domestic sector is linked to the appreciation of the Yuan. A stronger yuan will give citizens greater purchasing power to consume imported goods, *ceteris paribus*. Their material SOL increases with an increase in their ability to consume. Slower growth also mean 'more inclusive growth' implying a narrowing of the income gap as the Chinese tries to promote domestic consumption through various pro consumption incentives especially targeted at the rural poor.

Impact on her trading partners

Gainners – ASEAN and South East Asia

China's economic rebalancing can be a positive factor for ASEAN's development. As production now cater more for the domestic rather than export sector, there will be less competitive pressures on ASEAN's labour-intensive manufactured exports. More FDI may also find its way back to Southeast Asia. This will allow ASEAN to experience an increase in exports and FDI and hence actual and potential growth.

Gainners – commodities importers

As China turns inward, Chinese consumers are expected to buy more luxury goods and buy less commodities such as iron ore pellets or copper wire. This fall in demand for commodities will lead to a fall in prices of such commodities, benefiting all importers of such commodities in terms of lowering cost of production.

Improve relationship with the global economy

A rebalance helps improve relationship with the global economy as this would improve the external balances of trading partners such as the US and reduces tendency of retaliatory actions such as protectionism.

Losers

Losers of the rebalancing China economy in the global economy are commodities exporters like Brazil and South Africa. A fall in demand for such commodities from China (one of the world leading importer) will lead to a fall in prices and export revenue and hence actual growth for these exporters.

Judgment

In view of the weak external environment, rising labour cost and a strong yuan, a rebalancing from external to consumption-led growth is more sustainable and desirable, not only for the China, but also for its neighbours. The challenges facing China at the moment is how to bring about this rebalancing successfully.

Question 3

- (a) Explain, using examples, what is meant by:
 (i) a public good.
 (ii) negative externalities. [10]
- (b) Negative externalities arising from production of a good gives rise to market failure. Discuss the extent to which the price elasticity of demand for a good affects the effectiveness of using indirect taxation to correct this market failure. [15]

Suggested answer outline:

- (a) Explain, using examples, what is meant by:
 (i) a public good.
 (ii) negative externalities. [10]

a(i) **Public Good** Goods that are both non-excludable and non-rival

Non-excludable:

Definition A good is non-excludable if it is impossible or difficult and costly to exclude non-payer from consuming the good

Example Street-lighting is non-excludable as it would not be possible to obscure the view of the brightly lit street from passers-by even if they had not paid for it

Effect Consumers are able to enjoy something without paying for it → no one can stop them from consuming the goods regardless of whether they can pay or not → arising from free rider problem → No effective demand → firms cannot charge a price for these goods → profit seeking firm will not have an incentive to produce public good

Outcome in free market Non-provision (where no firms will produce public goods) → missing market

Non-rival:

Definition A good is non rival when one person's consumption of the good does not reduce the quantity available to another good

Example Street-lighting is not dimmed just because of an additional person's consumption, hence it is non-rivalry in consumption

Effect Once good produced in the market → cost of providing the good to an additional consumers is zero (MC = 0)

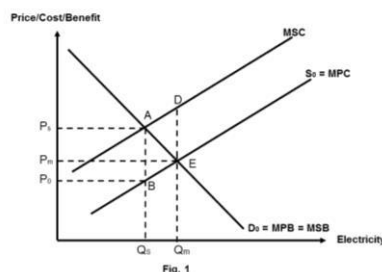
Outcome in free market For market to be allocative efficient, $P = MC$. So for market for public good to be efficient, $P = 0$.

a(ii) **Negative Externalities**

Definition Negative externalities are costs incurred by third parties who are not involved in the production or consumptions of the good and are incurred without compensation.

Example Third Party: People staying near power plants that emit harmful smoke. Third Party Cost: Healthcare cost that they incur to treat respiratory problems due to hazardous smoke

Effect



Presence of negative externalities in the production of good → Divergence between MPC and MSC → Market Eqm Output where $MPC = MSC$ @ Q_m , Social Optimal Output where $MSC = MSB$ @ Q_s in Fig.1.

Outcome in free market Additional unit produced from Q_s to Q_m , $MSC > MSB$ → DWL of area ABE (Fig.1) → Market fails.

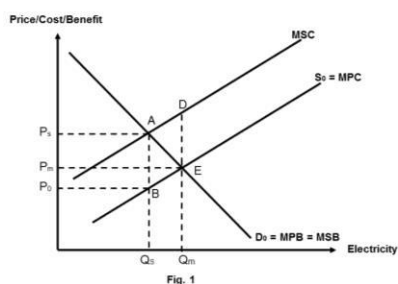
Requirements (Overview) for part (a)

Candidates should show a good understanding of both public good and negative externalities, and the implications on efficient resource allocation. Good candidates should be able to use examples to demonstrate their understanding of the non-excludability and non-rivalry characteristics of public goods as well as the 3rd party and 3rd party effects in the case of negative externalities.

- (b) Negative externalities arising from production of a good gives rise to market failure. Discuss the extent to which the price elasticity of demand for a good affects the effectiveness of using indirect taxation to correct this market failure. [15]

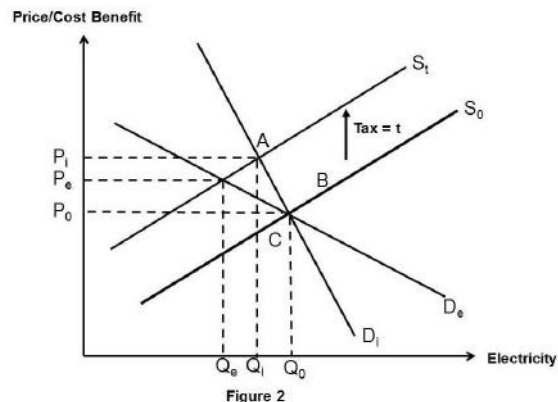
Intro: Third party cost incurred due to production of goods (e.g.: production of electricity, airline services) → Result in market failure.
Use of taxation to correct market failure → Effectiveness could depend on PED of good but also due to other factors.

BP1: How taxation correct market failure from production of electricity



Impose tax of amount equal to MEC (P_0P_s) → tax on production have same effect as an increase in COP of power plants → shift MPC to coincide to MSC. If tax is calculated correctly, it forced firms to internalize external cost → firms face true cost of production → Firms reduce output from Q_m to Q_s (where $MSC = MSB$) → corrects market failure

BP2: Effectiveness of indirect taxation to correct market failure does depend on PED



May not be very effective if $0 < PED < 1$:

If dd of the good is price inelastic, D_i (eg: electricity), imposing a tax, t → shift supply curve from S_0 to S_1 → less than proportionate for in qty dd (from Q_0 to Q_i). If dd is price elastic, D_e → same amount of tax will cause eqm quantity to fall more than proportionately (from Q_0 to Q_e) → therefore larger amount of tax is required to reduce production of electricity from Q_M to social optimal

output.

Indirect taxation may more effective to correct market failure due to negative externalities arising from production of a good if $PED > 1$

Eval However, although PED may affect the effectiveness of indirect taxation, government may still use it due to its benefits. Higher indirect taxation can enable the government to generate more tax revenue which can be used by government to subsidise R&D efforts to solve to the problem of negative externalities further. For example, tax on greenhouse gases can be used to subsidise R&D efforts to promote greener forms of energy which will lead to less carbon emission. In addition, in case of goods that have price inelastic demand (e.g. provision of air travel services by airlines) government can complement the policy of indirect taxation with other policy such as education efforts (e.g. campaigns to discourage domestic air travel and switch to other modes of transport) to make the demand for the good more price elastic so as to increase the effectiveness of indirect taxation.

BP3/4: Effectiveness of indirect taxation also depends on other factors - amount of information available, political acceptance

Difficult to determine the negative externalities in monetary terms due to lack of appropriate measuring device and non-quantifiable and long-term impact of the negative externalities (e.g. lack of measuring device for different types of pollutants, negative environmental effect of air pollution produced by power plant) → may end up over estimating amount of tax to impose → may reduce market eqm output less than social optimal output → deadweight loss incurred → reduce effectiveness of indirect taxation

Indirect taxation is also not popular among electorates → government may not willing or able to impose indirect tax to correct market failure if public do protest/express dissatisfaction → making indirect taxation not effective. For example, if dd for good is price inelastic, government will need to increase indirect tax by a large extent, this however may cause the price of the good to rise by a large extent thus may be deemed as inequitable as there will be a heavier burden on the poor, especially if the good is a necessity (e.g.: Electricity). Thus, the fear of a political backlash from this group of consumers may prevent the government from implementing the policy of taxation effectively.

The government will also need to consider the negative macroeconomic impact of indirect taxation. For example, many countries are not willing to implement the carbon tax for fear that it will lead to higher cost of production which will reduce the competitiveness of the domestic industries which will affect the macroeconomic performance of the country.

Conclusion/
Overall
evaluation PED of the good will affect effectiveness of indirect tax to reduce output of firms to social optimal output but this should be weighed against the benefits of taxation. In addition, there could be other important factors (e.g. ability to get accurate information and political acceptance) that will also determine the effectiveness as well. In the case where PED is an important consideration, the government may then have to consider using other policies such as regulation which is a direct measure and is hence not affected by PED.

Requirements (Overview) for part (b)

Candidates should show a good understanding how indirect taxation is used to negative externalities due to production of goods. Good candidates should be able to explain how indirect taxation works, how the price elasticity demand of the good produced could affect the effectiveness of indirect taxation and other possible factors that could affect the effectiveness of indirect taxation.

Question 4

- (a) Explain the possible effects of rising inflation. [10]
- (b) Most agree that inflation can create uncertainties and undermine confidence in the economy. That is why most Central Banks are tasked with keeping a lid on inflation through interest rate and exchange rate. Discuss the extent to which Central Banks could keep a lid on inflation. [15]

Suggested answer outline:

Part (a)

Candidates should show a good understanding of the possible consequences of inflation. Good candidates will explore the implications on both micro and macro aims and will also explain how it will affect the internal and external sectors of the economy. Candidates should also explain giving the scope on how these effects of rising inflation can be both a positive or negative outcome.

Internal - Micro Aims**Redistribution of income (Equity)**

- Fixed income earners will suffer a decrease in real income.
- Firms such as businesses will gain if the prices rise faster than cost of production, hence earning higher profits
- Borrowers will gain from having to return less in real value but lenders will lose out.

Efficiency

- Rising inflation may cause producers to misinterpret price signals and make wrong production and investment decisions such as producing more output thinking that there is an increase in AD and divert resources and FOP into the production of a good for which there is no additional demand, resulting in an inefficient allocation of resources

Standard of Living

- A rising inflation may result in higher prices to be paid by consumers in consumption. Assuming there is no increase in income, it will lower the purchasing power of consumers, resulting in a lower material SOL of the consumers.

Internal -Macro Aims**A reduction in Unemployment**

- With rising inflation and an increase in general price level, producers will wish to produce more to make more profits. This increases the derived demand for FOP such as labour and increases employment, reducing unemployment.

Economic Growth

- With rising inflation, the value of money will fall. The opportunity cost of consumption will now be lower and savers will also decrease savings and increase consumption. With a lower level of savings placed in the banks, it will lower the amount of loans available funds for investment from the banks. This lack of supply of loanable funds will increase interest rates; hence increase cost of borrowing and will result in a fall in capital investment. This will lower AD and in the long run also lowers potential growth.

External- Balance of Payment

- Rising inflation will make domestically produced goods and services more expensive to the trading partners. In the short run, assume demand for exports and imports to be price inelastic, hence

$$\uparrow P_x, \downarrow Q_x \rightarrow \uparrow P_x Q_x$$

$$\downarrow P_m, \uparrow Q_m \rightarrow \downarrow P_m Q_m$$

2015 H1 Economics Prelim Exam Paper 1 (Suggested answer outline and marking scheme)

There will be an improvement in the current account. However capital account may fall in run as investors may lose confidence. Overall BOP will likely to improve in the short run.

- However, in the long run, assume demand for imports and exports to be price elastic, hence
 $\uparrow P_x, \downarrow Q_x \rightarrow \downarrow P_x Q_x$
 $\downarrow P_m, \uparrow Q_m \rightarrow \downarrow P_m Q_m$

There will be likely a fall in LR Capital account as investor may lose confidence. Overall, BOP is likely to worsen in the LR.

Part (b)

Candidates should show a good understanding of the benefits and limitations of monetary and exchange rate policy on controlling inflation. Good candidates will first explain how the interest rate and exchange rates work and their limitations. Other factors such as the root cause of the inflation, eg. Government taxation, or cost push inflation should be factored in to answer the question requirement on 'to what extent'

Monetary policy on interest rate to help curb inflation

- Contractionary Monetary policy- \uparrow interest rates- \uparrow COB – assume same level of expected returns – decrease profitability to investors - $\downarrow I$.
- Contractionary Monetary policy- \uparrow interest rates- \uparrow returns to savings – \uparrow opportunity cost of consumption – $\downarrow C$
- $\downarrow C \downarrow I \rightarrow \downarrow AD \rightarrow$ Demand-pull inflation.(internal)
- Contractionary Monetary policy- \uparrow interest rates- \uparrow short term capital inflows- \uparrow demand for domestic currency- \uparrow external value of currency appreciates if supply remains the same- $\downarrow P_m$, export competitiveness falls- BOP \downarrow - lowers demand-pull inflation.

Limitations

- It raises the debt burden of those who borrow to finance spending.
- Frequent changes may not be desirable for producers to make long term investment decisions- $\downarrow I$ - which may worsen inflation in the long run as productive capacity does not increase.
- Leads to an increase in short term capital flow(Hot Money) which may result in inflation still.
- IT cannot solve cost-push inflation/imported inflation

Exchange rate to help curb inflation

- Contractionary Monetary policy-Appreciation- $\uparrow P_x, \downarrow P_m$, assume demand for imports and exports to be price elastic and Marshall Lerner's law of ($PED_x + PED_m > 1$) hence
 $\uparrow P_x, \downarrow Q_x \rightarrow \downarrow P_x Q_x$
 $\downarrow P_m, \uparrow Q_m \rightarrow \downarrow P_m Q_m$

Overall, $(X-M) \downarrow, \rightarrow \downarrow AD \rightarrow$ Demand-pull inflation (external)

- Contractionary Monetary policy-Appreciation- more costly for foreign investors to invest- $\downarrow FDI$ - $\downarrow AD \rightarrow \downarrow GPL \rightarrow$ Demand pull inflation(external)
- Contractionary Monetary policy-Appreciation- $\downarrow P_m$ - \downarrow imported inflation from imported raw materials.

Limitations

- But only if the government have sufficient foreign exchange rate reserves to engage in manipulation exchange rate. Thus it is not a long-term solution to curb inflation.
- It also has implications on balance of payments for the reason tat cheaper imports and dearer exports will boost outflow leading to a balance of payments deficit.

- It is unable to solve demand pull inflation caused by C, I, G and also internal led cost-push inflation.

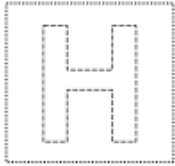
Evaluation and stand:

- The extent to which the Central Banks can keep a lid on inflation depends on the root cause of inflation:
 - If it is due to cost-push inflation (internal). Raising interest rates / exchange rates will not be effective. Supply management policies such as raising productivity or introducing wage freeze should be used to deal with the problem.
 - If the root cause of inflation is high government expenditure or lower taxes, fiscal policy will better reduce G and increase tax and is more effective in reducing demand-pull inflation.
- Exchange rates and interest rates may also result in a long term problem of $\downarrow I$. Hence supply side to boost productivity is better to meet increasing demand to curb inflation instead.
- If a country is facing exports slump, exchange rate policy will only worsen the actual growth and may result in cyclical unemployment instead.
- If a country's economic activity is dependent on trading partners' state of economy and there is no control over trading partner's policies, it is hard to curb inflation using these policies.
- If a country is part of Eurozone and has no control over monetary policy, these policies will not be applicable in curbing inflation.

Name: _____

Centre No. / Index No.: _____ / _____

Class: _____



PIONEER JUNIOR COLLEGE, SINGAPORE
JC2 PRELIMINARY EXAMINATION 2015
Higher 2

ECONOMICS

9732/01

Paper 1

18 Sep 2015

2 hours 15 minutes

Additional Materials: Answer Paper

READ THESE INSTRUCTIONS FIRST



Write your Centre number, index number and name on all the work you hand in.
Write in dark blue or black pen on both sides of the paper.
You may use a soft pencil for any diagrams, graphs or rough working.
Do not use staples, paper clips, highlighters, glue or correction fluid.

Answer **all** questions.

At the end of the examination, fasten all your work securely together.
Fasten your answers to each question SEPARATELY.

The number of marks is given in brackets [] at the end of each question or part question.

This document consists of 7 printed pages and 1 blank page.



Pioneer Junior College



Ministry of Education

Answer **all** questions.

Question 1 Healthcare in UK and Singapore

Extract 1: The UK National Health Service (NHS)

The NHS was launched in 1948. It was born out of a long-held ideal that good healthcare should be available to all, regardless of wealth – a principle that remains at its core. With the exception of some charges, such as prescriptions and optical and dental services, the NHS in England remains free at the point of use for anyone who is a UK resident. That is currently more than 64.1 million people in the UK and 53.9 million people in England alone. The NHS in England deals with over 1 million patients every 36 hours. Funding for the NHS comes directly from taxation.

Source: www.nhs.uk

Extract 2: Challenges facing NHS in UK

The NHS is arguably facing its most challenging period since it was created in 1948. Demands are rising, as are costs. And this is all happening at a time when money is tighter than ever. How the NHS responds to these will determine what sort of health service the UK has for the next decade and beyond.

The rise in the grey population brings with it challenges. The growing number of elderly people means more patients with multiple conditions - some of which, such as dementia, present significant difficulties in providing care and support. Two thirds of hospital beds are now estimated to be occupied by the over 65s at any one time. Paying for progress in medical technology costs the NHS an extra £10bn a year, according to estimates. Lifestyle changes (rising obesity, drinking and smoking) cause disease and death, adding billions of pounds to the NHS bill as well. There has been a sustained push to encourage people to live healthier lives for some years. The government is working with industry on a variety of schemes, which is seeing clearer labelling on food and drinks and reduced levels of salt, sugar and trans-fats.

Source: Adapted from BBC News, 26 September 2012

Extract 3: Why not... privatise the NHS

Privatisation is a slippery concept. Some see it in the opening up of NHS services to more private competition. In Germany for example a third of hospitals are run by charities, a third by for-profit companies and a third by government. Sweden has invited private providers to provide GP clinics and hospital services. By contrast only 3% of the NHS budget is spent by private providers in England.

The reason for competition is that it can drive real improvements in care. To take one current example, patients with chronic back pain in Bedfordshire will soon enjoy a much better service. The local NHS has asked different organisations to suggest the best way to deliver all musculo-skeletal healthcare services for the next five years. All qualified providers, including NHS hospitals, GP practices and private companies, are invited to submit bids to provide a world class service at the greatest value for money. Competition also puts patients at the heart of the NHS.

Opponents of competition argue that when markets are introduced into healthcare provision, providers chase income, costs soar, health outcomes suffer, fraud increases, and the system of universal care coverage collapses. Sweden put "competition at the heart" of their NHS. "Choice" grew in affluent urban areas where privately-owned clinics pushing unnecessary care now abound. Of the 196 new clinics that opened in Sweden, all privately-owned, 195 were in wealthy areas.

Competition puts revenue, not patients, at the centre of care. It's a legal requirement for firms to maximise shareholder value - not patient wellbeing. This is why the public consistently oppose privatisation; it converts a public health service to a "fantastic business".

BBC News 18 July 2013

Extract 4: Private healthcare providers under the microscope

On 4 April 2012, the Competition Commission opened its investigation into the UK's £5bn privately-funded healthcare industry to find out whether the country's private hospitals were guilty of "preventing, restricting or distorting competition". The findings are released on 28 August and, if evidence of market distortion is found, a number of private healthcare providers could be forced to sell off luxury hospitals and scale back on their UK operations.

The largest players in the UK market are HCA, BMI, Spire, Ramsay and Nuffield Health. The spotlight currently rests on the most sizeable of these companies, HCA. The US-based corporation owns six of London's seventeen private hospitals, including the Lister Fertility Clinic, the Wellington and the Portland. It manages 72 percent of private intensive care in the capital, 55 percent of overnight beds, and 56 percent of consulting rooms.

Dr Damien Marmion, managing director of Bupa Health Funding claims that the UK's insurers are keen to see an industry shake-up to bring down prices for their clients. "For too long the cost of private healthcare has been rising to unsustainable levels," he said. "Improving competition between private hospitals, ensuring we pay a fair fee to consultants in private practice and having the right information available to patients, GPs and insurers are all crucial if the private healthcare market is to work in the best interest of consumers."

Source: The Telegraph 27 Aug 2013

Extract 5: Singapore's Healthcare Industry

The Singaporean healthcare system comprises public and private healthcare. Good, affordable basic healthcare is available to Singaporeans through subsidized medical services at public hospitals and clinics. 80% of the primary healthcare services are provided by private practitioners while the government polyclinics provide the remaining 20%. However, the opposite is true for more costly hospitalization care, whereby 80% of it is provided by the public sector and 20% by the private sector. Singapore has developed a healthcare system that achieves positive health outcomes with a relatively low expenditure. The healthcare system is largely privately funded with about one-third financed by the government through taxation. The 33% of Singapore's health care spending from the government's tax revenue is focused on providing funds for public hospitals, health promotion, subsidies and assistance to those in greatest need through the Medifund scheme. The main source of private funding for hospital expenses comes from compulsory savings for health care such as Medisave. At the same time, the Singapore government actively regulates the supply and prices of health care services in the country so as to keep the overall cost low and the quality of health care services high. However, maintaining good healthcare is a "continuing challenge", said Mr Lee Hsien Loong, Prime Minister of Singapore due to progressions in medical science, an ageing population meaning an increase in the demand for healthcare, and an increase of diseases of affluence rather than poverty, such as more instances of diabetes and obesity.

Source: www.moh.gov.sg and www.channelnewsasia.com, 10 Feb 2015

Table 1: 2010 Public Health Expenditure per Capita

Country	Public Health Expenditure per Capita (US\$ purchasing power parity adjusted)
United States	\$3,967
United Kingdom	\$2,857
Japan	\$2,443
South Korea	\$1,185
Singapore	\$752

Source: ww.forbes.com

Table 2: Economic and Social Indicators of UK and Singapore

	2011		2012		2013	
	UK	Singapore	UK	Singapore	UK	Singapore
Real GDP per capita (US\$)	40,974	53,122	40,974	54,578	41,776	55,980
Life expectancy	81	82	81	82	81	82
Number of hospital beds per 1000 people	2.88	2.0	2.81	2.02	2.76	2.03

Source: Department of Statistics Singapore and Office of National Statistics, UK

Questions

- (a) (i) Explain the difference in the public health expenditure per capita between Singapore and UK. [2]
- (ii) Explain the impact of higher public health expenditure on the potential growth of a country. [2]
- (b) In Extract 2, NHS faced the challenge of “demands are rising, as are costs. And this is all happening at a time when money is tighter than ever.”
- Use the concept of opportunity cost to explain the effect on NHS arising from rising demand for healthcare and falling healthcare budget. [3]
- (c) With the use of a diagram, explain the impact of an ageing population and medical advancement on the market for healthcare. [5]
- (d) Discuss the benefits of introducing more competition by allowing more private hospitals to provide healthcare in the UK healthcare market. [8]
- (e) The UK government provides healthcare free of charge while Singapore subsidises healthcare and encourages co-payment for healthcare expenditure through regulations such as Medisave.
- Discuss which approach is better in achieving greater efficiency and equity in the healthcare market. [10]

[Total: 30]

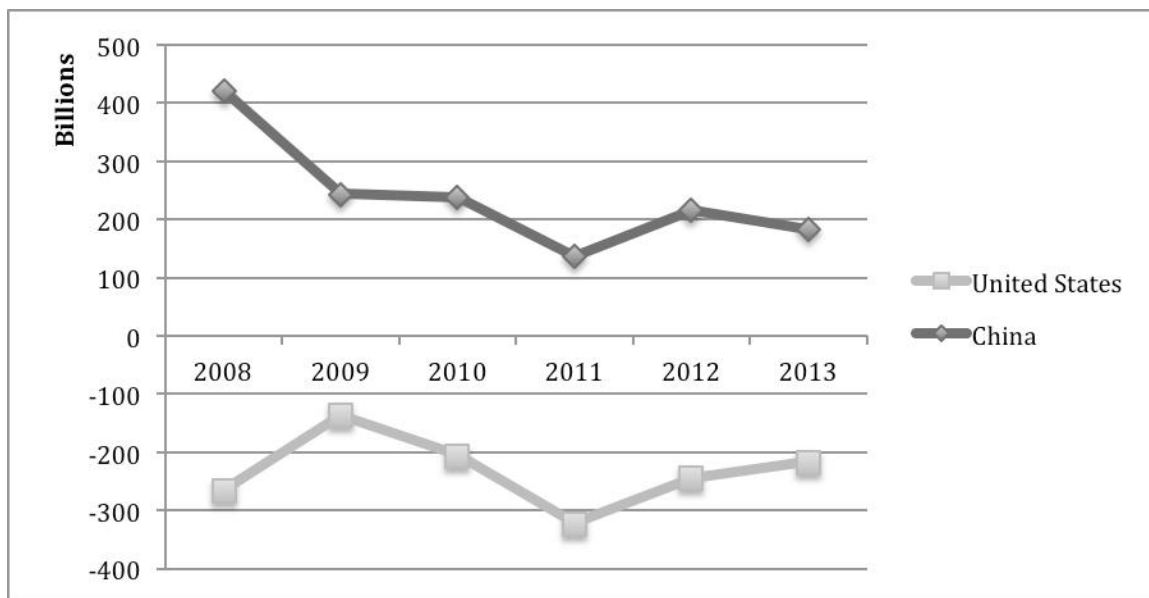
Question 2 Economic Challenges that China Faces

Table 3: China: selected economic indicators 2009 – 2013

Economic indicators	2009	2010	2011	2012	2013
Growth in real gross domestic product (% change per annum)	9.2	10.6	9.5	7.8	7.7
Consumption Expenditure (% of GDP)	48.5	49.6	50.8	49.9	49.6
Gross Savings (% of GDP)	52	51	49	50	50
Gross Capital Formation (% of GDP)	48	47	47	47	48
Exports of Goods and Services (% of GDP)	23.7	26.2	25.5	24.2	23.3
Imports of Goods and Services (% of GDP)	19.9	23.2	23.4	21.5	20.6

Source: World Trade Organization and World Bank

Figure 1: China and U.S. Current Account Balance (in billions US Dollars)



Source: World Bank

Extract 6: The slow boat in China is good for the region

China's economy is showing clear signs of slowing down.

China's economic growth on the demand side is mainly investment driven. But excess capacities in its many heavy industries, coupled with the cooling housing market, have recently depressed domestic investment. For more stable long-term growth, domestic consumption must be boosted. Currently, China's consumption level is too low, at about 40 per cent of GDP (compared with 55 per cent for India and 70 per cent for the US). Domestic consumption has not risen fast enough to compensate for the decline in domestic investment. At the same time, it is crucial for China to reduce its dependence on exports as external demand plummeted due to the erosion of China's export competitiveness as wages rise and the Yuan appreciates.

On the supply side, economic growth has been fuelled by an expanding labour force and productivity increases. However, China's growth is facing demographic constraints which is of immediate concern. Due to its ageing population and declining population growth, China will see the number of 20- to 35-year-olds decline. In order to maintain or increase productivity growth, there is a need for more investment in human capital and research and development.

It is important to note that "low growth" for China is actually not low at all by regional and global standards as growth rate stands around 7 per cent to 8 per cent, easing to 6 per cent or 5 per cent in the 2020s. China's transition from double-digit hyper expansion to more sustainable growth levels is a desirable phenomenon, not only for the country, but also for its neighbours.

Lower growth provides an opportunity to achieve better quality and more sustainable growth. Growth will go hand in hand with macroeconomic restructuring and rebalancing, hence slower growth also means more inclusive growth and less pressure on the environment. China's economic rebalancing can be a positive factor for ASEAN's development. There will be, for example, less competitive pressures on ASEAN's labour-intensive manufactured exports. More FDI may also find its way back to Southeast Asia. Meanwhile, China remains the main economic growth engine for the region. Slower growth will not diminish China's growing geo-economic predominance in the region.

Source: *Straits Times*, 1 June 2013

Extract 7: Losers of China's 'Rebalancing Act'

As China rebalances its economy from exports driven to a more consumer-oriented society, there will be growing pains. Successful rebalancing largely depends on the ability of household consumption to pick up but it has not been able to do that so far. Losers of the rebalancing China economy in the global economy are commodities exporters like Brazil and South Africa.

As China turns inward, the effects for the world is especially clear for the big commodities producers. With a rise in income in China, Chinese consumers are expected to buy more luxury goods than anyone else; more cars; take more business trips and buy homes abroad in increasing numbers. But none of this requires metal such as iron ore pellets or copper wire from the global commodities markets. Boeing won't need to build additional airplanes to take these Chinese to Paris. Beijing will not be building a bridge to Malibu. Overall commodity prices have dropped significantly and China is one of the reasons why.

Source: *Forbes*, 15 August 2013

Extract 8: China warns of 'grim' trade outlook after surprise exports fall

The world's second-largest economy is expected to be faced with a slowed down in GDP growth to 7.5 percent as weak demand dented factory output. In particular, exports to the United States, China's biggest export market, fell 5.4 percent in June, while exports to the European Union dropped 8.3 percent.

The external environment remains weak, rising labor costs and a stronger Yuan had eroded China's exports competitiveness. A customs spokesman in China stated that the economy faces relatively stern challenges in trade, and exports in the next quarter is forecasted to continue to be sluggish.

Source: *Reuters*, 10 July 2013

Extract 9: Protectionists pick your pocket again

In late 2012, a handful of American companies that make hardwood plywood in the U.S. lodged a complaint with the Commerce Department that Chinese suppliers selling hardwood plywood to U.S. have an unfair advantage because they supposedly receive Chinese-government subsidies and also that these Chinese suppliers sell at an unfairly low price.

Following the complaint, the Commerce Department levied a punitive penalty on every Chinese exporter of the plywood. Plywood is a vital raw material for U.S. manufacturers – for making cabinets, furniture, boats, paneling and in home construction, crating and packaging, store fixtures,

flooring underlayment and countless other products. They depend on a steady, affordable supply of this plywood for the products they will sell at home and abroad.

The plywood tariffs have jolted supply chains, pushing up cost of imported plywood and resulting in shortages due to a lack of domestic supply. The first to suffer will be American jobs in manufacturing and woodworking. Many U.S. manufacturers that depend on imported Chinese hardwood plywood fear that the tariffs will force the production of cabinets, furniture and other products now made in the U.S. to sites overseas such as Canada and Mexico. Households will also suffer the consequences as the current U.S. plywood manufacturers already control 80% of the market for domestic hardwood plywood and now they're seeking to further exploit their stronghold by edging out overseas competition.

In conclusion, when the Commerce Department imposes tariffs on China plywood, it raises prices on the many to benefit the protected few.

Source: *Wall Street Journal*, 15 September 2013

Questions

- (a) (i) Compare the change in China's current account balance with that of US between 2009 and 2013. [2]
- (ii) With reference to Table 3 and Figure 1, explain how far the data might show that China has made progress in rebalancing the economy away from export. [4]
- (b) Explain why China's "demographic constraints" is of "immediate concern"? [4]
- (c) Identify one injection and one leakage (or withdrawal) shown in the Table 3 that would change if consumption became the "main engine of growth" in China in the future. [2]
- (d) Extract 9 highlights that "when the Commerce Department imposes tariffs on China plywood, it raises prices on the many to benefit the protected few".
- Discuss whether the US government's policy of protection for the plywood industry benefits the minority and penalises the majority? [8]
- (e) Extract 6 and 7 describe China's rebalancing as moving away from export-driven growth to consumption driven growth. Assess the impact of such rebalancing on China and her trading partners, using both the case study and your own relevant knowledge. [10]

[Total: 30]

2015 PJC H2 Econs P1 Q1

Suggested Answers

- (a) (i) Explain the difference in the public health expenditure per capita between Singapore and UK. [2]

1 mark for difference and 1 mark for explanation of the difference

Singapore lower than UK (1)
Singapore practice co-payment while UK provide healthcare free of charge.(1)

- (ii) Explain the impact of higher public health expenditure on the potential growth of a country. [2]

1 mark for a descriptive answer

2 marks for an analytical answer that shows the causal link of higher public healthcare to AS and potential economic growth.

Public health expenditure → higher life expectancy → larger labour force → increase qty of fop → higher AS → higher potential growth.

Public healthcare expenditure → better quality of healthcare → higher productivity of labour → higher AS → higher potential growth

- (b) In Extract 2, NHS faced the challenge of “demands are rising, as are costs. And this is all happening at a time when money is tighter than ever.” [3]

Use the concept of opportunity cost to explain the effect on NHS arising from rising demand for healthcare and falling healthcare budget.

1 mark for identifying the problem of scarcity (rising dd for healthcare but falling budget)

1 mark for identifying the choice arising from the problem of scarcity

1 mark for identifying the next best alternative foregone

Give 1 mark for some attempt to define opportunity cost but did not go further than that.

Rising dd for healthcare yet falling healthcare budget, NHS need to decide how to allocate the scarce resources. (1) If it allocates more resources to treat the elderly patients, it will have fewer resources (e.g. hospital beds, funds for research) to treat other ailments for the other patients e.g. younger patients with obesity related medicated problems such as diabetes.(2)

- (c) With the use of a diagram, explain the impact of an ageing population and medical advancement on the market for healthcare. [5]

1 mark for accurate diagram

1 mark for identifying the demand factor (ageing population)

1 mark for identifying the supply factor (medical advancement)

1 mark for explaining the combined effect on eqm price

1 mark for explaining the combined effect on eqm qty

Ageing population → higher dd for healthcare services → dd shifts right
Medical advancement → higher cost of production → ss shifts left
Dd shifts right, ss shifts left
→ eqm price will definitely rise by a large extent as both changes reinforce each other
→ eqm Q is uncertain → depends on the extent of shift of dd and ss.
→ if dd rise > ss fall → eqm qty rise.

- (d) Discuss the benefits of introducing more competition by allowing more private hospitals to provide healthcare in the UK healthcare market. [8]

Benefits

→ More Competition → increase SS → drives down price
→ more incentive to innovate → better quality of healthcare
→ Private hospitals → less bureaucratic than govt hospitals → can respond better and more quickly to the needs of the market → more AE
→ govt cut down spending → improved budget balance → can be spent on other areas e.g. retraining to reduce unemployment

Costs

→ Private hospitals → profit motivated → with high BTE and mkt power → set $P > MC$ → allocative inefficiency
→ Private hospitals → provide based on ability to pay → cater to the rich and not to the poor → inequitable distribution of resources to the rich and not to the poor
→ Imperfect information in healthcare sector → doctors in private hospitals may exploit consumers by recommending expensive treatments than necessarily → fall in cs

Conclusion → Some competition through allowing more private hospital is good to provide more competition to the public hospitals and reduce govt burden. But the private hospitals have to be regulated to reduce abuse of market power.

- (e) The UK government provides healthcare free of charge while Singapore subsidises healthcare and encourages co-payment for healthcare expenditure through regulations such as Medisave. [10]

Discuss which approach is better in achieving greater efficiency and equity in the healthcare market.

Briefly explain the types of market failure in the healthcare market

- i. +ve externalities which will cause $MSB > MPB$ thus leading to under-consumption of healthcare and allocative inefficiency
- ii. Market distributes goods and services based on ability to pay rather than need. Thus, the low income may not be able to enjoy the costly healthcare while the high income may get to enjoy more of the costly healthcare services which is an inequitable outcome

Explain and evaluate how the different approach by UK and Singapore help to achieve greater efficiency and equity

UK provides healthcare free of charge:

→ Qd of healthcare rises → solve the under-C of healthcare → greater efficiency

→ The poor will now be able to enjoy the costly healthcare → greater equity

Benefits: promote equity, avoid problem of deciding how much to subsidise for different types of healthcare services

Problems: High cost and this will rise further given the ageing population → affects the health of the UK government's budget → increased burden on UK's tax-payers

The UK government will have less to spend on other areas, e.g. to fight recession and thus the opportunity cost incurred may outweigh the benefits of free healthcare.

Singapore subsidises healthcare and encourages co-payment through regulation such as Medisave:

→ subsidies to hospitals = marginal external benefit → shift SS to the right → P fall → increase Qd for healthcare → more efficient allocation

With cheaper healthcare → poor can better afford healthcare → more equity

→ co-payment through regulation → ensure the consumers have sufficient savings for their healthcare → increase dd for healthcare → more efficient allocation

Benefits: Not as costly as free healthcare in UK, thus less burden on the government. Co-payment will ensure that the consumers do not over-consume healthcare services since it will affect their own savings.

Costs: The poor may still not be able to afford if subsidy is not enough and they do not have sufficient Medisave. Imperfect knowledge will mean that government does not know how much to subsidise → may not be able to achieve an efficient allocation of resources although it is likely that even with insufficient subsidy, the eqm Q will move nearer to the socially optimal output leading to a more efficient allocation.

Evaluation

Judging by the higher life expectancy of Singapore than UK (Table 2), Singapore is able to achieve a more efficient and equitable outcome than UK with less burden on the government.

The problem of lower affordability of healthcare in Singapore can be overcome through the use of Medifund where the poor may be given additional assistance to pay for the costly healthcare. Thus, the problem of inequity can be reduced for Singapore.

Hence, overall, the Singapore's approach can be a more sustainable and better approach to achieving efficient and equitable outcomes in the healthcare market.

2015 PJC H2 Econs P1 Q2

Suggested answers:

- (a) (i) Compare the change in China's current account balance with that of US between 2009 and 2013. [2]

Suggested answer

China's current account balance is in a surplus and the surplus fell from 2009 to 2013 whereas US current account balance is in a deficit and the deficit reduces over the same time period.

- (ii) With reference to Table 1 and Figure 1, explain how far the data might show that China has made progress in rebalancing the economy away from export. [4]

Suggested answer

- China's current account surplus worsened from 2009 to 2013, indicating that net exports has likely fallen (Figure 1). Nevertheless Table 3 shows that the growth in real GDP remained relatively stable from 2008 to 2013. This suggests that China's growth could have been supported by domestic consumption instead of exports. [2]
- However, overall consumption has only increase by a mere 1% point of GDP. Hence, China's growth could have been due to a rise in government spending instead of a rise in domestic consumption. In this case, no rebalancing of the economy would have taken place. [2]

- (b) Explain why China's "demographic constraints" is of "immediate concern"? [4]

Suggested answer

Due to its ageing population and declining population growth, the supply of labour is no longer unlimited. This means that there will be a loss of easy availability of abundant cheap labour that fuelled China's massive industrial expansion. This is of immediate concern as this means a fall in potential output and growth and a rise in GPL as represented by a leftward shift of the long run AS curve on a constant AD curve. In order to maintain or increase productivity growth, there is a need for more investment in human capital, research and development, and institutional reforms.

Suggested mark scheme

Explain meaning of demographic challenge – 1m

Explain why it is of concern – 3m

- (c) Identify one injection and one leakage (or withdrawal) shown in the tables that would change if consumption became the "main engine of growth" in China in the future. [2]

Suggested answer

1 injection – Gross capital formation or exports

1 withdrawal – gross savings or imports

- (d) Extract 7 highlights that "when the Commerce Department imposes tariffs on China plywood, it raises prices on the many to benefit the protected few".

Discuss whether the US government's policy of protection for the plywood industry benefits the minority and penalizes the majority? [8]

Suggested answer

In the US, punitive tariff was imposed on plywood imported from China. This has benefited producers and suppliers in the plywood industry in the US.

Benefits the minority: Causal links for effects of tariff on plywood producers in US

Price of imported plywood from China \uparrow in USD \rightarrow quantity demanded for China's plywood \downarrow as consumers and businesses that used to import China's plywood will switch to domestically produced plywood \rightarrow domestic plywood producers will have an \uparrow in revenue \rightarrow \uparrow in profit (if costs unchanged) \rightarrow rise in employment in the US plywood industry.

Penalizes the majority:

1. COP for many other industries (such as construction and woodworking/furniture producers) will $\uparrow \rightarrow \downarrow$ in SS $\rightarrow \downarrow$ in equilibrium Q in the respective markets \rightarrow a \downarrow in production will lead to a \downarrow in derive demand for FOPs including labour \rightarrow rise in unemployment in these markets/industries (higher COP might result in these firms to resort to cutting corners to save costs \rightarrow adversely affect the quality of their products \rightarrow consumer welfare will be compromised)

2. Tariff \rightarrow SS of plywood in the US market $\downarrow \rightarrow$ shortage \rightarrow upward pressure on P $\rightarrow \downarrow$ in consumer surplus (on top of that, according to the extract, the US plywood suppliers already control 80% of market share in the domestic market, their complaint to demand for tariff to protect them will further allow them to exploit their strong market share/ monopoly power)

Hence, due to the fact that plywood is widely used in the United States, households and many industries use plywood. When the US government imposed punitive tariff on Chinese plywood, this will only benefit the producers and suppliers of the US plywood industry. Businesses in other markets which require plywood as FOP, and households will be penalized.

- (e) Extract 4 and 5 describes China's rebalancing as moving away from export-driven growth to consumption driven growth. Assess the impact of such rebalancing on China and her trading partners. [10]

Suggested answer

In view of the current challenging external environment, there is a need for China to rebalance her economy from export driven growth to consumption driven growth. This move results in both positive and negative impact on China as well as her trading partners.

Impact on China

- 1. Less vulnerable to external shocks, thus preventing large fluctuations in national income**

In view of the slowing global economy (Extract 4), by reducing the reliance on exports and encouraging domestic consumption, China could mitigate the fall in national income as she will be less vulnerable to external shocks, thus preventing large fluctuations in national income.

- 2. More stable long-term growth**

Extract 4 mentions that China is suffering from over-investment as many large industries are suffering from excess capacity. While there is ample capacity, there seems to be a lack of demand to utilise the capital goods. Given the poor global economy, the demand for exports may be lacking. Hence increasing domestic consumption will increase the utilisation of the capital goods, bringing about actual growth which is likely to be more stable compared to one relying on external sector. -However, successful rebalancing largely depends on the ability of household consumption to pick up but it has not been able to do that so far.

- 3. Increase current standard of living**

Increasing domestic consumption increases current standard of living (SOL). As seen in Extract 5, 'with a rise in income.....' and Table 3 Consumption expenditure increases (marginally) from 2009 to 2013. This increases the purchasing power to consume more goods and services, thus increasing the quantitative aspect of SOL. Moreover, rebalancing slows down the economic

growth, which slows down production and leads to less environmental degradation (Extract 4). This may improve the quality of air as less air pollutants are emitted, hence improving the qualitative aspect of SOL. China's aim of rebalancing from export to domestic sector is linked to the appreciation of the Yuan. A stronger yuan will give citizens greater purchasing power to consume imported goods, ceteris paribus. Their material SOL increases with an increase in their ability to consume. Slower growth also mean 'more inclusive growth' implying a narrowing of the income gap as the Chinese tries to promote domestic consumption through various pro consumption incentives especially targeted at the rural poor.

Impact on her trading partners

Gainers – ASEAN and South East Asia

China's economic rebalancing can be a positive factor for ASEAN's development. As production now cater more for the domestic rather than export sector, there will be less competitive pressures on ASEAN's labour-intensive manufactured exports. More FDI may also find its way back to Southeast Asia. This will allow ASEAN to experience an increase in exports and FDI and hence actual and potential growth.

Gainers – commodities importers

As China turns inward, Chinese consumers are expected to buy more luxury goods and buy less commodities such as iron ore pellets or copper wire. This fall in demand for commodities will lead to a fall in prices of such commodities, benefiting all importers of such commodities in terms of lowering cost of production.

Improve relationship with the global economy

A rebalance helps improve relationship with the global economy as this would improve the external balances of trading partners such as the US and reduces tendency of retaliatory actions such as protectionism.

Losers

Losers of the rebalancing China economy in the global economy are commodities exporters like Brazil and South Africa. A fall in demand for such commodities from China (one of the world leading importer) will lead to a fall in prices and export revenue and hence actual growth for these exporters.

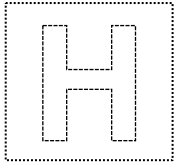
Judgment

In view of the weak external environment, rising labour cost and a strong yuan, a rebalancing from external to consumption-led growth is more sustainable and desirable, not only for the China, but also for its neighbours. The challenges facing China at the moment is how to bring about this rebalancing successfully.

Name: _____

Centre No. / Index No.: _____ / _____

Class: _____



PIONEER JUNIOR COLLEGE, SINGAPORE
JC2 PRELIMINARY EXAMINATION 2015
Higher 2

ECONOMICS

9732/02

Paper 2

22 Sep 2015

2 hours 15 minutes

Additional Materials: Answer Paper



READ THESE INSTRUCTIONS FIRST

Write your Centre number, index number and name on all the work you hand in.

Write in dark blue or black pen on both sides of the paper.

You may use a soft pencil for any diagrams, graphs or rough working.

Do not use staples, paper clips, highlighters, glue or correction fluid.

Answer **three** questions in total, of which **one** must be from Section A, **one** from Section B and **one** from **either** Section A or Section B.

At the end of the examination, fasten your answers to each question SEPARATELY.

The number of marks is given in brackets [] at the end of each question or part question.

This document consists of **2** printed pages and **no** blank page.



Pioneer Junior College



Ministry of Education

Answer **three** questions in total.

Section A

One or two of your three chosen questions must be from this section.

- 1 Mobile phones come in different models such as the high-end smartphones (iPhone), entry-level smartphones (Huawei and LG) and feature phones with basic functions (Nokia). A rise in incomes and the entry of Asian manufacturers such as Huawei and LG offering more affordable smartphone models are likely to affect the different models of mobile phones in different ways.
 - (a) Explain how elasticities of demand can assist in understanding the effect of each of these changes on the sales volume of different models of mobile phones. [10]
 - (b) Compare and contrast the likely combined impact of both of these changes on the consumer expenditure on the different models of mobile phones. [15]
- 2 Governments are increasingly concerned with factor immobility which would lead to rising income inequality.
 - (a) Explain how immobility of factors of production and inequality in the distribution of income may lead to market failure. [10]
 - (b) Evaluate the policies currently used by the Singapore government to correct these causes of market failure. [15]
- 3 Advancements in technology may help to open up markets, leading to greater competition and free flow of goods, services, capital and knowledge.
 - (a) Explain the differences between internal and external economies of scale. [10]
 - (b) Discuss how technological advancements might enable firms to reap economies of scale and practice price discrimination [15]

Section B

One or two of your three chosen questions must be from this section.

- 4 The size of multiplier varies significantly amongst countries.

Explain why some countries have relatively smaller multiplier values than others and discuss the extent to which the estimated multiplier value is useful in predicting the impact of a rise in government spending on an economy. [25]
- 5 Unemployment rate hits record high in some countries due to internal and external problems.
 - (a) Explain what causes the rate of unemployment to rise in an economy. [10]
 - (b) Discuss the alternative policies that a government could adopt to reduce the high rate of unemployment. [15]
- 6 As globalisation connects people and economies, the consequences are not always what was expected - or welcome.

Assess the extent to which the above statement is true for Singapore. [25]

2015 H2 Economics Prelim Exam Paper 2 (Suggested answer outline and marking scheme)

Question 1

Mobile phones come in different models such as the high-end smartphones (Iphone), entry-level smartphones (Huawei and LG) and feature phones with basic functions (Nokia). A rise in incomes and the entry of Asian manufacturers such as Huawei and LG offering more affordable smartphone models are likely to affect the different models of mobile phones in different ways.

- (a) Explain how elasticities of demand can assist in understanding the effect of each of these changes on the sales volume of different models of mobile phones. [10]
- (b) Compare and contrast the likely combined impact of both of these changes on the consumer expenditure on the different models of mobile phones. [15]

Suggested answer outline:

- (a) Explain how elasticities of demand can assist in understand the effect of each of these changes on the sales volume of different models of mobile phones. [10]**

Income rises → effect on dd depends on the sign and value of YED

High-end smartphones → $YED > 1$ (luxury) → DD rises more than prop → DD shifts right by a large extent → eqm Q (sales volume) rises by a large extent

Entry-level smartphones → $0 < YED < 1$ (necessity) → DD rises less than prop → DD shifts right by a small extent → eqm Q (sales volume) rises by a small extent

Feature phones → $YED < 0$ (inferior) → DD falls → DD shifts left → eqm Q (sales volume) falls

Entry of Asian manufacturers offering more affordable smartphone models → SS entry level smartphones rise → P falls → eqm Q (sales volume) rises → extent depends on PED → price elastic ($PED > 1$) as the entry-level smartphones target at low/middle Y consumers who are sensitive to price change → Q rises by a large extent.

P of entry-level smartphones fall → DD for high-end smart phones and feature phones fall → extent depends on CED

→ likely to be weak substitutes with high-end smartphones due to brand loyalty → DD of high-end smartphones fall less than prop → Q falls by a small extent

→ likely to be close substitutes with feature phones thus $CED > 1$ → DD of feature phones fall more than prop → Q falls by a large extent.

Requirements (overview) for part (a)

Candidates should show a good understanding of how the change in price of the good, income and price of related goods affects the extent of change in quantity using the concept of price elasticity of demand (PED), income elasticity of demand (YED) and cross elasticity of demand (CED). Good candidates should be able to identify the different models of mobile phones, feature phone, entry level smartphones and high-end smartphones, and how the increase in income and fall in price of entry level smartphones affect the quantity of the different models using PED, YED and CED concept.

(b) Compare and contrast the likely combined impact of both of these changes on the consumer expenditure on the different models of mobile phones.

[15]

High-end smartphones

Y rises → DD rises ($YED > 1$)

P of entry-level smartphones fall → DD falls less than prop ($0 < CED < 1$)

Combined effect → DD rises as effect of higher Y greater than effect of lower P of entry-level smartphones.

Evaluation: This is particularly true if the high-end smartphone producers can engage in aggressive advertising and R&D to reduce the size of the CED

Overall DD rises, eqm P and Q rises, TE rises.

Entry-level smartphones

Y rises → DD rises less than prop as $0 < YED < 1$ (necessity) → eqm P and Q rise

This is particularly true in developed countries as consumers have higher level of income and may deem entry-level smartphones as necessity rather than luxury.

Evaluation: However, in developing countries where the consumers have lower level of income and hence may deem entry-level smartphones as luxuries.

Entry of more suppliers of entry-level smartphones → SS rise → eqm P falls, eqm Q rises

Combined effect:

DD rises and SS rises → eqm Q rises, eqm P uncertain

Evaluation: if there is a large number of suppliers entering the market, SS can rise by a larger extent than DD → eqm P falls → however overall the eqm P may fall only marginally

Eqm Q rises, eqm P falls marginally, TE will still rise overall.

Feature phones

Y rises → DD falls as $YED < 0$ → eqm P and Q fall

Entry of more suppliers of entry-level smartphones → DD falls by large extent as they are close substitutes

Evaluation: This depends on the extent to which the price of entry-level smartphones fall. If it falls by a large extent making it more affordable for the low-income consumers from developing countries to buy them, the dd for feature phones will fall by a large extent.

Also, depends on the price of data plan → in many developing countries, data plan may be very expensive, thus many consumers may still not buy smartphones despite the falling price.

Combined effect → overall DD falls, SS unchanged → eqm P and Q fall by large extent → TE falls by large extent.

Requirements (overview) for part (b)

Candidates should show a good understanding how the increase in income and increase in the number of firms offering entry-level smartphones affect the extent of shift of demand and supply of three different mobile phones market, which will affect the equilibrium price and quantity of each market before being able to make a judgement what happens to consumer expenditure.

Question 2

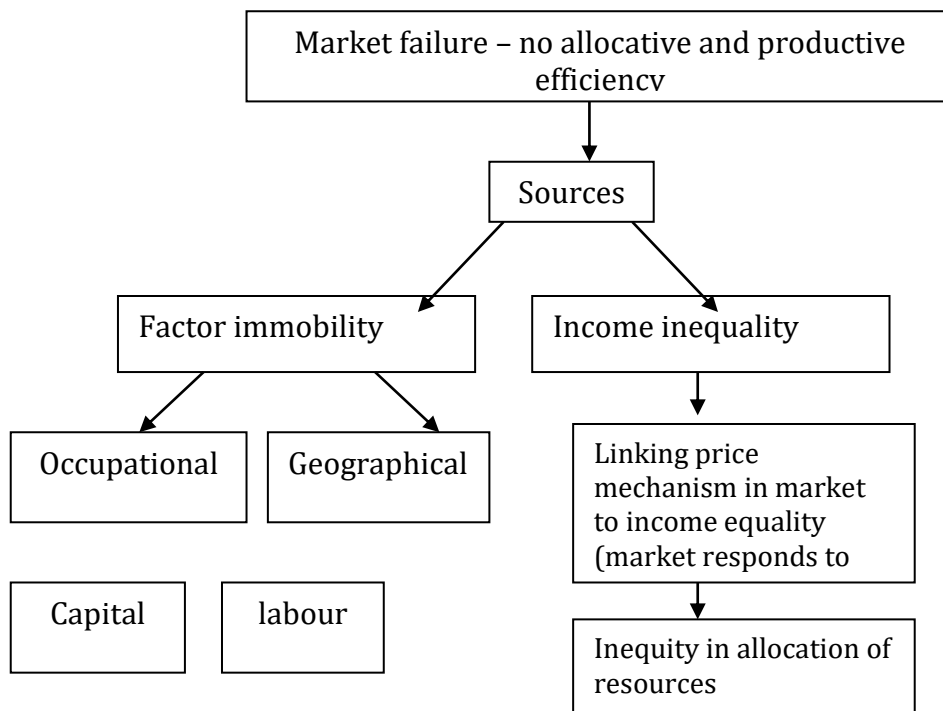
Governments are increasingly concerned with factor immobility which would lead to rising income inequality.

- a. Explain how immobility of factors of production and inequality in the distribution of income may lead to market failure. [10]
- b. Evaluate the policies currently used by the Singapore government to correct these causes of market failure. [15]

Suggested answer outline:

- a. Explain how immobility of factors of production and inequality in the distribution of income may lead to market failure.

Schematic plan



Introduction

- Meaning of market failure and how immobility of factors of production and income inequality may lead to market failure.

Body

1. Explain how immobility of factors of production leads to market failure

There are two common types – occupational and geographical mobility.

Occupational immobility occurs when there are barriers to the mobility of factors of production between different industries which leads to these factors remaining unemployed or inefficiently used. Some capital inputs are occupationally mobile – a computer can be put to use in many different industries. However many capitals are industry-specific (manufacturing plants and biohubs or digital media involved very different technologies).

Occupational immobility also applies to labour. Labor immobility describes a situation in which

2015 H2 Economics Prelim Exam Paper 2 (Suggested answer outline and marking scheme)

manufacturing workers, when displaced due to closure of the sunset manufacturing industry in many developed economies, lack the relevant skills to become employed in the new sunrise industries such as clean energy or sciences. Thus they become structurally unemployed. Structural unemployment arises due to such a mismatch between the skills and jobs, is long-term and represents a waste of scarce resources.

Geographical immobility occurs when there are barriers to people moving from one area to another to find work. Some reasons why it might exist are family and other social ties, the financial costs involved in moving homes such as cost of selling houses, removal expenses and other associated expenditure, huge regional variations in house prices and differences in the general cost of living between regions. Backward and poorly developed transport system and infrastructures will worsen such immobility.

- Factor immobility prevents the switch to the production of new goods and services most valued by society, in the quantity required, thereby resulting in allocative inefficiency while the unemployment of immobile factors results in productive inefficiency.

2. Explain why income inequality is a concern

In a market / capitalist economy, the ability of individuals to consume goods depends upon the income and wealth of the household.

Hence, a key problem with markets in the context of inequality is that the willingness and ability to pay differs from needs. The market system will not respond to the needs and wants of those with insufficient economic votes to have any impact on market demand because what matters in a market based system is effective demand for goods and services. The free market responds to the economic question of "For whom to produce?" through the use of price mechanism. Price mechanism helps to distribute the limited amount of goods produced to those who want them and it is reflected by their willingness to pay and backed by their purchasing power.

Because income and wealth are unevenly distributed → people with most income and wealth will be able to determine what should be produced as they are able to cast higher money votes for the goods that they want → resources will be diverted to produce luxury goods for the rich, while the needs of the poor will not be satisfied. This is evident from the production of bio-fuel (to satisfy wants of car owners and to enable firms to produce more consumer goods) that worsened the global food shortage in 2008 due to profitability of bio-fuel.

Unfair distribution of resources → **inequity** → society's welfare not maximized

Conclusion

As immobility of factors of production may lead to market failure and income inequality may lead to unsatisfactory allocation of resources, there is a need for government intervention.

Requirements (overview) for part (a)

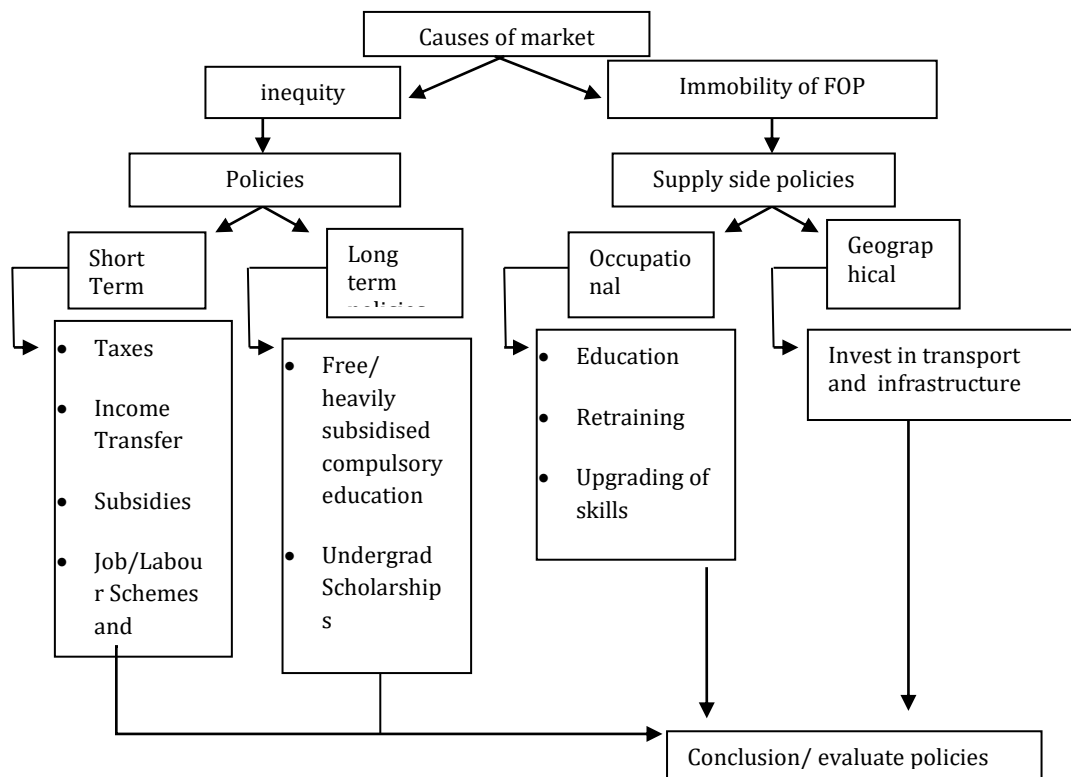
Candidates should show a good understanding of how immobility of factors of production leads to productive inefficiency and inequity leads to allocative inefficiency. Good candidates should be able to link the two concepts to market failure adequately.

(b) Evaluate the policies currently used by the Singapore government to correct these causes of

market failure.

[15]

Schematic plan



1. Policies used by the Singapore government to tackle immobility of factors of production:

To improve occupational mobility:

To reduce structural unemployment among blue-collar manufacturing and older workers, supply-side policies have been implemented which aim to increase the efficiency in the labour market. Education, retraining and upgrading of Singapore’s human capital via huge subsidies has always been the government’s priority, given that workers are the most important capital in the land- and resource-scarce country. The Skills Programme for Upgrading and Resilience (SPUR) which provided higher course fee support for companies to send their workers for training and life-long learning individuals. The Workforce Development Agency (WDA) has been expanded by and the number of courses covered under SPUR including courses in human resource, healthcare, precision engineering, and ICT. Training has also stepped up across all levels of the workforce, including our PMETs (professionals, managers, executives and technicians).

To improve geographical mobility, Singapore government in the form of Urban Redevelopment Authority has been forward-looking in identifying the needs of an improvement in the transport system and infrastructure such as building of the Circle line and new stations to ensure accessibility in every corner of the country. This is despite that geographical immobility is not much a big problem due to Singapore’s small geographical size relative to bigger countries.

Evaluate:

Singapore government has been relatively successful in ensuring that the skills and knowledge of Singapore’s workforce stays relevant in the new and global economy, as reflected by her relatively low unemployment rate all these years. The fact that she has also been able to continue to attract foreign direct investment which require skilled labour is another evidence of the success of her policies in enhancing the quality of her labour force.

2. Policies used by the Singapore government to tackle income inequality:

Market failure caused by income inequality can be reduced through the implementation of

Progressive income tax where an additional dollar on income is taxed at a higher rate than the last. This tax system helps to narrow the income gap. However, tax rates have been adjusted downwards in recent years to attract foreign direct investment and foreign talent which has reduced its effectiveness in addressing the income gap. There may also be a tendency for self-declared incomes to be understated.

Transfer Payments by the Singapore government provides assistance to lower income families via Public Assistance Scheme for those unable to work and with little means of subsistence and Workfare Income Supplement (WIS) Scheme provides incentive for older low wage workers to find work and stay in work.

Subsidies by the government in critical areas such as public housing, healthcare, and education. This ensures that lower income families are not deprived of their basic necessities. More subsidies are enjoyed by those with lower incomes and greater needs. However, higher income families also get to enjoy highly subsidised education so while the needs of the poor are addressed, this may not serve to address the widening income gap. Even with the current means-testing system, the rich can still compete for limited lower-class wards even though the subsidies are a little lower at each corresponding ward class.

Evaluate

The Singapore government's policies to address the issue of income inequality have been fairly effective as reflected by the lowering of the Gini Coefficient (after adjusting for Government transfers and taxes) in 2014 which reflects the redistributive effect of Government transfers.

Requirements (overview) for part (b)

Candidates should show a good understanding of policies implemented by the Singapore government in correcting market failure due to immobility of FOP and inequity. An awareness of the possible limitations of policies and make a judgement.

Question 3

Advancements in technology may help to open up markets, leading to greater competition and free flow of goods, services, capital and knowledge.

(a) Explain the differences between internal and external economies of scale. [10]

(b) Discuss how technological advancements might enable firms to reap economies of scale and practice price discrimination. [15]

Suggested answer outline:

(a) Explain the differences between internal and external economies of scale. [10]

	iEOS	eEOS
different sources of cost savings	cost savings due to large scale production by a firm in the long run → result in the reduction of average cost of production (eg: when a firm increases its output, bulk purchases of raw material will allow it to enjoy cost savings i.e. lower per unit cost)	arises from the expansion of the industry to which the firm belongs and this also result in the reduction of its average cost of production (eg: an oil refinery company such as Shell in Jurong Island gets to enjoy better infrastructure support due to the expansion of the oil refinery industry. Therefore, unlike internal EOS, external EOS can be reaped by both small and large firms.
Illustration on LRAC curve	<p><u>Movement along LRAC curve</u> firms expand in size → average costs fall, and this is shown where average costs fall from 10 to 5 (See Fig 1) when the firm expands and increases output from Q_1 to Q_2. The firms moves along the long run average cost (LRAC) curve through expanding its firm size and now operates on $SRAC_B$</p> <p>Fig 1</p> <p>occur along the downward sloping part of the LRAC curve - average costs are falling as output and scale of production rises</p>	<p><u>Downward shift of LRAC curve</u> external EOS occur when the industry expands, average cost falls regardless of the size or scale of production of the firm. These cost savings are illustrated by a downward shift of the entire LRAC curve from $LRAC_0$ to $LRAC_1$ where a firm producing at Q_1 experiences a fall in average costs from C_0 to C_1 as shown in Fig 2</p> <p>Fig 2</p>
types of internal and external EOS	<p>internal EOS: sources of cost savings are derived from the technical EOS, managerial EOS, marketing EOS, financial EOS, risk bearing EOS.</p> <p><u>CHOOSE 2 out of the various examples shown.</u> technical EOS: cost savings gained directly from the production process by increasing the size of the production unit to increase productivity and efficiency. As output</p>	<p>external EOS: sources of cost savings are derived from the economies of concentration and the economies of information.</p> <p><u>Just need explain 1 form of External EOS</u> the economies of concentration will arise when a firm experiences cost savings due to firms carrying out similar or related activities are concentrated in one area.</p>

increases, bigger and better machinery may be purchased, increasing productivity and hence output and lowering the average cost of production. For example, as a laundry plant expands, it can purchase a much larger washing machine to increase its washing load without requiring additional staff to man it.

Managerial EOS: when a firm expands and specialised departments are set up and professionals are hired to man each department. With professional personnel handling each aspect of the job, it will lead to higher productivity and greater efficiency with output increasing faster than cost and thus reducing unit cost.

Marketing EOS: bulk buying or advertising. Large firms that purchase raw materials in large quantities are able to enjoy larger discounts and better services from the supplier. Furthermore, large firms can advertise aggressively and yet the advertising cost per unit will be lower than that of small firms. For example, MacDonald may have a large advertising expenditure, but the total cost of advertising divided by the total number of units sold (hamburgers, fries et cetera) is very low.

Financial EOS: large firms are able to get bank loans at lower rate of interest and with better conditions than small firms. Larger firms can also raise funds more easily and cheaply compared to small firms. Hence, saving costs for the firms.

Risk bearing EOS: when a firm diversifies its production, businesses and markets. This helps to improve a firm's strength and make it less vulnerable to changes in consumers' preferences. Hence it is able to spread its total cost over a larger and more stable output, hence lowering its LRAC.

When these firms are operating in the same area, they can take advantage of a ready pool of skilled personnel, the provision of better transportation, storage and banking facilities. These will lead to cost savings in terms of lower transaction, transportation and delivery costs.

An example will be the oil refinery company located in Jurong Island in Singapore. The refinery company reaps internal economies of scale (technical economies of scale) by expanding its multi-stage production to encompass more stages so that crude oil can be refined into different kinds of products in a single location. This helps the company to save on the costs and time of transportation.

On the other hand, being located with the other refinery companies (SRC, ExxonMobile, Shell etc) on the same island also helps the company to reduce its costs (external economies of scale). Better supporting infrastructure (e.g a highway bridging the island and mainland Singapore) reduces the cost of transporting the finished products out of the island.

Economies of information can also be attained when firms engaged in the same or related activities derive benefits from the publication of trade, business and technical journals, enabling the firms' access to information and latest trend and development at a lower cost.

2015 H2 Economics Prelim Exam Paper 2 (Suggested answer outline and marking scheme)

Advancements in technology may help to open up markets, leading to greater competition and free flow of goods, services, capital and knowledge.

(b) Discuss how technological advancements might enable firms to reap economies of scale and practice price discrimination. [15]

Reap EOS	
Thesis	Anti-thesis
<p>(1) Internet advancement → easier access to information and easier access to consumers and producers worldwide, trading of goods and services becomes faster and cheaper* → firms gain access to larger market → scale of production expands → reap iEOS</p> <p><i>*technological advancements also make shipping of goods a lot cheaper than before</i></p> <p>(2) Technological advancements in terms of machineries and improvements in production methods can be costly → this serves as barriers to entry in <u>some industries</u> → existing firms continue to enjoy expansion of demands that follow from global economic growth → larger scale of production → reap iEOS</p>	<p>(1) 'Borderless' trade works in different ways for different types of businesses → eg: if domestic retailers lose price competitiveness to foreign retailers (which consumers can easily gain access to via the Internet) → demand for domestic retailers will fall → scale of production will fall → less able to reap iEOS</p> <p>(2) The Internet can sometimes lower barriers to entry as new entrants do not have to incur high start-up cost → only need to set up a website → lower costs than a brick-and-mortar shop → consumers have more substitutes with more sellers in the market and the incumbent's demand curve will fall → fall in scale of production → less able to reap iEOS (but expansion/growth of industry can reap eEOS)</p>
Price discrimination	
Thesis	Anti-thesis
<p>(1) Opportunity for firms to expand overseas → if there are fewer substitutes in the new overseas market or the good is of significantly better quality or a lot more popular than the domestic equivalent available → then the demand for the good may be relatively more price inelastic in the foreign market compared to domestically → firm can practice price discrimination if they now have 2 markets of different PEDs for their product</p> <p>Evaluation: With the extensive use of search engines and many more firms using the online platform to market their products, increased ease of access to information will have an increasingly significant impact on firm's pricing and how they may have to be more aware of their rival's strategies to remain competitive and hence will be more careful in price discriminating even across different countries</p> <p>(2) reduces menu costs - allows firms to easily adjust prices: due to imperfect information in the real world, firms are unable to identify the exact PED values for different groups of consumers → constant adjustment of prices as the firm try to achieve the profit-maximising price in different market segments would cause the firm to incur additional menu cost → hampers firms' willingness to change prices as there has to be substantially higher potential profits to justify</p>	<p>(1) Consumers have easier access to rival's products and information (substitutes can come from domestic or overseas markets) → harder for firms to have market segmentation from separation by geographical boundaries across borders/countries (which is an important condition in order for firms to practise PD) → also easier for consumers in one country to sell to another consumer in a different country → ability of the firm to prevent seepage and hence their ability to practice price discrimination may be weakened</p> <p>(2) Consumers have much easier access to information of rival companies and can much more easily compare prices and product details online rather than have to travel from shop to shop → knowledge is less imperfect and easier comparison of prices make it harder for the firm to price discriminate between different groups of consumers</p> <p>(3) From previous point about how internet advancements lower barriers to entry → when more firms enter the industry due to the relatively lower costs of setting up e-business → incumbent's demand curve will become more price elastic due to the availability of more substitutes & their market share will also fall → reducing their price setting ability</p>

2015 H2 Economics Prelim Exam Paper 2 (Suggested answer outline and marking scheme)

changing prices in the real world as it is costly to create new catalogues, designing new advertisement, changing price tags, etc. → prices can be easily adjusted by updating the prices displayed on their website → reduces menu costs → firms are more likely to constantly adjust and experiment with different prices for different consumers to reap higher profits

(3) With technology, firms can harvest huge amount of personal information about their consumers at very little cost → “cookies” allow firms to track the internet user’s interaction with the website (providing info such as demographic data) → also records which links or advertisements the user clicks on & past buying patterns can also be recorded and analysed at a lower cost → allows firms to collect more information on every individual consumer for analysis at almost no cost. Hence, it can set a price closer to each individual’s willingness to pay and move towards perfect price discrimination.

Evaluation: Analysis above more applicable towards larger firms: for smaller firms such as firms in an MC market structure less applicable, also depends on whether firms sell goods or services/types of goods

Evaluation: As firms reap greater EOS as explained, they will have lower variable costs and higher output. They may then be able to expand their market share by selling more domestically too due to the now lower price and higher output. Hence firms can potentially gain more monopoly power better enabling them to practice price discrimination.

Evaluation: Depends on the types/nature of goods or services, some industries face less competition from the Internet as consumers will still prefer making purchases physically instead of over the cyberspace, for eg

- i. perishables
- ii. very bulky items like furnitures
- iii. legal constraints like cars
- iv. services (less able to ‘enjoy’ services across cyberspace)
- v.

Also, dependent on profiles of consumers – eg: older generation has greater doubts about making purchases online - worry about fraud and the inability to test the products before purchase, conservative view the security of the internet environment

Synthesis: Technological advancements allow many firms to enjoy greater iEOS and eEOS but the effects are dependent on the nature of products that the firms produce/sell. For a natural monopoly, the firm is protected by high capital costs and various barriers to entry, on top of that, services and goods such as petrol, hair cut, electricity, water, healthcare and many more cannot be transacted over the cyberspace.

Technological advancements also makes it easier for firms to set prices differently for different consumers, however, it also allows consumers to identify these differences easily. Hence, the impacts depend on the behaviour of consumers, such as how they make use of information available to change their decisions.

Question 4

The size of multiplier varies significantly amongst countries.

Explain why some countries have relatively smaller multiplier values than others and discuss the extent to which the estimated multiplier value is useful in predicting the impact of a rise in government spending on an economy. [25]

Suggested answer outline:

Introduction:

The national income multiplier (k) is defined as the ratio of the change in national income to a change in autonomous expenditure. Due to the multiplier process, the larger the value of multiplier, k, the greater the impact on national income when there is an increase in autonomous expenditure such as government spending. The size of k is affected by marginal propensity to withdraw (mpw). It can be represented by $k = (1/mpw)$. The size of k depends on the values of marginal propensity to import (MPM), marginal propensity to tax (MPT) and marginal propensity to save (MPS). Hence a variation in the size of these components will lead to different national income multiplier for different countries.

Factors affecting mps

Expectation → if consumers are **pessimistic** of future income and employment, will want to **save more** of their **additional income** for the future, **mps rises, mpc falls → k falls**.

Example: Due to the financial crisis in US, many US households cut back on their consumption out of additional income and saved more, leading to a rise in mps and a fall in k.

Government policies - In Singapore, the government has implemented the CPF scheme for all working adults, which is a form of compulsory saving that forces them to save more than 20% of their income every month. Also, being an Asian society that emphasizes on being thrifty and having the need to adopt a prudent spending habit to save for contingencies in life, this contributes to high levels of savings. Hence, households save more out of any additional income they earn. As such, the MPS is high.

Factors affecting mpm

Openness of the economy → a more open economy will have more exports and imports with the rest of the world, thus leading to a higher mpm than a closed economy → lower k.

Example: With globalisation, countries are more dependent on foreign countries to enjoy a greater variety of imported consumer goods and to buy their imported capital goods, thus leading to a higher mpm and a lower k.

Country that have limited raw materials may need to import more → higher mpm → lower k (e.g. Singapore)

Factors affecting mpt

Types of tax system → the more regressive the tax system, the less a person will be **taxed out of their additional income** leading to **fall in mpt → higher k**

Example: Singapore government has lowered personal income and corporate tax rate to attract foreign talents and investment while at the same time raised its GST. This makes the tax system less progressive (or more regressive) as the higher-income earners are taxed a smaller proportion of their additional income → lower mpt → higher k.

Welfare states such as that of Australia may need to tax more to provide for greater welfare benefits → tax system will be more progressive → mpt rises → k falls.

The estimated multiplier value is useful in predicting the impact of a rise in government spending on an economy.

A rise in government spending raises the level of AE in the economy and cause the level of NY to rise by a larger extent due to the multiplier effect. This is because when income rises, people will consume more domestic goods out of the additional income, thus causing AE and NY to rise by a larger extent. The extent of the rise in NY will depend on how much people consume out of the additional income (mpc). The size of mpc and mpw affect the extent of increase in NY due to the multiplier effect. Suppose there is an increase in G of \$10m, the first group of recipient receives additional Y of \$10m. If $mpc=0.5$ and $mpw=0.5$, the first group will spend \$5m and withdraw \$5m contributing to the increase in income of second group by \$5m, thus leading to a greater increase in income than the original increase in G. However, suppose that mpc falls to 0.2 and mpw rise to 0.8 (as in the case of Singapore), the first group will only spend \$2m thus contributing to a lower increase in income of the second group by \$2m instead \$5m. Thus, the multiplier effect is weaker when mpc falls and mpw rises. In the first case when $mpc=mpw=0.5$, $k=2$ while in the second case where $mpc=0.2$ and $mpw=0.8$, leading to a smaller $k=1.25$. As illustrated above, an economy with a small multiplier would reduce the effectiveness of fiscal policy. Hence, estimated multiplier value is useful in predicting the impact of a rise in government spending on an economy.

Other factors affect the impact of a rise in government spending on an economy

Pessimistic economic outlook may reduce the impact of a rise in G on the economy.

Due to an economic downturn, households and firms are pessimistic about the future economic outlook. The loss of consumer and business confidence in the economy can be strong enough to cause consumers and producers to hold back on their consumption and investment. The level of AE may not rise significantly if the rise in government spending is negated by the fall in the level of consumer spending and investment spending. Hence, knowing the estimated multiplier value may not be useful in predicting the impact of a rise in government spending on an economy. Thus, low consumer confidence and poor business sentiments render fiscal policy (rise in G) to be ineffective in stimulating the economy regardless of the estimated size of k.

Presence of crowding-out effect may reduce the impact of a rise in G on the economy.

Crowding out effect can take the following forms: resource crowding out and finance crowding out.

Resource crowding out: a rise in government spending leads to government using resources such as raw material and labour that would otherwise be used by the private sector. If the economy is operating near to Y_f , then if government uses resources, there will fewer resources available for the private firms. Thus, resource crowding out leads to a reduction in private-sector output. This is important to note that this is only true if the economy is operating near to full capacity.

Finance crowding out: happens when a rise in government spending diverts funds from private sector firms and thus deprives them of the finance necessary for investment spending. If the government spends more without raising taxes, it will have to borrow more. This will raise the level of interest rate in the economy which discourages firms from borrowing and hence reduces the level of government spending.

Conclusion:

The extent to which the estimated multiplier value is useful in predicting the impact of a rise in government spending on an economy, in light of the points raised in this essay, is hence very small. Other factors like extent of crowding-out effect, the level of consumer confidence and business sentiments affect the impact of a rise in G on an economy. Even though a country may have a relatively larger multiplier value (k) than other countries, a rise in G may not have a significant impact on the economy due to low consumer confidence and bleak business outlook. In another situation, the impact of a rise in G on the economy is reduced by crowding-out effect. If finance crowding-out is present, a greater the rise in interest rate, the lower the impact of a rise in G on the economy.

Question 5

Unemployment rate hits record high in some countries due to internal and external problems.

(a) Explain what causes the rate of unemployment to rise in an economy. [10]

(b) Discuss the alternative policies that a government could adopt to reduce the high rate of unemployment. [15]

Suggested answer outline:

(a) Explain what causes the rate of unemployment to rise in an economy. [10]

Unemployment: Refers to people who are registered as able, available and willing to work at the going wage rate in a suitable job but who cannot find paid unemployment despite an active search for work.

Cause of a rise in rate of unemployment:

(1) Cyclical unemployment → Demand- deficient unemployment

(2) Structural unemployment → Supply side unemployment

(Frictional unemployment is likely not a significant cause as this is a natural phenomenon and is generally not regarded as a serious problem. In addition, the preamble and question highlighted that there is a record high unemployment rate and rise in rate of unemployment which means that there are other more significant sources of unemployment)

(1) Cyclical unemployment: occurs when the economy is at the recessionary phase of the trade cycle. It is caused by a decrease in aggregate demand (from either internal or external problems).

Internal → Recession → C & I fall → AD fall → real output fall → demand for FOP fall → demand deficient unemployment

External → Global downturn → X fall → AD fall → real output fall → demand for FOP fall → demand deficient unemployment

Example: In Singapore, cyclical unemployment is observable when we experience a recession, especially from a global downturn. Since external demand is the largest factor that contributes to the determination of Singapore's AD. When X falls, demand for labour would fall too bringing about cyclical unemployment

(2) Structural unemployment: occurs when the economy undergoes structural changes due to changing consumer demand and technology. These changes result in certain industries and skills becoming obsolete and at the same time such changes create demand for other industries and skills.

External → Labour intensive sectors face more competition from rising economies such as China → lose CA → workers who are retrenched from these sunset industries do not have the relevant skills to find jobs in rising industries → structural unemployment

Example: Singapore focuses more on developing the knowledge-based sectors (such as pharmaceutical/life sciences). However, workers who currently have skills in labour-intensive production do not have the skills to be involved. Therefore, they become structurally unemployed as they are unable to gain jobs in these sunrise sectors.

5 (b) Discuss the alternative policies that a government could adopt to reduce the high rate of unemployment. [15]

Stand: Policies depends on the root cause of the unemployment

(1) Cyclical unemployment (Demand Deficient): Demand management policies

(2) Structural unemployment (Supply-side): Supply side policies

(1) Cyclical unemployment: Demand management policies

Internal or External Problems

Internal: Monetary Policy centered on i/r / Fiscal Policy

External: MP centered on E/R

2015 H2 Economics Prelim Exam Paper 2 (Suggested answer outline and marking scheme)

Expansionary MP centered on i/r :

Fall in i/r → fall in cost of borrowing → rise in consumption of big-ticket items → higher C → AD rises

Fall in i/r → fall in return to savings → lower opportunity cost to consume → higher C → AD rises

Fall in i/r → fall in cost of borrowing → given the same expected returns to investment → more investment projects are profitable → investment rises → AD rises

Limitations:

- Liquidity trap
- Consumer and business confidence

Expansionary MP centered on E/R :

Weaken domestic currency → reduce the prices of exports in foreign currencies → if $PED_x > 1$, export revenue increases.

Weakening of domestic currency → prices of imports rise → if $PED_m > 1$, import expenditure falls.

Rise in net exports → AD rise

Limitations:

- Imports dependent reduces ability to substantially weaken currency

Expansionary FP:

Reduce income tax rates → consumers' disposable income rise → increase in C since the level of consumption expenditure is directly related to the level of disposable income → AD rises

Reduce corporate tax rate → increases firms' after-tax profits → increase in I → AD rises

Limitations:

- crowding out effect
- availability of funds

How demand management policies address cyclical unemployment:

An initial change in AD can have a greater final impact on equilibrium national income. Via the multiplier mechanism cause a multiple increase in output necessitating more workers to be employed, hence reducing cyclical unemployment.

(2) Structural unemployment: Supply side policies

Increase government spending (G) on training and/or reduce taxes (T) on firms which provide more training programmes for their workers.

training → improve employability and quality of our workforce → increasing capacity to produce (shown by AS shifting right → → increase in AD → workers can now be employed as the skills-vacancy mismatch is resolved → reduce severity of structural unemployment.

government establish training facilities/institutions for skills upgrading or acquire new skills

Training grants and subsidies (e.g. Skills Development Funds in Singapore) can also be provided to encourage skills retraining and upgrading. In Singapore, the government encourages retrenched and older workers to receive training in hospitality and healthcare sectors (such as house-keeping, patient services) so that they can be re-employed in these industries.

Encourages the use of new technology to boost the productivity of low-skilled, retrenched workers. E.g. re-design of cleaners' job to incorporate the use of new/high technology so that cleaners need to use more sophisticated machines in helping them to accomplish the work in lesser time with fewer workers.

Limitations:

- take a relatively long period of time
- SR: Workfare benefits
- may lead to budget deficit

2015 H2 Economics Prelim Exam Paper 2 (Suggested answer outline and marking scheme)

Evaluation:

Which alternative policy to adopt depends on:

- root cause of unemployment (Demand deficient from which component of AD or structural unemployment)
- Size of government debt [USA]
- time lag (FP vs MP if cause of Unemployment is fall in C and I)
- short term measure for structural unemployment (Jobs credit scheme)

Question 6

As globalisation connects people and economies, the consequences are not always what was expected - or welcome.

Assess the extent to which the above statement is true for Singapore. [25]

Suggested answer outline:Introduction

- Define globalization—increased integration of economies through greater flows of trade, capital and labour.
- Effects of globalization differs due to reasons such as nature of economies and availability of policies to mitigate the unexpected and negative consequences of globalization

Explain and analyze how globalization has affected Singapore (expected and unexpected effects)**Trade**

- Phenomenon of globalization is driven by theory of CA. Theory of CA states that trade will be mutually beneficial if there is a relative difference in opportunity cost of production and countries trade according to CAT.
- With globalization, Singapore is able to gain access to more export markets → increase the consumer base we serve → demand for Singapore's exports rise → rise in AD → real GDP increase → national income rise by multiplier times via multiplier process and employment increase as well
- With a small domestic market, Singapore cannot depend on C and I to support AD and drive economic growth → Hence, she must be export oriented and globalization will benefit Singapore to a large extent (expected benefit)
- In addition, as Singapore is a small country, she is not endowed with natural resources → import reliant →
With globalization, Singapore is able to diversify our sources of imports → cushions her from adverse external shocks and increase consumer welfare (can bring a greater variety and cheaper imports) → another expected benefit
- On the other hand, being highly globalized will make Singapore very vulnerable to external shocks and bring unexpected consequences → during 2008/09 global recession, Singapore was one of the most seriously affected nations → our X fell significantly, leading to rapid rise in UN (unexpected negative consequence)
- *However, as our government has always been prudent in their spending, Singapore was able to implement policies such as Jobs Credit Scheme to prevent UN from rising too fast. The Jobs Credit Scheme is a short term subsidy aimed at reducing the cost of retaining workers for firms and this reduce the rapid increase in retrenchment of workers) Thus, the unexpected consequences of globalization applies to Singapore only to a small extent*
- *In addition, the Singapore government has also taken measures to reduce our susceptibility to external shocks in future. For instance, we have tried to reduce dependence on our visible trade balance by encouraging SMEs to venture overseas (increase net factor income from abroad that also could contribute to economic growth) and also restructuring towards a higher value added and knowledge based economy.*

Capital

- Globalisation will result in higher flows of capital such as FDIs between countries → this will increase I in the domestic economy → the influx of FDIs also raises demand for goods and services from complementary industries such as banking, logistics and transport (Spillover benefits) → the firms in complementary industries will then expand operations by increasing I to respond to a rising demand for their goods and services → this will lead to a significant rise in AD → real GDP increases → higher employment and multiplied increase in national income via multiplier process (expected benefit)

2015 H2 Economics Prelim Exam Paper 2 (Suggested answer outline and marking scheme)

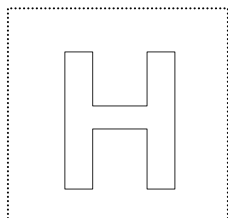
- With higher influx of FDIs, there will be transfers of technologies and knowledge to the domestic economy → increase productivity → rise in productive capacity of the economy → rise in potential growth and the increase in AS also allows for an increase in non-inflationary economic growth (expected benefit)
- For a small country like Singapore with no natural resources, it is extremely challenging for us to expand AS on our own → heavily dependent on FDIs for capacity building → globalization brings benefits for Singapore to a very large extent
- On the other hand, being more globalized also entails higher competition for our industries → Greater need for constant restructuring and innovation → sectors that cannot compete will either relocate to more cost competitive regions or outsourcing parts of their operations → jobs will be lost as a result → workers displaced may not possess relevant skills and knowledge to take up the opportunities presented in the expanding industries → mismatch of skills and job requirements occurs → occupational immobility rises (unexpected effect)
- *However, the unexpected consequences are mitigated by the Singapore government's supply side policies → Singapore government is committed to help Singaporeans learn and upgrade through life → SkillsFuture was introduced recently to promote constant skills upgrading and retraining of workers → allows workers to always gain updated and relevant skills and knowledge required by firms → reduce occupational immobility and makes workers more employable, throughout their lives → Hence, unexpected consequences of globalization applies to Singapore only to a small extent*
- *Though possessing the ability to implement SS side policies extensively currently, it must be noted that supply side policies depend very much on the availability of government funds and may result in tradeoffs such as depletion of resources and possibility of budget deficit in future. To ensure sustainability, firms in Singapore are strongly encouraged to take up a more proactive role in developing and training their own staff.*

Labour

- Globalization has allowed Singapore to gain access cheaper foreign workers for industries such as construction, healthcare and F&B. Cheaper foreign workers allow our firms to lower their COP, making them more competitive and generates economic growth.
- Apart from cheap foreign workers, Singapore also endeavor to attract top foreign talent and professionals → these foreign talent raises productivity and plays a vital role in helping us to attract quality FDIs → our productive capacity rise when we bring in more top foreign talent
- On the other hand, with an influx of cheap foreign workers, the average wage of the lower skilled workers will be depressed. To attract top foreign talent, higher wages will have to be offered → results in rising income inequality.
- Globalisation also increases labour mobility → Singapore can suffer from brain drain as well → affects our internal capacity building efforts
- *However, the Singapore government has in place policies like SkillsFuture to reduce income inequality → SkillsFuture ensures workers are always supported whenever they need to upgrade and improve themselves → can gain access to better paying jobs → reduce income inequality*
- *Secondly, the imposition of Workfare has made income inequality a less serious problem in Singapore. Workfare is a scheme that tops up low income workers' CPF accounts to ensure that essential goods and services such as healthcare and housing are always affordable and accessible. This promotes equity and reduces income inequality.*
- *Note that policies adopted requires huge amount of spending by the government and may lead to budget constraints and opportunity costs incurred.*

Conclusion (Justify why unexpected consequences of globalization apply to Singapore to a small extent)

- Despite unexpected consequences of globalization affecting Singapore, she has always been able to weather the storms. For instance, during the 2008/09 global recession, Singapore was the first to recover and it validated the effectiveness of her government policies in mitigating the unexpected negative consequences of globalization
- Economic data over the past few years such as sustained economic growth, low UN and healthy BOP all point to the fact that we have managed to maximize our gains from globalization while also having in place a set of comprehensive measures to cope with the unexpected negative consequences of globalization.



ST ANDREW'S JUNIOR COLLEGE
PRELIMINARY EXAMINATIONS – 2015 (JC2)
General Certificate of Education Advanced Level
Higher 1

ECONOMICS

8819/01

Paper 1

28 August 2015

3 hours

Additional Materials: Answer Paper

READ THESE INSTRUCTIONS FIRST

Write your name and class on all the work you hand in.

Write in dark blue or black pen on both sides of the paper.

You may use a soft pencil for any diagrams, graphs or rough working.

Do not use staples, paper clips, highlighters, glue or correction fluid.

Section A

Answer **ALL** questions.

Section B

Answer **ONE** question.

At the end of the examination, fasten your work for **Section A & B together**.

The number of marks is given in brackets [] at the end of each question or part question.



This document consists of **9** printed pages and **1** blank page.

[Turn Over]

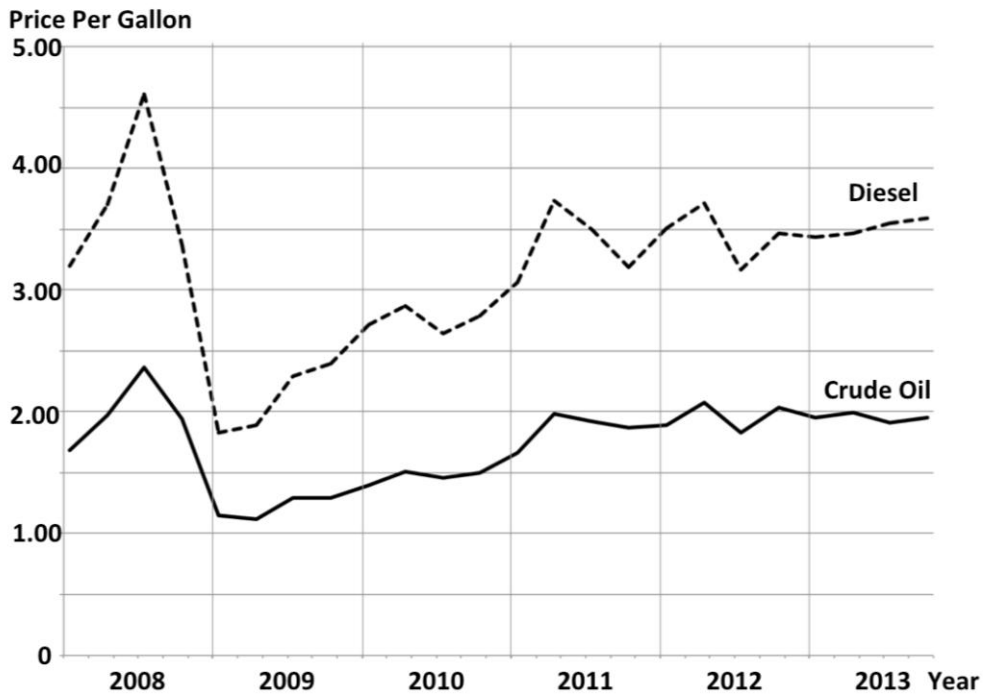
Section A

Answer all questions in this section.

Question 1

Changes in the Market for Vehicles

Figure 1: Crude Oil and Diesel Prices



Source: U.S. Energy Information Administration

Extract 1: Singapore’s pole position in Asian’s energy market

The oil industry has been an integral part of Singapore’s economy, ever since oil-trading activities started in 1891. Today, Singapore is the undisputed oil hub in Asia and is one of the world’s top three export refining centres, a valuable sector that contributed almost 5% of Singapore’s Gross Domestic Product in 2007.

Singapore offers extensive oil storage facilities on Jurong Island, its integrated energy and chemical hub, to facilitate trade and manufacturing activities. Our storage capacity is set to multiply with the advent of Jurong Rock Cavern, a massive underground facility. Refineries in the Jurong Island produce diesel fuel and gasoline (petrol) from crude oil imported from abroad. Many other petroleum products are also refined from crude oil.

Source: edb.gov.sg

Extract 2: Tighter emission standards for in-use diesel vehicles in Singapore

The National Environment Agency (NEA) has advised owners of diesel vehicles, including Express Bus Service operators to get their vehicles inspected and serviced to meet tighter emission standards that will take effect on January 1, 2014. In a statement on Wednesday, NEA said it has been working closely with authorised vehicle inspection centres to alert owners whose vehicles show borderline results during the mandatory inspection.

It requires all diesel vehicles in use in Singapore to have a smoke opacity test result of 40 Hartridge Smoke Units (HSU) or lower from January 1, 2014. The current requirement is 50 HSU and lower. Owners whose vehicles fail to meet the standard can be fined up to S\$5,000. The new regulation would mean costlier vehicles and fuel.

The new requirement is part of efforts to keep the air in Singapore clean and safe. Observers reckon the newfound urgency may have to do with Singapore's air quality as data released recently by the Ministry of the Environment and Water Resources shows that air quality last year was poorer than in 2007. Pollutants emitted from vehicles affects the levels of sulphur dioxide and particulate matter which contributes to acid rain and poses respiratory risks respectively.

Source: Channel News Asia, 18 October 2013

Extract 3: Pollution control body for ban on diesel vehicles in Delhi

Indian Government today informed the lower house of Parliament, that Environment Pollution (Prevention and Control) Authority (EPCA) has recommended that there is need to ban diesel vehicles in Delhi to prevent emission of high smoke particles.

"The EPCA in a report in 2012 has stated that benefits of CNG transition are not visible due to growth in diesel vehicles, because diesel vehicles are known to emit higher smoke particles and Nitrogen Oxides than petrol cars," Environment Minister said.

Earlier in 2007, the EPCA had expressed this concern in a detailed report filed by it in the Supreme Court titled "Controlling Pollution from the growing number of diesel cars in Delhi".

In the report, EPCA had recommended to the Court that there is a need to ban the use of diesel in cars in Delhi. The Central Pollution Control Board had carried out a study in 2007 in six cities - Bangalore, Chennai, Delhi, Kanpur, Mumbai and Pune. The ambient air quality data of these cities in respect of Particulate Matter revealed that contribution due to all vehicles is ranging from 2 per cent to 48 per cent.

Source: The Times of India, Dec 18 2012

[Turn Over]

Extract 4: PMs agree on high-speed rail linking KL, Singapore

Singapore and Malaysia have agreed to build a high-speed rail link between Kuala Lumpur and Singapore by 2020, in a move that both heads of government called a "**game-changer**". Announcing the breakthrough agreement at a press conference today following bilateral talks, Prime Minister Lee Hsien Loong said that the rail link would create a 90 minute door to door journey for commuters, and that it will "change the way we do business, the way we look at each other and interact." He pointed to the Eurostar link between Paris and London, which transformed "two European cities into one virtual urban community" as a model for the KL-SG link. Malaysian PM Najib Razak said that the project will be a private-public one, with the link being built by private contractors with government infrastructural support. He declined to estimate how much the project will cost.

Source: The Straits Times, Feb 19, 2013

Questions:

- (a) (i) Compare the trend in the prices of crude oil and diesel between 2008 and 2013. [2]
- (b) (i) With the aid of a diagram, explain how the changes in price of diesel will affect the market for Express Bus Services. [3]
- (ii) Explain how the completion of the High Speed Rail will affect the demand curve for Express Bus Services between Singapore and Malaysia. [3]
- (c) (i) Explain the rationale behind the new regulation mentioned in Extract 2. [6]
- (ii) With reference to extracts 2 and 3, discuss whether the new regulation or the banning of diesel vehicles is the key to achieving efficient allocation of resources in the Express Bus Services market. [8]
- (d) Discuss how the High Speed Rail as a 'game changer' may affect the Singapore's economy. [8]

[30 marks]

Question 2**Tale of Two Economies****Extract 5: Indonesia aims for FDI growth**

Indonesia is aiming to increase foreign direct investment by 23 percent this year, after record inflows in 2012 helped insulate Southeast Asia's largest economy from a slowdown in exports. Strong investment was driven by the mining, transport and chemicals sectors, showing firms shrugged off worries over policy uncertainty, corruption and weak infrastructure to seek returns in an economy growing at more than 6 percent.

It was also reported that investors at home and abroad have responded positively to efforts to improve the investment climate. Foreign inflows to the G20 economy have increased significantly since Indonesia regained investment grade status from two rating agencies a year ago. Investment makes up around 30 percent of the G20 economy. Although it's FDI is less than that attracted by China in 2012, Indonesia remained attractive to foreign investors compared with its Southeast Asian neighbours, Vietnam, for example, estimated its FDI fell by 5 percent to \$10.46 billion in 2012.

Foreign investors are not expected to stop coming into Indonesia, especially noting the fact that infrastructure upgrades are ongoing in the country over the next three to five years. There is a need to continue enhancing workers' productivity, especially in the manufacturing sector, which has been a laggard relative to the region."

Adapted from Reuters, 22 June 2013

Extract 6: Abenomics and the Japanese Economy

Just weeks after taking office in December 2012, Japanese Prime Minister Shinzo Abe, who had also led the country from 2006 to 2007, announced plans for a new suite of policies geared toward jolting the stagnating economy out of its deflationary malaise. Japan, having fought deflation for more than two decades, remains mired in weak growth despite repeated attempts to revitalize the economy.

Abenomics refers to an aggressive set of monetary and fiscal policies, combined with structural reforms, geared toward pulling Japan out of its decades-long deflationary slump.

Fiscal stimulus began with economic recovery measures totaling 20.2 trillion yen (\$210 billion), of which 10.3 trillion (\$116 billion) was direct government spending. Abe ordered a hefty stimulus package focused on critical infrastructure projects, such as building bridges, tunnels, and earthquake-resistant roads. This was earmarked to stimulate private investment

The Bank of Japan (BOJ) simultaneously pursued an unorthodox injection of liquidity into the economy, a policy known as quantitative easing, seeking to push inflation to 2 percent to spur spending. The goal of easy monetary policy is to reduce real interest rates. In Japan's case, it has a significant side effect of weakening the yen.

Finally, structural reform—including slashing business regulations, liberalizing the labor market, cutting corporate taxes, and increasing workforce diversity—aims to revive Japan's long-term competitiveness.

Adapted from Business Insider, 16 March 2013

[Turn Over]

Extract 7: Abenomics need an overhaul

Japanese Prime Minister Shinzo Abe must rethink his Abenomics program in its entirety. So far, only Abenomics' third and final arrow, reform, has come in for widespread criticism. But arrows one and two – monetary and fiscal stimulus – are also flagging in their efforts to pull Japan out of its economic funk. Annualized GDP growth fell to 1 percent in the second half of 2013 from more than 4 percent in the first half. If Abe does not refocus his reform program, the country risks a dangerous reliance on the Bank of Japan and its ultra-loose monetary policy.

Barring substantial reforms elsewhere in the Japanese economy, using the 'first arrow' to repeatedly weaken the yen is an unsustainable source for growth in the long-run. Under Abenomics, growth in Japanese exports has failed to keep pace with the rising cost of imports.

In a country with an aging and shrinking population, real long-term growth can only be realized through improved productivity. To stimulate productive investment, Japan must revamp the second arrow of Abenomics and focus on tax incentives rather than government spending. The new tax breaks tied to capital investment are surely too small to encourage significant new domestic investment, and only apply if companies can meet a 15 percent return on investment hurdle, a level which may be unrealistic in such a stagnant economy. These kinds of measures should prove more effective, and safer, than fiscal stimulus. Japan's government debts are already more than twice its GDP and further increasing it would prove problematic.

The third arrow of Abenomics, reform, also requires redirection. First, Japan needs to ensure its businesses use its people properly. To do this it will need to address a rigidity that has led to the development of a 'dual' labor market. Around 40 percent of workers are now deemed 'temporary,' in jobs which provide low pay, a lack of social insurance, and little opportunity to develop skills. There is scope to increase the use of foreign labor. There is also a need to use more flexible labor contracts so you can bring people into the labor force

Adapted from CNBC News, 27 March 2014

Table 1: Macroeconomic Indicators: Indonesia

	2009	2010	2011	2012	2013
Annual Rate of Growth Real GDP (%)	4.6	6.2	6.5	6.3	5.8
Rate of Inflation (%)	4.8	5.1	5.3	4	6.2
Unemployment Rate (%)	7.9	7.1	6.6	6.1	6.3
Current Account Balance (% of GDP)	2	0.7	0.2	-2.8	-3.2
Current Account Balance (USD billion)	10.6	5.1	1.7	-24.4	-29.1
Capital and Financial Account Balance (USD billion)	7.8	3.9	-1.7	-24.6	-29.2
Budget Balance (% of GDP)	-3.1	-2.8	-2.2	-1.7	-1.4
Public Debt (% of GDP)	27	24.6	22.5	22.4	24.5
Exchange Rate (rupiah per USD)	9,425	9,010	9,068	9,638	10,461

Table 2: Macroeconomic Indicators: Japan

	2009	2010	2011	2012	2013
Annual Rate of Growth Real GDP (%)	-5.5	4.7	-0.5	1.4	1.5
Rate of Inflation (%)	-1.4	-0.7	-0.3	0.0	0.7
Unemployment Rate (%)	5.1	5.1	4.6	4.3	4.0
Current Account Balance (% of GDP)	2.9	3.9	2.1	1.0	0.7
Current Account Balance (USD billion)	145.3	217.2	126.5	58.5	34.1
Capital and Financial Account Balance (USD billion)	168.6	248.13	164.5	61.2	-24.2
Budget Balance (% of GDP)	-7.6	-6.7	-8.2	-8.0	-7.7
Public Debt (% of GDP)	185.0	190.5	203.4	210.5	218.1
Exchange Rate (yen per USD)	92.9	81.2	77.0	86.7	95.3

Source: Organisation for Economic Co-operation and Development

Questions:

- (a) (i) With reference to Tables 1 & 2, compare the trend in the government budget balance as a percentage of GDP of Indonesia and Japan between 2009 and 2013. [2]
- (ii) Explain how GDP growth rate could have affected the government budget balance in Indonesia. [3]
- (b) (i) Explain how the increase in FDI may affect Indonesia's capital and financial account balance and current account balance. [2]
- (ii) Explain the rationale for Indonesia's aim "to increase foreign direct investment by 23 percent this year". [4]
- (c) Discuss the extent to which the data provided supports the theoretical relationship between Indonesia's exchange rate and its current account balance between 2009 and 2013. [5]
- (d) Using the concept of circular flow of income, explain how the fiscal expansion mentioned in Extract 6 as part of Abenomics will affect the equilibrium level of national income. [6]
- (e) Discuss the view that the approach of "Abenomics" undertaken by the Japanese government requires adjustment in response to the underlying problems faced by Japan. [8]

[30 marks]

[Turn Over]

Section B: Essay Question

Answer ONE question from this section.

Question 3

- (a) Explain how globalisation could reduce the economic problem of scarcity. [10]
- (b) Discuss the impact of globalisation on the economic agents of a country. [15]

Question 4

Be it to raise or lower inflation, governments around the world have used interest rates as a means to tackle this problem.

- (a) Explain why governments may want to achieve a low and stable inflation rate. [10]
- (b) Discuss whether the control of interest rates is the best approach to tackle inflation. [15]

St Andrew's Junior College



Economics Department

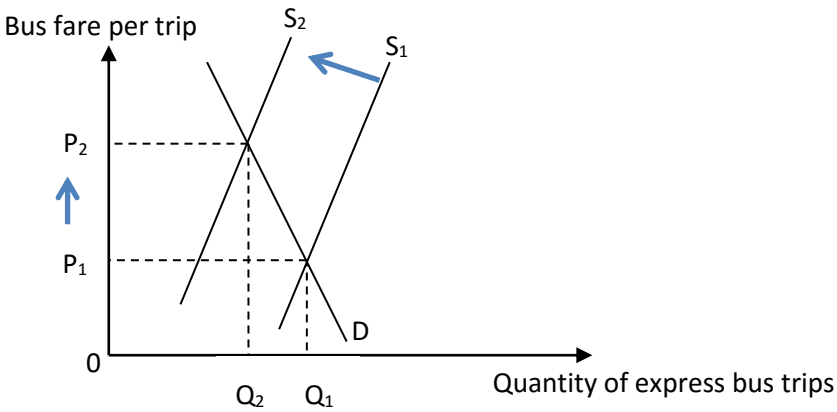
JC 2 Prelims (2015)

Examiner's Report

H1 Economics

(Syllabus 8819)

Question 1: Changes in the Markets for Vehicles

(a)	<p>Compare the trend of the price of crude oil and diesel between 2008 and 2013.</p> <p>Similarity [1m]</p> <ul style="list-style-type: none"> - Prices of both fuel generally increased throughout the period. - Prices of both fuel moved in tandem throughout the period. <p>Difference [1m]</p> <ul style="list-style-type: none"> - Diesel prices were consistently higher than those of crude oil throughout the period. - Prices of Diesel decreased more than than crude oil in 2008. 	[2]
(b)	<p>(i) With the aid of diagram, explain how the changes in price of diesel will affect the market for express bus services.</p> <p>Price of diesel increased. Diesel is a factor of production for express bus services, cost of production of Express Bus Services would increase, which will cause the Supply of Express Bus Services to fall [1m] → Market $P_e \uparrow$ and $Q_e \downarrow$ [1m]</p> <p>Optional: TR \uparrow (assuming $PED < 1$)</p> <p>Correct Diagram [1m]</p> 	[3]

	(ii)	<p>Explain how the completion of the High Speed Rail will affect the demand curve for Express Bus Services between Singapore and Malaysia.</p> <p><i>Relationship between the two services – substitute</i></p> <ul style="list-style-type: none"> - Completion of HSR → consumers who previously demand for Express Bus Services may switch to HSR [1m] → Demand for EBS would fall, demand curve shift left[1m] <p><i>Increase in the availability of closed substitutes.</i></p> <ul style="list-style-type: none"> - DD for EBS trips that end in KL becomes more price elastic, larger in PED value [1m] 	[3]
(c)	(i)	<p>Explain the rationale behind the new regulation mentioned in Extract 2.</p> <p>Market failure due to negative externalities in consumption OR production</p> <p>Identify Q_p, state condition ($MPB = MPC$) [1m] Identify and explain MEC (3rd parties must be clearly identified) [1m] Establish MSC to be $MPC + MEC$ [1m] Identify Q_s, state condition ($MSB = MSC$) Identify DWL from the overconsumption or production of vehicles in text form or in diagram [1m]</p> <p>Regulation aims to reduce the MEC which will reduce MSC or increase MPC depending on the way they explained.[1m] Reduction in MSC (shifting MSC down) would increase in the Socially Optimum Level of Output.</p> <p><u>With a higher QSOL, resource allocation are improved as net welfare loss are reduced, DWL reduced.</u> [1m]</p> <p style="text-align: center;">Or</p> <p><u>the vehicle using cleaner engine and fuel will be more expensive causing MPC to increase and Q_p to decrease. This would reduce the over consumption and reduce the deadweight loss</u></p> <p>Note: Diagram is not required but strongly encouraged. No marks given for diagrams.</p>	[6]
	(ii)	<p>With reference to extracts 2 and 3, discuss whether the new regulation or the banning of diesel vehicles is the key to achieving efficient allocation of resources in the Express Bus Services market.</p> <p><i>Question analysis:</i></p> <ul style="list-style-type: none"> - To identify and explain the pros and cons of each policy in achieving efficient allocation of resources. - To provide a judgement on which is the 'key' to achieve AE – which one would better help attain AE. <p>New regulation on emission</p> <ul style="list-style-type: none"> ✓ Strong deterrent of \$5000. ✓ If correctly measured, DWL could be successfully eliminated – achieve AE. × New emission standards may not sufficiently eliminate DWL if they 	[8]

		<p>are wrongly measured/computed.</p> <ul style="list-style-type: none"> * Adds administrative/monitoring costs to vehicle owners (private) and firms (delivery vehicles, EBS company, etc) <p>Total Ban</p> <ul style="list-style-type: none"> ✓ Cheap, quick and easy to implement ✓ Improvement in air quality almost immediately after implementation * Unlikely to be allocatively efficient outcome – continued existence of DWL <p>Possible evaluation:</p> <ul style="list-style-type: none"> - Given strong law-enforcement and law-abiding culture/practice in Singapore, either method should be able to deliver its intended outcome. With increasing precision in the estimation of MEC, new regulation ought to be key in achieving AE compared to total ban, the latter of which tends to produce DWL even if one assumes it to be a smaller one than without intervention. 	
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Level and Marks	Knowledge, Understanding, Application, Analysis
Level 3 5-6m	Two sided comparison of Strength and Limitation of Ban and Regulation. Max 6 for two sided answers without a judgment.
Level 2 3-4m	Two sided explanation of Strength and Limitation of Ban and Regulation.
Level 1 1-2m	One sided, Max 3 Unfocused answer or simply listed a large number of points Smattering of points. No use of economic theories.
E 1-2m	Judgment based on sound evaluation in the context of the case.

(d)	<p>Discuss how the High Speed Rail as a ‘game changer’ may affect the Singapore’s economy.</p> <p><i>Question analysis:</i></p> <ul style="list-style-type: none"> • <i>Singapore’s economy – 4 KEIs.</i> • <i>Focus on macro impact rather than micro impact.</i> • <i>Need to use AD/AS framework.</i> • <i>Positive and Negative impact on Singapore economy.</i> <p><i>Game changer:</i></p> <ul style="list-style-type: none"> • certain industries may face a shake-up (e.g. bus services and airlines serving Singapore and Malaysia) • certain industries may flourish (complementary services such as hotels, taxi firms providing transfers from train stations, F&B due to increased tourists and business travellers, etc) <p><u>AD/AS framework:</u></p> <p>Aggregate Demand</p> <ul style="list-style-type: none"> • C = no significant change or may face a fall due to increased imports as more Singapore residents begin to travel to Malaysia to satisfy their consumption needs (meals, shopping, etc) which used to be done in Singapore • I = \uparrow I in booming sectors (e.g. shopping malls near terminal stations, hotels, etc) • G = \uparrow ancillary amenities/facilities around the HSR train stations (expansion of bus/MRT terminals) • X-M = More in-bound and out-bound travellers (tourists, 	[8]
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		<p>businessmen) between Singapore and Malaysia – impact on X-M indeterminate.</p> <p>If Aggregate Demand increased Positive impact</p> <ul style="list-style-type: none"> • Improvement of BOP* (If AD increased due to improvement BOT) • Economic growth (Actual) • Decrease in Unemployment <p>Negative impact</p> <ul style="list-style-type: none"> • Inflation • Worsening of BOP* (After AD increased) <p>*2 choose 1 depending on how the student structure the answer</p> <p>If Aggregate Demand decreased Positive impact</p> <ul style="list-style-type: none"> • Reduction of GPL or reduce Inflationary pressure <p>Negative impact</p> <ul style="list-style-type: none"> • Recession • Increase in Unemployment • Worsening of BOP (If AD decreased due to worsening BOT) <p>Aggregate Supply</p> <ul style="list-style-type: none"> • SRAS = Cost of imports of major inputs such as raw materials as well as foodstuff expected to fall. SRAS rises. • LRAS = expansion of productive capacity (similar to expansion of airport terminal) to handle more travelers. LRAS rises. • Likely effect - ↑ NY via k process, ↑ Employment, BOP balance indeterminate <p>If Aggregate Supply increased Positive impact</p> <ul style="list-style-type: none"> • Economic growth (Actual and Potential) • Decrease in Unemployment • Reduction of GPL or reduce Inflationary pressure <p><u>Other Possible Points:</u></p> <ul style="list-style-type: none"> ○ Bundled Singapore-Malaysia tour packages to attract tourists from other countries due to relatively more hassle-free travel (no more arriving at airport 2 hours early and multiple transfers between airport and hotels) ○ Long term plans to extend HSR to Thailand and beyond, bringing in more trade and investment opportunities. ○ Outflow of investments from Singapore to Malaysia, both residential and commercial, to take advantage of lower land and labour costs. <p>Note: Not to include economic activities related to construction of the HSR.</p>	
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Level and Marks	Knowledge, Understanding, Application, Analysis
Level 3 5-6m	Two sided discussion of the positive and negative impact on the Singapore economy. Good use of AD/AS At least 3 of the 4 KEIs Max at 6 Max 6 for two sided answers without a judgment.
Level 2 3-4m	Two sided explanation of the positive and negative impact on the Singapore economy. Average use of AD/AS

		At least 2 of the 4 KEIs. Max at 4m for a very well one sided explanation of either the positive or negative impact on the Singapore economy.	
	Level 1 1-2m	One sided explanation of either the positive or negative impact on the Singapore economy. Focus on 1 of the 4 KEIs. Unfocused answer or simply listed a large number of points Smattering of points. No use of economic theories.	
	E 1-2m	Judgment based on sound evaluation in the context of the case.	

Question 2: Tale of Two Economies

(a)	(i)	With reference to Table 1 and 2, Compare the trend in the government budget balance as a percentage of GDP of Indonesia and Japan between 2009 and 2013.	[2]
		Similarity: Both countries were experiencing a deficit in the government budget balance as a percentage of GDP between 2009 and 2013. [1] Difference: Japan's government budget balance as a percentage of GDP was worsening (deficit becoming bigger) from 2009 to 2013 except for 2010, while Indonesia's government budget balance as a percentage of GDP was improving (deficit becoming smaller). [1]	
	ii)	Explain how GDP growth rate could have affected the government budget balance in Indonesia.	[3]
		From Table 1 and 2, From 2009 to 2013, as in the case for Japan and Indonesia, when there was positive economic growth, the government budget deficit would become smaller while when there was negative economic growth, the government budget deficit would become larger. [1] When there is positive/negative economic growth, household incomes and firms profits are higher/lower and thus there would be higher/lower tax revenue collected from income tax and corporate tax as well as indirect taxes (GST). [1] Government expenditure on welfare payments would have also decreased/increased with positive/negative economic growth. [1]	
b)	i)	Explain how the increase in FDI may affect Indonesia's current account balance and capital and financial account balance.	[2]
		Foreign direct investment (FDI) is a direct investment into production or business in a country by an individual or company from another country, either by buying a company or by expanding operations of an existing business into the target country. In the short run, an increase in FDI would improve the capital and financial account balance as it is considered a credit item and a capital inflow into Indonesia. [1] In the long run, when profits made by the foreign firms (FDI) are sent back to their parent company abroad, it will be recorded as a debit item into the current account of Indonesia due to income outflows. [1]	

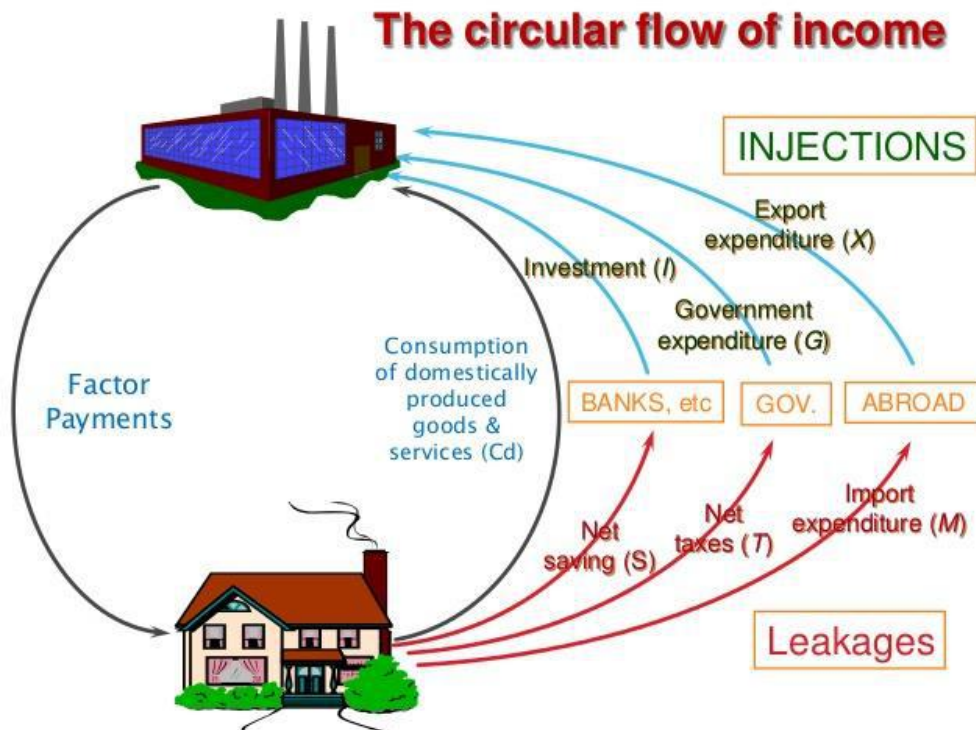
ii)	<p>Explain the rationale for Indonesia's aim "to increase foreign direct investment by 23 percent this year".</p>	[4]
	<p>Indonesia aim to increase foreign direct investment as it helps it in achieving its macroeconomic objectives of sustained economic growth (both actual and potential economic growth) as well as lowering unemployment and improving the balance of payment (BOP).</p> <p>In the short run, an increase in foreign direct investment would increase investment (I). The increase in I would bring about an increase in AD. [1] When AD increases from AD₁ to AD₂, at the original equilibrium price of OP₁, there would be an excess demand for goods and services and this causes a rundown in inventories stocks. In response, producers would have to increase production of goods and services. To meet the increase in production of goods and services, producers would have to increase their demand for both labour and capital goods to increase output. As such, this would bring about an increase in national income from Y₁ to Y₂. [1]</p> <p>Foreign direct investment would improve the capital and financial account. Assuming ceteris paribus, this would improve the BOP account. [1]</p> <p>In the long run, due to the increase in foreign direct investment, the quantity of factors of production would have increased and this brings about an increase in the productive capacity of the economy leading to an increase in LRAS. This is represented by the rightward shift of LRAS₁ to LRAS₂ in the diagram above. This would bring about an increase in national income from Y₂ to Y₃. [1]</p>	
c)	<p>Discuss the extent to which the data provided supports the theoretical relationship between Indonesia's exchange rate and its current account balance between 2009 and 2013.</p>	[5]
	<p>When a currency weakens/strengthens in value relative to another country's currency, this should improve/worsen the current account balance assuming Marshall Lerner Condition holds.</p> <p>Looking at Indonesia, the rupiah appreciated in value from 2009 to 2010 and this caused the worsening of the current account balance as it fell from a surplus of US\$10.6 billion to US\$5.1 billion in value. This thus shows that it supports the theoretical relationship.</p> <p>However, from the period of 2011 to 2013, the theoretical relationship between exchange rate and current account balance does not seem to hold.</p>	

From 2011 to 2013, the Indonesia rupiah depreciated in value. If the theoretical relationship holds, we should be expecting an improvement in the current account balance. However, we saw a worsening of the current account balance as the surplus became smaller in 2011 before worsening to a deficit in 2012 and it became larger in 2013. This could be explained due to many reasons, namely,

- I. Marshall-Lerner Condition does not hold. (for the relationship to be true, $PED_x + PED_m > 1$ has to apply) However, there could be contractual obligations and consumers' taste and preferences, which cause Marshall-Lerner Condition to not hold.
- II. Exchange rate given is only relative to USD. Indonesia's rupiah could have appreciated against other countries' currencies, which would then explain the worsening current account balance we see.

Level (Marks)	Level Descriptor
L2 (3-5)	Well-developed explanation that examines both the sides in explaining if the data provided showed a relationship between the exchange rate and current account balance of Indonesia.
L1 (1-2)	One-sided and undeveloped explanation that has limited economic analysis in explaining if the data provided showed a relationship between the exchange rate and current account balance of Indonesia.

d) Using the concept of circular flow of income, explain how the fiscal expansion mentioned in Extract 2 as part of Abenomics will affect the equilibrium level of national income. [6]



	<p>Assuming a 4-sector economy initially at equilibrium,</p> $\begin{aligned} \text{Injections} &= \text{Withdrawals} \\ (J) &= (W) \\ I + G + X &= S + T + M \quad [1] \end{aligned}$ <p>According to Extract 2, the fiscal expansion was direct government spending on capital spending on infrastructure. This would increase G. According to Extract 2, corporate taxes were also reduced and this would cause a fall in T.</p> $\begin{aligned} G &\text{ would increase to } G_1 (G < G_1) \\ T &\text{ would decrease to } T_1 (T > T_1) \quad [1] \end{aligned}$ <p>This would cause disequilibrium in our circular flow of income, as injections are now more than withdrawals.</p> $\begin{aligned} J &> W \\ I + G_1 + X &> S + T_1 + M \quad [1] \end{aligned}$ <p>Increase in G is spent on goods and services: [1]</p> <ul style="list-style-type: none"> - Increase in demand for g/s - Firms have to raise output to meet the additional demand - By Output Approach → increase in output by firms will increase in national income <p>Getting back to equilibrium: [1]</p> <ul style="list-style-type: none"> - Increase in national income → increase in induced savings, taxes and imports → S_1, T_2 and M_1 - S_1, T_2 and M_1 is larger than the S, T_1 and M at the original equilibrium - Therefore, withdrawals ($S + T + M$) would increase until a new equilibrium level of national income is reached where withdrawals are equal to injections. $\begin{aligned} I + G_1 + X &= S_1 + T_2 + M_1 \\ \text{Injections} &= \text{Withdrawals} \\ J &= W \end{aligned}$ <p><u>Result: an increase in the equilibrium level of national income.</u> [1]</p>	
<p>e) i)</p>	<p>Discuss the view that the approach of “Abenomics” undertaken by the Japanese government requires adjustment in response to the underlying problems faced by Japan.</p>	<p>[8]</p>
	<p>“Abenomics” as explained in Extract 2, “refers to an aggressive set of monetary and fiscal policies, combined with structural reforms, geared toward pulling Japan out of its decades-long deflationary slump.”</p> <p><u>Side 1: “Abenomics” may require adjustment in response to the underlying problems faced by Japan.</u></p> <p><u>Monetary policy</u> Japan undertook “quantitative easing” and increased money supply, resulting in a fall in interest rates. This also has the added effect of causing the Japanese yen to weaken. (Extract 2) While the aim of this policy is to increase domestic consumption (C) and investment (I), Japan’s domestic demand is weak given the fact that it has been facing deflationary pressures in the past. The fall in interest rates could also run into a situation known as</p>	

the liquidity trap, whereby any further increase in money supply by the Bank of Japan (BoJ) would not cause any fall in the interest rates. This would then render the effectiveness of this policy to be limited.

The weakening of the Japanese yen could help spur Japan into a recovery, as it would make its exports relatively cheaper in terms of foreign currency. When this happens, assuming Marshall-Lerner condition holds, this would increase net exports revenue (X-M). Assuming ceteris paribus, this increase in (X-M) would increase AD and real national income by the multiplier effect. Nonetheless, as mentioned in Extract 3, this was not to be the case as “growth in Japanese exports has failed to keep pace with the rising cost of imports”. The weakening of the Japanese yen would cause price of imports to be relatively more expensive in Japanese yen and could lead to imported inflation. This, according to Extract 3, “is an unsustainable source for growth in the long-run.” Thus Japan would need to adjust in response to the challenges faced for monetary policy.

Fiscal policy

Japan undertook an expansionary fiscal policy and spent a large amount on capital spending to improve its infrastructure. Tax cuts were also introduced to encourage both consumption (C) as well as investment (I).

According to Extract 3, it seems that the focus of fiscal policy seems to be more on government spending. “*To stimulate productive investment, Japan must revamp the second arrow of Abenomics and focus on tax incentives rather than government spending.*” (Extract 3) This would prove to be problematic for an economy like Japan as based on Table 2 as well as Extract 3, we know that Japan is facing a public debt amount of more than twice its GDP. Further increasing the public debt amount would have dire consequences to the Japanese economy as it may erode confidence in the Japanese economy and raise questions of the government’s ability to repay the debt. While the intent of the government spending is to encourage households and businesses to increase C and I, it may not be sustainable for the government to spend in the long term to boost its AD. Thus, Japan would need to adjust in response to the challenges faced for fiscal policy.

Structural reforms

Japan embarked on “*structural reforms—including slashing business regulations, liberalizing the labor market, cutting corporate taxes, and increasing workforce diversity—*” aims to revive Japan’s long-term competitiveness. “(Extract 2)

While these reforms help in making Japan more attractive to businesses, with the slashing of business regulations which is more business-friendly, as well as the reduction in corporate taxes which contribute to higher post-tax profits for businesses, it has to address the issues that are plaguing them, namely, aging and shrinking population as well as improving the rigidity in the labour market in Japan.

To tackle the aging and shrinking population, Japan may wish to relook its policy on allowing foreign labour in to help plug the gap caused by the aging and shrinking population. The aging and shrinking population could cause labour cost and wages to increase and this would add on to businesses’ cost of production. This may lead to firms looking elsewhere where cost of production is much lower. Allowing foreign labour in would help to reduce the pressure of the rising wages.

In addition to the above problem, there is also mention of rigidity in the labour market which leads to a ‘dual’ labour market. To improve this condition, the government may wish to embark on retraining and upgrading programmes to help the development of skills in the workforce. It could focus on retraining and upgrading for those who are stucked in “temporary” jobs so that with the completion of the training programme, they could go out and look for a job which would ensure that his/her skills are put to good use and contributing to the Japanese economy.

Thus Japan would need to adjust in response to the challenges faced for structural reforms.

Side 2: “Abenomics” may not requires adjustment in response to the underlying problems faced by Japan.

Based on Table 2, Japan seems to be on the rebound as they returned to positive economic growth in 2012 and 2013. In addition, Japan is also starting to move from a state of deflation to inflation again. Unemployment rate also fell during the period of 2009 to 2013. All these are positive signals and could imply that the Japanese economy is seeing an increase in economic activity. Typically, these policies undertaken would require time for the effects to slip in and thus it may be too premature for us to make the conclusion as to whether there is a need for adjustment in response to the problems faced by Japan.

Evaluation and synthesis

It is important to note that Japan will not grow as fast as China as it is already a developed country and the success of Abenomics should not be judged mechanically on it achieving its various targets. We should assess the policies and effects broadly to decide whether there is a need for adjustment of its policies. Nonetheless, the authorities in charge should review and monitor the performances of its policies so that any adjustment if necessary could be made in a timely fashion to help Japan and its economy to achieve its macroeconomic objectives and recover from their predicament.

Level	Knowledge, Application, Understanding and Analysis
L3 (7-8)	Clear 2-sided answers Answers show clear understanding of the working and the ineffectiveness of the Abenomics program outlined in the extracts Able to analyse the changes suggested to increase the effectiveness of the policies Appropriate data to support the view that Abenomics programme need/ need not be adjusted.
L2 (3-4)	Undeveloped answer Able to explain at least 2 policies but lack the analysis to explain whether there is a need to adjust the Abenomics program
L1 (1-2)	Able to identify the policies used in Abenomics Unable to link to the problems pertaining to Japan 1-sided answer

E2 (2)	Evaluative comments with justification.
E1 (1)	Evaluative comments without explanation.

2015 Prelim J2H1 Essay Question (3)

- (a) Explain how globalisation could reduce the economic problem of scarcity. [10]
(b) Discuss the impact of globalisation on the economic agents of a country. [15]
-

- (a) Explain how globalisation could reduce the economic problem of scarcity. [10]

Suggested Answer:**Introduction**

Define Globalisation: Increasing integration of the international economy and is characterised by greater global interdependence through expansion in the volume and variety of cross-border transactions in goods & services, capital, foreign direct investments, exchanges in labour & technology.

Explain economic problem of scarcity: Unlimited wants and limited resources → resulting in scarcity → thus required to make choices between competing uses → incur opportunity cost, which is the next best alternative forgone.

Development

- With globalisation → increases access to goods and services internationally not available in domestic country → increases in quantity, quality and varieties → this increases consumers' utilities → reduces the economic problem of scarcity, i.e. unlimited wants but limited resources to produce where the domestic country might not have the resources to do so, such as lack of knowledge, technology etc. Hence with globalisation, the country can now consume beyond the production possibility curve (PPC).
- Globalisation increases competition → country would need to specialise in the production of goods that it has comparative advantage in order to stay competitive internationally → increasing world output → allow countries to consume beyond PPC → reduces the problem of scarcity.
- At the same time, specialisation allows the countries to be more productive and efficient → leading to better allocation of resources → increasing quality and quantity of resources → increases productive capacity → able to shift PPC to the right or LRAS to the right → reducing the problem of scarcity.
- Globalisation increases cross-border transfer of resources, in terms of labour, capital and technology. E.g. Labour → increase quantity of labour in the countries, with highly skilled labour, it will also increase in quality, enhance productivity. Likewise, capital and technology transfer → increase capital inflow and efficiency → thus lead to increase quality and quantity of resources → helping the country boost its productive capacity → shift PPC or LRAS to the right → hence reduce the resource constraints face by a country → reduce problem of scarcity.
- With more goods and services produce, increase in labour, capital inflow and technology transfer → increase both AD and AS → increase real NY via the multiplier process → speed up economic growth → leading to more and greater utilisation of resources.

Conclusion

Globalisation allows the economy to better utilise their resources due to comparative advantage. It also allows them to increase world output, thus reduces the 'limited resources' constraint. At the same time, with more goods and services available for consumption, it can also satisfy more wants, thus able to tackle the problem of 'unlimited wants'.

Level (Marks)	Knowledge, Application, Understanding and Analysis
L3 (7 – 10)	For an answer that are well-developed with real-life examples to illustrate how globalisation is able to reduce the problem of scarcity. Candidates must explain at least 3 aspects of globalisation, i.e. goods and services, labour, capital and technology linking clearing how it can reduce the problem of scarcity of BOTH unlimited wants and limited resources.
L2 (5 – 6)	For an answer that covered only 2 aspects of globalisation with no clear link to the problem of scarcity. Or answer that only focus on unlimited wants or limited resources. Little or no examples given to support the analysis. Max 5m: only 1 aspect of globalisation but well-explained with clear link to the problem of scarcity.
L1 (1 – 4)	Smattering of points. No link of globalisation to reduce the problem of scarcity. Superficial analysis with limited economic concepts and framework. High L1: only 1 aspect of globalisation well-explained with clear link to only unlimited wants or limited resources

(b) Discuss the impact of globalisation on the economic agents of a country. [15]

Suggested Answer:

Introduction:

As explained in (a), globalisation lead to freer flow of goods and services, labour, capital and technology. Even though it is able to reduce the problem of scarcity, benefitting the economic agents of a country, namely consumers, producers and government; it can also bring about negative impact to them.

Development:

Thesis: Globalisation leads to positive impact on the economic agents of a country

Consumers:

With more goods and services available → more variety, quantity and quality → this increases consumer welfare. With expansion of output, producers can increase its scale of production, reaping internal economies of scale, reducing average cost → if producers pass on the cost savings to the consumers → consumers will be able to enjoy lower prices → increases consumer surplus.

E.g. Singapore being a small economy with limited resources, globalisation would allow the consumers to obtain goods at a lower price from their trading partners who might be more efficient in their production using their existing vast resources available in their countries. Also Singaporeans would also get to enjoy greater varieties of goods and services → leading to an improvement in the material standard of living (SOL).

Producers:

Due to globalisation, firms can sell their goods to foreign markets → thus able to gain from larger export market → with greater demand → firms can increase total revenue. As explained above, firms can expand internally due to increase output level → thus lower their average cost → total cost fall. With higher revenue and lower cost → profits increase

For example, there is a limit on how much a firm such as Breadtalk could expand in the domestic market. Hence it ventured into China to tap on the huge markets available. This enables the firm to increase their revenue due to greater demand in overseas market. With greater output, Breadtalk would also be able to reduce their average cost. Also it allows them to tap on cheaper labour and production costs in China, reducing their total cost further → leading to increase profit.

Government:

Globalisation leads to increase in investment via the inflow of capital. It also increases export revenue → increase AD → leading to actual growth. It also allows the country to increase in

its productive capacity → increase LRAS. With technology and investment → cost of production would also fall → SRAS increase. All the above will lead to increase in real national income via the multiplier effect → allowing the country to attain economic growth and reduction of unemployment as firms would need to hire more labours. This reduces government expenditure, such as unemployment benefits.

With more people employed → more income tax revenue will be collected from the taxpayers. Also increase consumption lead to increase sales tax → both increase government revenue. Government would have more available fund to invest in infrastructure, further enhance the standard of living of the citizens.

Anti-Thesis: Globalisation leads to negative impact on the economic agents of a country

Due to freer mobility of capital → there would also be outflow of capital to other country. Firms would also want to look for cheaper alternatives to reduce their cost of production, setting up firms in other countries, especially country with cheaper labour cost. A reduction in production means less labour required in the domestic industry. This would lead to increase unemployment in the domestic country. If the workers do not possess the required skills in other sectors → this will increase structural unemployment. Consumers would also have lesser purchasing power → leading to a fall in consumption → worsen SOL.

Government would also need to increase its expenditure to assist these workers, either through unemployment benefits or to equip the workers with the relevant skills through training → all these increase government expenditure.

More production would also deplete the available resources in the country. It could also result in environment degradation. Government might need to intervene to control the pace of such environment degradation and depletion of its scarce resources, leading to increase expenditure.

Also the above would worsen the economic problem of scarcity. If firms need to increase production to cater to increase demand due to globalisation, there would be an increase in total cost of production as firms would need to compete with the limited resources in their countries. This would adversely affect a firm's profit as total cost increase.

A country will also face stiffer competition and even unfair competition. E.g. Dumping; where a country sells their goods below its marginal cost → leading to a fall in total revenue of domestic producers. Both of the above would reduce profits → in extreme case, it could result in firms shutting down. E.g. US faced intense competition from China in the textile industry, leading to massive retrenchment → resulted in high unemployment → affected producers, workers and government.

With cheaper price and greater variety from the foreign markets → increase import expenditure and reduce export revenue → result in a fall in AD → firms would need to reduce output, affecting the producers. Likewise a reduction of output means less labour required → increase unemployment. Both affected consumers and producers negatively.

Also with increase import expenditure and reduction of export revenue → worsen balance of trade account, thus its current account position, ceteris paribus → also lead to lesser demand for domestic currency → leading to a depreciation of domestic currency → imports goods would become relatively more expensive in domestic currency → increase price of both imported goods for final consumption and raw materials for production → reduce purchasing power of consumers and increase cost of production for producers respectively → affected both negatively.

Evaluation:

Globalisation brings about both benefit and cost to the different economic agents of a country. Increasing integration means a country could not avoid the increasing competition as well. Hence a country could develop their area of comparative advantage so that the country can better utilise its resources to increase welfare gains to the society at large. Also the influx of capital and technology allowed a country to increase its capacity to produce, and with increasing labour flows, e.g. foreign talents, which would bring about their expertise; would lead to increase AD and AS both in the short and long run respectively. This allows an economy to achieve sustained economic growth, i.e. non-inflationary economic growth, which would thus increase the overall SOL of a country. Coupled with a more prudent government intervention to implement multi-pronged policies to reduce the negative impact of globalisation, it would have more positive impact on the economic agents of a country.

Level (Marks)	Knowledge, Application, Understanding and Analysis
L3 (9 – 11)	For an answer with clear analysis and well supported with relevant examples on the positive AND negative impact of globalisation on the different economic agents of a country.
L2 (6 – 8)	For an answer with in-depth analysis on the positive AND negative impact on only 2 economic agents. Max 6m: only positive OR negative impact but well-explained on the different economic agents of a country.
L1 (1 – 5)	High L1: only positive OR negative impact explained on the different economic agents of a country but lack in depth and scope. Low L1: Smattering of points. Superficial analysis with limited economic concepts and framework.
Allow up to 4 additional marks for Evaluation	
E2 (3 – 4)	For an evaluative assessment based on economic analysis. Able to substantiate judgement on the relative impact on the different economic agents of a country.
E1 (1 – 2)	For an unexplained assessment or not supported by analysis.

2015 Prelim J2H1 Essay Question (4)

Be it to raise or lower inflation, governments around the world have used interest rates as a policy means to tackle this problem.

- a) Explain why governments may want to achieve a low and stable inflation rate. [10]
 b) Discuss whether the control of interest rates is the best way to tackle inflation.

[15]

Suggested Answer

For this question, candidates were expected to explain the benefits of having a low and stable inflation rate to an economy. Candidates should link their answer to other economic objectives – both micro and macro.

Intro:

- Definition of inflation

Body:

- Low and stable inflation leads to higher growth and lower unemployment
 - o Low and stable inflation creates certainty in terms of costs and revenue.
 - o Firms are more confident and thus increase investment

- If economy's inflation rate is lower than another economy, exports will be relatively cheaper and thus export demand increases, increasing export revenue
 - Imports will be seen as relatively more expensive and thus households switch away from consuming imports to consume domestically produced goods
 - Increases net exports
 - Increase in I and (X-M) leads to increase in AD and NY via the multiplier effect, thus actual growth
 - Inc AD leads to firms employing more resources and thus lowers unemployment rate
 - This leads to an increased standard of living as households earns higher incomes and thus can enjoy more goods and services
- Low and stable inflation leads to more favourable BOP
 - Increase in net exports will improve balance of trade and thus current account
 - Increased firm's confidence will lead to higher inflow of FDI, leading to improvement in the capital and financial account
 - Overall leads to an improvement in BOP
 - Low and stable inflation encourages savings
 - Inflation erodes value of savings
 - Higher rates of inflation erodes the value of savings faster and thus households are less inclined to save
 - Reduces availability of loanable funds and thus increases interest rates
 - Low and stable inflation encourages savings as the interest earned can help reduce the erosion of the value of savings and also because households will not be withdrawing their money in large amounts to consume goods and services in anticipation of future price increases. This thus leads to the availability of loanable funds for borrowing to invest or consume
 - Low and stable inflation leads to greater efficiency
 - High inflation results in more menu costs and shoe leather costs as firms would have to update their price lists in accordance with higher prices and this would incur some form of costs to reprint their price lists. Households, on the other hand, incur more shoe leather costs as they make more trips to the banks to withdraw money to consume goods and services.
 - These costs will be reduced if inflation is low and stable, allowing for less resources utilized and thus greater efficiency.

Conclusion:

- Low and stable inflation can help in the attainment of other macroeconomic objectives and governments would have to implement policies to attain this goal

Level (Marks)	Knowledge, Application, Understanding and Analysis
L3 (7 – 10)	Answer provides clear explanation of the benefits of having low and stable inflation rate, drawing clear links to macroeconomic and microeconomic goals.
L2 (5 – 6)	Answer provides undeveloped explanation of the benefits of having low and stable inflation. Such answers would lack adequate links between statements.
L1 (1 – 4)	Answer provides some knowledge of the effects of high inflation and relate to why governments want to achieve low and stable inflation.

b) Discuss whether the control of interest rates is the best way to tackle inflation.

[15]

Suggested Answer

Candidates are expected to look at various policies that a government can implement to tackle inflation and come to a conclusion if monetary policy is the best policy to tackle inflation. Students can approach this question either by lowering inflation or increasing inflation to the desired rate.

Introduction:

- As explained in part (a) governments have reasons why they want to pursue low and stable inflation
- In order to achieve this, governments can employ a range of policies
- Will be evaluating various policies to assess if control of interest rates is the best way

Body:

- **Side 1: Control of interest rates to tackle inflation**
Assumption: economy is operating near full-employment and encountering demand-pull inflation (i.e. increase in AD)
 - o Governments can choose to increase interest rates to decrease the rate of inflation
 - o When interest rates increase, cost of borrowing increases and thus leads to lower levels of C and I as there will be reduced borrowing to consume and invest
 - o This leads to a fall in AD which would mitigate the initial increase in AD and thus brings about a slower increase in GDP, assuming c.p
 - o This is effective for economies that are experiencing high demand-pull inflation as the policy will cut down domestic demand
 - o An example would be China in 2011 where it raised its interest rates due to the excessive demand for property resulted in high rates of inflation. This helped to curb some demand for property and other goods and services as a whole, thus curbing demand-pull inflation
 - **Side 2:**
Limitations of Interest Rate Policy
 - o However, the fall in AD could also bring about a fall in growth as real GDP would fall via the multiplier effect, if the economy was operating within the intermediate range of AS.
 - o Furthermore, increase in interest rates could result in greater hot money inflow, leading to appreciation of the currency that could worsen its trade balance which would then adversely affect its balance of payments, which is a conflict of objective.
 - o In addition, the inflow of hot money would increase domestic money supply and this increase in money supply would lead to a fall in interest rates which mitigates the initial increase in interest rates.
 - o Control of interest rates may only be effective to reduce demand-pull inflation. If inflation is due to supply side factors, interest rate policy may be ineffective.
- Other policies to tackle inflation**
- o Due to the limitations of monetary policy, governments can consider using other policies to tackle inflation such as exchange rate policy and supply-side policies

a) Exchange rate policy

Assumption: economy is operating near full-employment and encountering dd-pull inflation (i.e. increase in AD)

- In order to reduce inflation, the government could adopt a modest and gradual appreciation of its currency and that would make exports relatively more expensive in foreign currency while imports become relatively cheaper in domestic currency. This would lead to a fall in net exports, assuming Marshall-Lerner condition holds and thus bring about a slower increase in AD. This would bring about a slower increase in GPL assuming c.p.
- This policy would be effective for countries that suffer from imported inflation as it makes imports cheaper. This would make imported final goods (e.g. rice) cheaper as well as imported intermediate goods (e.g. electrical components) cheaper, making domestically produced goods cheaper. For an economy that is heavily dependent on imported raw materials, this would represent a fall in cost of production and would lead to a rightward shift of SRAS.
- An example of an economy that utilizes a modest appreciation of its currency is Singapore, due to the large import content of its exports and also because it imports most of the goods it consumes.
- However, the policy would take some time to be effective as the Marshall-Lerner condition does not hold in the SR
- Furthermore, with more expensive exports leading to fall in export revenue, this could lead to rise in unemployment within trade-related industries (e.g. tourism)

b) Supply-side policy

- Another policy the government can consider is the use of supply-side policies to tackle cost-push inflation
- Supply-side policies include training of workers to increase their productivity or foreign labour policies which would affect the size of the labour force within the economy. Examples would be Skills Programme and Upgrading for Resilience (SPUR) and Skills Redevelopment Fund which help to encourage firms to send their workers for training so that they become more productive and thus help to lower the unit costs of output produced.
- With the increase in productivity, labour resources are able to produce more goods and services per unit time and thus lowers the average cost of the goods, bringing about an increase in the SRAS and thus addresses cost-push inflation
- Having a looser foreign worker policy allows for more foreign workers to enter the country and thus there is an increase in the supply of labour. This would lead to a fall in wages and thus leads to lower COP. Thus increasing SRAS and bringing the inflation rate down.
- However, training requires time for the effects to be seen and this policy may be met with resistance from firms in sending their workers for training as well as workers' mindsets which make them unwilling to attend the training or benefit from it

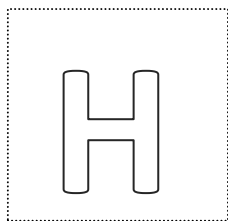
Synthesis/Conclusion:

- The government has many policy tools at its disposal but each has its own merits and costs.
- Each policy tool is also more suited to tackle specific sources of inflation and thus there is no best policy to tackle inflation. As an economy can suffer from high inflation due to several sources, a government should consider implementing a mix of policies. Furthermore, it could implement complementary policies to address the trade-offs that are brought about by the policy to tackle inflation. For example, the government can implement supply-side policies alongside the exchange rate policy

so that the COP will be further reduced and thus allow for exports to be cheaper, stemming the fall in demand for exports due to the appreciation of the currency.

- The nature of the economy also affects the policy to be undertaken to tackle inflation. For example, Singapore is an interest rate taker and thus cannot control its interest rates to tackle inflation. Instead it utilises the exchange rate policy to tackle inflation as a large portion of the final goods consumed and intermediate goods are imported.
- Governments may also intervene to increase the inflation rate as an inflation rate that is too low is indicative of weak demand and thus the government would employ expansionary policies to stimulate the economy.

Level (Marks)	Knowledge, Application, Understanding and Analysis
L3 (9 – 11)	Answer provides clear analysis of at least 3 policies that a government can employ to tackle inflation with examples. Answer must encompass policies to address BOTH demand-pull and cost push inflation. Max 9m with well-developed answer on 3 policies without real-life example.
L2 (6 – 8)	Answer provides an undeveloped analysis of at least 2 policies to tackle inflation. One of the policies MUST be interest rate policy as in the question requirement. Explanation of policies without looking at its limitations will be given max 6m. Well-developed answer on one policy with limitations and real-life example would be awarded max 6m.
L1 (1 – 5)	Answer shows some knowledge of the policies to tackle inflation but lacks of scope and depth.
Allow up to 4 additional marks for Evaluation	
E2 (3 – 4)	Judgement based on analysis.
E1 (1 – 2)	Mainly unexplained judgement.



ST. ANDREW'S JUNIOR COLLEGE
PRELIMINARY EXAMINATIONS – 2015 (JC2)
General Certificate of Education Advanced Level
Higher 2

ECONOMICS

9732/01

Paper 1: Case Study Questions

28 August 2015

2 hr 15 minutes

Additional Materials: Answer Paper

READ THESE INSTRUCTIONS FIRST

Write your name and class on all the work you hand in.

Write in dark blue or black pen on both sides of the paper.

You may use a soft pencil for any diagrams, graphs or rough working.

Do not use staples, paper clips, highlighters, glue or correction fluid.

Answer **all** questions.

At the end of the examination, fasten all your work securely together.

The number of marks is given in brackets [] at the end of each question or part question.



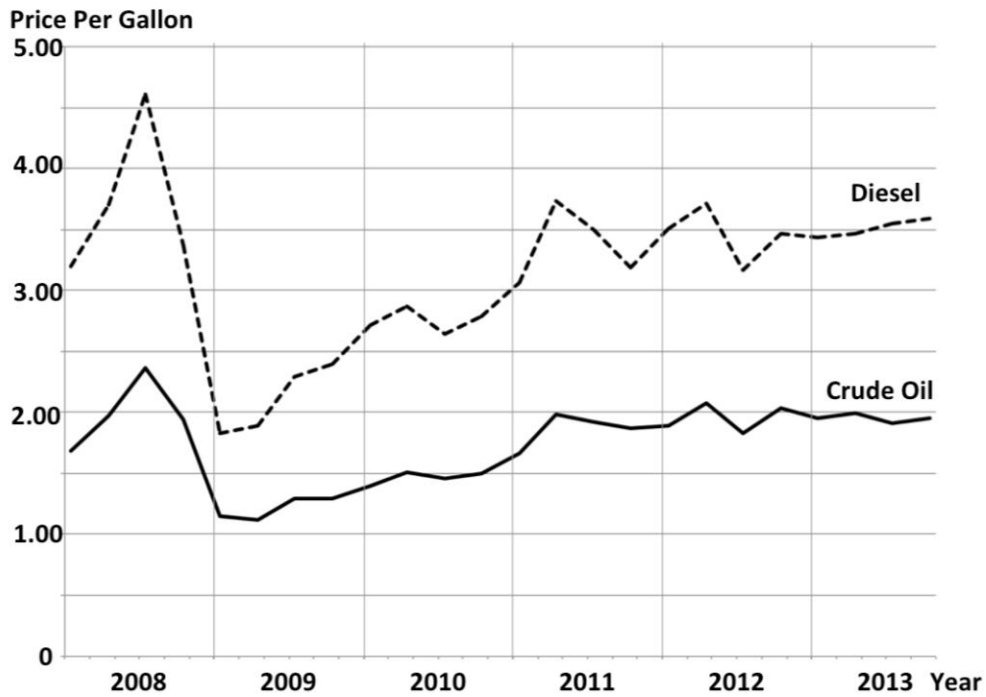
This document consists of 7 printed pages.

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Answer all questions

Question 1 Bilateral transportation between Singapore and Malaysia

Figure 1: Crude Oil and Diesel Prices



Source: U.S. Energy Information Administration

Extract 1: Singapore's pole position in Asian's energy market

The oil industry has been an integral part of Singapore's economy, ever since oil-trading activities started in 1891. Today, Singapore is the undisputed oil hub in Asia and is one of the world's top three export refining centres, a valuable sector that contributed almost 5% of Singapore's Gross Domestic Product in 2007.

Singapore offers extensive oil storage facilities on Jurong Island, its integrated energy and chemical hub, to facilitate trade and manufacturing activities. Our storage capacity is set to multiply with the advent of Jurong Rock Cavern, a massive underground facility. Refineries in the Jurong Island produce diesel fuel and gasoline (petrol) from crude oil imported from abroad. Many other petroleum products are also refined from crude oil.

Source: edb.gov.sg

Extract 2: Competition Commission of Singapore fines Coach Operators and Association

The Competition Commission of Singapore (CCS) has today decided that 16 coach operators and their trade association, the Express Bus Agencies Association (EBAA), had engaged in price-fixing of coach tickets. 16 Coach Operators and Association were fined \$1.69 Million For Price-Fixing. CCS' investigations revealed that the coach operators, together with the EBAA, had agreed to higher fixed prices of coach tickets for travelling between Singapore and destinations in Malaysia from 2006 to 2008. The coach operators agreed to fix the coach prices in two ways:

- Minimum Selling Prices (MSP) of the coach tickets sold. As a result, these coach operators adjusted ticket prices to either at or above the Minimum Selling Prices, resulting in higher ticket prices.
- Fuel & Insurance Charges imposed across the board to mark up ticket prices. The FIC was revised upwards on various occasions after it was implemented.

During this period, it is estimated that the coach operators pocketed over S\$3.65 million from the sale of the FIC. CCS' investigations revealed that there was an agreement reached on 1 June 2005 by the Executive Committee of EBAA to fix coach ticket prices to various destinations in Malaysia. This agreement continued after 1 January 2006, when the Competition Act came into effect in Singapore. The interviews revealed that the introduction of the MSP was premised on an intention to prevent any price war and minimise any slashing of coach ticket prices amongst competitors. Before the introduction of the MSP, the EBAA members were selling coach tickets at various prices, in particular, lower prices. As an example, the MSP was first fixed at \$25 for one-way coach tickets to Kuala Lumpur. Most of the EBAA members were then selling their tickets at \$20 or \$23.

Source: CCS.gov.sg, Nov 3 2009

Extract 3: PMs agree on high-speed rail linking KL, Singapore

Singapore and Malaysia have agreed to build a high-speed rail link between Kuala Lumpur and Singapore by 2020, in a move that both heads of government called a "**game-changer**". Announcing the breakthrough agreement at a press conference today following bilateral talks, Prime Minister Lee Hsien Loong said that the rail link would create a 90 minute door to door journey for commuters, and that it will "change the way we do business, the way we look at each other and interact." He pointed to the Eurostar link between Paris and London, which transformed "two European cities into one virtual urban community" as a model for the KL-SG link. Malaysian PM Najib Razak said that the project will be a private-public one, with the link being built by private contractors with government infrastructural support. He declined to estimate how much the project will cost.

Source: The Straits Times, Feb 19, 2013

[Turn Over]

Questions

- (a) (i) Compare the trend of the price of crude oil and diesel between 2008 and 2013. [2]
- (b) (i) With the aid of diagram, explain how the changes in price of diesel will affect the market for express bus services. [3]
- (ii) Explain how the completion of the High Speed Rail is likely to affect the demand curve for Express Bus Services between Singapore and Kuala Lumpur. [3]
- (c) (i) Explain how the formation of cartels results in the worsening of the market failure. [4]
- (ii) Discuss whether the disadvantages to consumers from 'higher fixed prices' (Extract 2) outweigh any benefits they may gain from the existence of the Express Bus Services cartel. [8]
- (d) Discuss how the High Speed Rail as a 'game changer' will affect the performance of firms in Singapore that provide transport to Malaysia. [10]

[Total: 30 marks]

Question 2 Tale of Two Economies**Extract 4: Indonesia aims for FDI growth**

Indonesia is aiming to increase foreign direct investment by 23 percent this year, after record inflows in 2012 helped insulate Southeast Asia's largest economy from a slowdown in exports. Strong investment was driven by the mining, transport and chemicals sectors, showing firms shrugged off worries over policy uncertainty, corruption and weak infrastructure to seek returns in an economy growing at more than 6 percent.

It was also reported that investors at home and abroad have responded positively to efforts to improve the investment climate. Foreign inflows to the G20 economy have increased significantly since Indonesia regained investment grade status from two rating agencies a year ago. Investment makes up around 30 percent of the G20 economy. Although it's FDI is less than that attracted by China in 2012, Indonesia remained attractive to foreign investors compared with its Southeast Asian neighbours. Vietnam, for example, estimated its FDI fell by 5 percent to \$10.46 billion in 2012.

Foreign investors are not expected to stop coming into Indonesia, especially noting the fact that infrastructure upgrades are ongoing in the country over the next three to five years. There is a need to continue enhancing workers' productivity, especially in the manufacturing sector, which has been a laggard relative to the region."

Adapted from Reuters, 22 June 2013

Extract 5: Abenomics and the Japanese Economy

Just weeks after taking office in December 2012, Japanese Prime Minister Shinzo Abe, who had also led the country from 2006 to 2007, announced plans for a new suite of policies geared toward jolting the stagnating economy out of its deflationary malaise. Japan, having fought deflation for more than two decades, remains mired in weak growth despite repeated attempts to revitalize the economy.

Abenomics refers to an aggressive set of monetary and fiscal policies, combined with structural reforms, geared toward pulling Japan out of its decades-long deflationary slump.

Fiscal stimulus began with economic recovery measures totaling 20.2 trillion yen (\$210 billion), of which 10.3 trillion (\$116 billion) was direct government spending. Abe ordered a hefty stimulus package focused on critical infrastructure projects, such as building bridges, tunnels, and earthquake-resistant roads. This was earmarked to stimulate private investment

The Bank of Japan (BOJ) simultaneously pursued an unorthodox injection of liquidity into the economy, a policy known as quantitative easing, seeking to push inflation to 2 percent to spur spending. The goal of easy monetary policy is to reduce real interest rates. In Japan's case, it has a significant side effect of weakening the yen.

Finally, structural reform—including slashing business regulations, liberalizing the labor market, cutting corporate taxes, and increasing workforce diversity—aims to revive Japan's long-term competitiveness.

Adapted from Business Insider, 16 March 2013

[Turn Over]

Extract 6: Abenomics needs an overhaul

Japanese Prime Minister Shinzo Abe must rethink his Abenomics program in its entirety. So far, only Abenomics' third and final arrow, reform, has come in for widespread criticism. But arrows one and two – monetary and fiscal stimulus – are also flagging in their efforts to pull Japan out of its economic funk. Annualized GDP growth fell to 1 percent in the second half of 2013 from more than 4 percent in the first half. If Abe does not refocus his reform program, the country risks a dangerous reliance on the Bank of Japan and its ultra-loose monetary policy.

Barring substantial reforms elsewhere in the Japanese economy, using the 'first arrow' to repeatedly weaken the yen is an unsustainable source for growth in the long-run. Under Abenomics, growth in Japanese exports has failed to keep pace with the rising cost of imports.

In a country with an aging and shrinking population, real long-term growth can only be realized through improved productivity. To stimulate productive investment, Japan must revamp the second arrow of Abenomics and focus on tax incentives rather than government spending. The new tax breaks tied to capital investment are surely too small to encourage significant new domestic investment, and only apply if companies can meet a 15 percent return on investment hurdle, a level which may be unrealistic in such a stagnant economy. These kinds of measures should prove more effective, and safer, than fiscal stimulus. Japan's government debts are already more than twice its GDP and further increasing it would prove problematic.

The third arrow of Abenomics, reform, also requires redirection. First, Japan needs to ensure its businesses use its people properly. To do this it will need to address a rigidity that has led to the development of a 'dual' labor market. Around 40 percent of workers are now deemed 'temporary,' in jobs which provide low pay, a lack of social insurance, and little opportunity to develop skills. There is scope to increase the use of foreign labor. There is also a need to use more flexible labor contracts so you can bring people into the labor force

Adapted from CNBC News, 27 March 2014

Table 1: Macroeconomic Indicators: Indonesia

	2009	2010	2011	2012	2013
Real GDP (USD billion)	355.7	377.9	401.2	425.4	449.1
Annual Rate of Growth Real GDP (%)	4.6	6.2	6.5	6.3	5.8
Rate of Inflation (%)	4.8	5.1	5.3	4	6.2
Unemployment Rate (%)	7.9	7.1	6.6	6.1	6.3
Current Account Balance (% of GDP)	2	0.7	0.2	-2.8	-3.2
Current Account Balance (USD billion)	10.6	5.1	1.7	-24.4	-29.1
Capital and Financial Account Balance (USD billion)	7.8	3.9	-1.7	-24.6	-29.2
Budget Balance (% of GDP)	-3.1	-2.8	-2.2	-1.7	-1.4
Public Debt (% of GDP)	27	24.6	22.5	22.4	24.5
Exchange Rate (rupiah per USD)	9,425	9,010	9,068	9,638	10,461
Human Development Index	0.67	0.67	0.68	0.68	0.68
Life Expectancy (years)	69.9	70.2	70.4	70.6	70.8

Table 2: Macroeconomic Indicators: Japan

	2009	2010	2011	2012	2013
Real GDP (USD billion)	4,441.8	4,648.4	4,627.4	4,708.5	4,784.5
Annual Rate of Growth Real GDP (%)	-5.5	4.7	-0.5	1.4	1.5
Rate of Inflation (%)	-1.4	-0.7	-0.3	0.0	0.7
Unemployment Rate (%)	5.1	5.1	4.6	4.3	4.0
Current Account Balance (% of GDP)	2.9	3.9	2.1	1.0	0.7
Current Account Balance (USD billion)	145.3	217.2	126.5	58.5	34.1
Capital and Financial Account Balance (USD billion)	168.6	248.13	164.5	61.2	-24.2
Budget Balance (% of GDP)	-7.6	-6.7	-8.2	-8.0	-7.7
Public Debt (% of GDP)	185.0	190.5	203.4	210.5	218.1
Exchange Rate (yen per USD)	92.9	81.2	77.0	86.7	95.3
Human Development Index	0.88	0.88	0.89	0.89	0.89
Life Expectancy (years)	82.9	82.8	82.6	83.1	83.3

Source: Organisation for Economic Co-operation and Development

Questions

- (a) (i) With reference to Table 1, describe the trend in the government budget balance as a percentage of GDP of Indonesia between 2009 and 2013. [2]
- (ii) Explain how the government budget could have affected GDP growth rate in Indonesia. [2]
- (b) (i) How far does the data support the changes in the capital and financial account in Indonesia from 2009 to 2013? [4]
- (ii) Explain the rationale for Indonesia's aim "to increase foreign direct investment by 23 percent this year". [4]
- (c) Comment on the view that residents in Japan enjoyed a higher standard of living compared to those in Indonesia in 2013. [8]
- (d) Discuss the view expressed in Extract 6 which suggests that "Japanese Prime Minister Shinzo Abe must rethink his Abenomics program in its entirety." [10]

[Total: 30 marks]

St. Andrew's Junior College



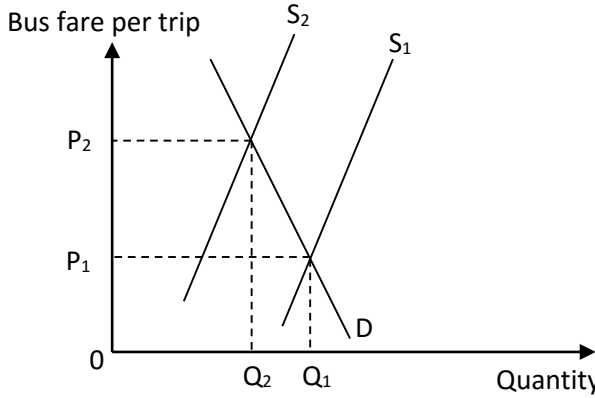
Economics Department JC 2 Preliminary Examinations (2015)

Suggested Answers

H2 Economics Paper 1 (Syllabus 9732)

Question 1 Bilateral transportation between Singapore and Malaysia

Suggested Answers:

(a)	<p>Compare the trend of the price of crude oil and diesel between 2008 and 2013.</p> <p>Similarity [1m]</p> <ul style="list-style-type: none"> - Prices of both fuel generally increased throughout the period. - Prices of both fuel moved in tandem throughout the period. <p>Difference [1m]</p> <ul style="list-style-type: none"> - Diesel prices were consistently higher than those of crude oil throughout the period. 	[2]
(b) (i)	<p>With the aid of diagram, explain how the changes in price of diesel will affect the market for express bus services.</p> <p>Price of diesel rose → COP of Express Bus Services would rise → Supply of Express Bus Services would fall [1m] → Market P_e ↑ and Q_e ↓ [1m]</p> <p>Optional: TR ↑ (assuming PED < 1)</p> <p>Correct Diagram [1m]</p> 	[3]
(ii)	<p>Explain how the completion of the High Speed Rail is likely to affect the demand curve for Express Bus Services between Singapore and Kuala Lumpur.</p> <p><i>Relationship between the two services – substitute</i></p> <ul style="list-style-type: none"> - Completion of HSR → consumers who previously demand for Express Bus Services may switch to HSR [1m] → Demand for EBS would fall [1m] <p><i>Increase in the availability of closed substitutes.</i></p> <ul style="list-style-type: none"> - PED for EBS trips that end in KL becomes more price elastic, 	[3]

		larger in value [1m] Max 2 marks for Demand without Price elasticity of demand.	
(c)	(i)	<p>Explain how the formation of cartels results in the worsening of the market failure.</p> <p>Key word: 'worsening'</p> <ul style="list-style-type: none"> - Establish existence of market failure <i>prior to</i> formation of cartel, $P > MC$ [1m] - Formation of cartel <ul style="list-style-type: none"> ⇒ greater MCR (market concentration ratio) of cartel members, cartels would act and behavior more like a monopoly [1m] ⇒ demand for cartel members' goods and services become more price inelastic due to reduced competition among firms [1m] ⇒ price charged would become even more than or even higher than MC ⇒ Greater DWL, hence worsening of market failure [1m] <p>Max at 3m if answers explained clearly how imperfect information resulted in a market failure but did not mentioning on the 'worsening' or increase in deadweight loss.</p>	[4]
	(ii)	<p>Discuss whether the disadvantages to consumers from 'higher fixed prices' (Extract 2) outweigh any benefits they may gain from the existence of the Express Bus Services cartel.</p> <p>Disadvantages of 'higher fixed prices'</p> <ul style="list-style-type: none"> - 'Higher prices' <ul style="list-style-type: none"> → lower consumer surplus for consumers who continue to take the bus service → market quantity decreased, total loss of utility for some consumers who are now priced out of the market. - 'Fixed prices' <ul style="list-style-type: none"> → not being able to enjoy lower price even if there is to be cost savings (e.g. lower fuel prices or improvement in technology etc) - Complacency of Cartel members <ul style="list-style-type: none"> → due to fixed price and reduce in competition, Cartel members might become complacent and not produce at the lowest cost or invest in R&D. <p>Benefits of 'higher fixed prices'</p> <ul style="list-style-type: none"> - 'Higher prices' <ul style="list-style-type: none"> → Cartel is more likely to earn supernormal profits or increase in the amount of supernormal profits → firms in cartel will be more able to upgrade of equipment, more comfortable ride, and promotion of dynamic efficiency in the market. - 'Fixed prices' <ul style="list-style-type: none"> → as Cartel members do not have the ability for price 	[8]

	<p>competition, they might embark on non price competition by improving quality of services. → Ensured continued provision of service at fixed prices. Excessive competition may drive out weaker firms in the long run, leaving the remaining stronger ones with even more market power and may charge even higher prices.</p> <p>Conclusion & Evaluation:</p> <ul style="list-style-type: none"> • Students must choose a stand whether pros outweigh cons or vice versa. (1m) • Students justifying their choice of stand based on the context of the Express bus service. (1m) <p>Setter's comments: Likely to have more Cons than Pros, if not the government would not need to step in and restrict the formation of cartels in the EBS.</p>									
	<table border="1"> <thead> <tr> <th>Level and Marks</th> <th>Knowledge, Understanding, Application, Analysis</th> </tr> </thead> <tbody> <tr> <td>Level 3 6-8m</td> <td>Two sided analysis with clear use of relevant economic theories. Judgment based on sound evaluation in the context of the case. Max 6 for two sided answers without a judgment.</td> </tr> <tr> <td>Level 2 4-5m</td> <td>Two sided analysis with some use of relevant economic theories.</td> </tr> <tr> <td>Level 1 1-3m</td> <td>One sided, Max 3 Unfocused answer or simply listed a large number of points Smattering of points. No use of economic theories.</td> </tr> </tbody> </table>	Level and Marks	Knowledge, Understanding, Application, Analysis	Level 3 6-8m	Two sided analysis with clear use of relevant economic theories. Judgment based on sound evaluation in the context of the case. Max 6 for two sided answers without a judgment.	Level 2 4-5m	Two sided analysis with some use of relevant economic theories.	Level 1 1-3m	One sided, Max 3 Unfocused answer or simply listed a large number of points Smattering of points. No use of economic theories.	
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(d)	<p>Discuss how the High Speed Rail as a 'game changer' will affect the performance of firms in Singapore that provide transport to Malaysia.</p> <p><i>Question analysis:</i></p> <ul style="list-style-type: none"> - Performance of transport firms in Singapore that provide transport services to Malaysia – Express Bus Services (eg Grassland), normal airlines (eg SIA and MAS), budget airlines (eg Airasia and Tigerair) etc. - Performance indicators include AE, PE, DE, Choice and Equity. - Evaluation: Degree of impact also depends on the different destinations in Malaysia <p><i>Game changer:</i></p> <ul style="list-style-type: none"> - Certain firms may face a shake-up <p>Substitutes of HSR: <i>Performance of transport firms in Singapore that provide transport services to Malaysia which are substitutes to HSR:</i></p> <ul style="list-style-type: none"> • Express Bus Services (eg Grassland) 	[10]								

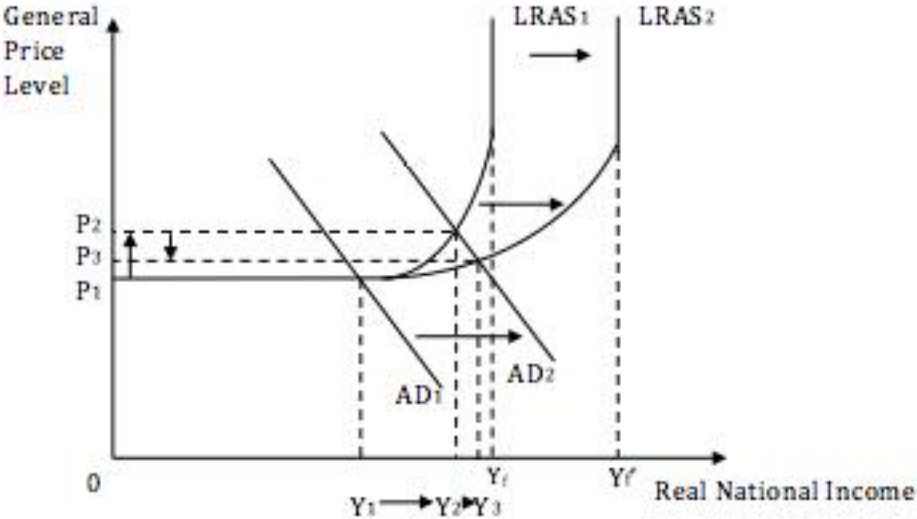
	<ul style="list-style-type: none">• <i>Normal airlines (eg SIA and MAS)</i>• <i>Budget airlines (eg Airasia and Tigerair)</i> <p>Allocative Efficiency: Decrease in demand and Demand becoming more price elastic will reduce deadweight loss as the degree of $P > MC$ will be reduced.</p> <p>Productive Efficiency: Assuming Profit motivated, firms will continue to minimise cost, with more competition, firms will be even more eager to minimise cost making them more productive.</p> <p>Dynamic Efficiency: With more competition, firms will be even willing to innovate. Firms might be less able to innovate due to a decrease in demand and profits.</p> <p>Choices: More choices for transport to Malaysia.</p> <p>Equity: Prices are likely to decrease, making a more fair distribution of consumer and producer surpluses.</p> <p>Transport services unrelated to HSR</p> <ul style="list-style-type: none">- HSR are only substitutes to some routes and areas. For those routes from Singapore that are unrelated or unaffected by HSR, there should be no changes in performance of those firms. <p>Evaluation:</p> <ul style="list-style-type: none">• Depend on degree of substitutability or closeness.• HSR will take a few years to complete, there might be changes to the different transport markets from now till the completion of HSR.• Prices of HSR would also determine the impact on performance. <p>Note: Choices and Equity are not compulsory, they are bonus points that students can write.</p>	
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Level and Marks	Knowledge, Understanding, Application, Analysis
Level 3 6-8m	All three efficiencies are required, analysis with clear use of relevant economic theories.
Level 2 4-5m	At least two out of three efficiencies analysis with some use of relevant economic theories.
Level 1 1-3m	One sided, Max 3 Unfocused answer or simply listed a large number of points Smattering of points. No use of economic theories.
Evaluation 1-2m	Judgment based on sound evaluation in the context of the case with justification.
[Total: 30 marks]	

Question 2 Tale of Two Economies

Suggested Answers:

(a)	i)	With reference to Table1, describe the trend in the government budget balance as a percentage of GDP of Indonesia between 2009 and 2013.	[2]
		<ul style="list-style-type: none"> Indonesia’s government budget balance is in deficit throughout 2009 and 2013. [1] However, Indonesia’s government budget balance as a percentage of GDP has been improving (Or deficit has become smaller). [1] 	
	ii)	Explain how the government budget could have affected GDP growth rate in Indonesia.	[2]
		<ul style="list-style-type: none"> Indonesia’s budget deficit means that its government is pursuing an expansionary policy, i.e Government spending is greater than its revenue. This would lead to an increase in Aggregate Demand with an increase in Govt spending, consumers expenditure and investment expenditure. National income will rise as there would be an increase in production to meet the increase in the aggregate demand. [1] Hence GDP growth rate would be positive. [1] 	
(b)	i)	How far does the data support the changes in the capital and financial account in Indonesia from 2009 to 2013?	[4]
		<ul style="list-style-type: none"> From Table 1: <ul style="list-style-type: none"> Capital and financial account shows a falling positive net inflow from 2009 to 2010 to an increasing negative net inflow for the rest of the period. Thus the statistics shows that there is more outflow than inflow from 2011 till 2013. [1] Evidence from Extract (4) seems to indicate that there is a greater net inflow of FDI from 2012 to 2013. Evidence : <ul style="list-style-type: none"> “increase foreign direct investment by 23 percent in 2013, after record inflows in 2012” “Indonesia remained attractive to foreign investors” [1] However because inflows < outflow, this may indicate that while FDI into Indonesia is rising, there could be relatively more long term investment flowing out of Indonesia. Moreover, data of other components of capital and financial accounts, eg ST capital flow, has not been provided. [1] Conclusion: Therefore the data given does not fully explain the position of the Indonesia’s capital and financial account. [1] 	

ii)	<p>Explain the rationale for Indonesia’s aim “to increase foreign direct investment by 23 percent this year”.</p>	[4]
	<p>Indonesia aims to increase foreign direct investment as it helps it in achieving its macroeconomic objectives of sustained economic growth as well as lowering unemployment in the face of falling exports. [1] Note: To get the mark, students must use evidence from the Table 1 or Extract 4 to support why Indonesia would want to increase FDI.</p>  <p>In the short run, an increase in foreign direct investment greater than the fall in exports would bring about an increase in AD. When AD increases from AD₁ to AD₂, at the original equilibrium price of OP₁, there would be an excess demand for goods and services and this causes a rundown in inventories stocks. In response, producers would have to increase production of goods and services. To meet the increase in production of goods and services, producers would have to increase their demand for both labour and capital goods to increase output, resulting in lower unemployment. [1] As such, this would bring about an increase in real national income from Y₁ to Y₂. [1]</p> <p>In the long run, due to the increase in foreign direct investment, the quantity of factors of production would have increased and this brings about an increase in the productive capacity of the economy leading to an increase in LRAS. This is represented by the rightward shift of LRAS₁ to LRAS₂ in the diagram above. This would bring about an increase in national income from Y₂ to Y₃ and reduce GPL from OP₂ to OP₃. [1]</p> <p>Note: Students may also relate this to improving BOP position of Indonesia given that it is facing deficits in both the current as well as capital and financial accounts.</p>	
(c)	<p>Comment on the view that residents in Japan enjoyed a higher standard of living compared to those in Indonesia in 2013.</p>	[8]
	<ul style="list-style-type: none"> • Define SOL and explain how it is measured; and make comparison <ul style="list-style-type: none"> ○ Refers to the well-being of average person residing in the country. It includes both the quantitative and the qualitative aspects of living ○ Measurement <ul style="list-style-type: none"> ▪ Quantitative measure – real GDP per capita ▪ Qualitative measure – 	

- Quality of life – hours worked, pollution access to education, health care and housing
- Equity - fairness, ease of access to goods and services, (Supplementary data HDI (includes life expectancy data)
- Quantitatively, from the data
 - Japan real GDP in 2013 is 10 times higher than that of Japan. But one cannot deduce that Japan's residents SOL is 10 times better than those living in Indonesia. Residents in Japan are able to consume more goods and services compared to those in Indonesia.
 - However, there could be an over estimation of the difference in the SOL as there is insufficient data to make accurate assessment as some key information were missing:
 - Population figure to calculate GDP per capita.
 - Gini coefficient – measure on income distribution – link to equity issue
 - Indonesia – developing economy – existence of non-marketed transaction not included in the national income calculation, inaccurate data
 - Use of common currencies – exchange rate – ppp value?
- Qualitatively from the data–
 - Life expectancy is given and it shows that Japan is experiencing a higher SOL. Higher life expectancy indicates that the Japanese are enjoying better standards in healthcare, sanitation, etc.
 - However, more information is needed to assess the non-material SOL – e.g. leisure hours, pollution index, literacy rates, etc.
- It is therefore reasonable to agree with the view that Japan has a higher SOL than Indonesia as HDI, a composite index which considers income, literacy rates and life expectancy is higher.
- But the difference in the level of SOL cannot be ascertained or accurately assessed as more information is needed.

Level	Knowledge, Application, Understanding and Analysis
L3 (7-8)	<ul style="list-style-type: none"> A thorough assessment of the criteria to compare SOL accurately and the difference in SOL between Japan and Indonesia based on given information Explain why information provided is insufficient To get full marks, the importance of using PPP exchange rates must be considered.
L2 (4-6)	<ul style="list-style-type: none"> Able to identify and explain specifically the quantitative measures and the lack of information to make accurate assessment of SOL OR Incomplete/undeveloped in analysis of both the material and non-material aspect of SOL.
L1 (1-3)	<ul style="list-style-type: none"> Have some knowledge of how SOL is measured. 1-sided answer Able to identify but not explain differences in SOL

(d)	Discuss the view expressed in Extract 6 which suggests that “Japanese Prime Minister Shinzo Abe must rethink his Abenomics program in its entirety.”	[10]
	<p>Introduction :</p> <ul style="list-style-type: none"> Identify the objective of Abenomics program <ul style="list-style-type: none"> ‘Abenomics’ as explained in Extract 5, “refers to an aggressive set of monetary and fiscal policies, combined with structural reforms, geared toward pulling Japan out of its decades-long deflationary slump.” <p>Body</p> <ul style="list-style-type: none"> Policies adopted – Fiscal Policy, Monetary Policy and structural reform Explain how the program works (Use AD/AS analysis – demand side management for FP & MP and AS-structural reform) to solve the problems and its ineffectiveness, and its positive effects on the economy. <ul style="list-style-type: none"> Monetary policy Japan undertook “quantitative easing” and increased money supply, resulting in a fall in interest rates. This also has the added effect of causing the Japanese yen to weaken. (Extract 5) <p>The aim of the policy is to stimulate C & I so as to boost AD and real national income by the multiplier effect thereby achieving positive growth and higher GPL.</p> <p>The weakening of the Japanese yen could help spur Japan into a recovery, as it would make its exports relatively cheaper in terms of foreign currency. When this happens, assuming Marshall-Lerner condition holds, this would increase net exports revenue (X-M). Assuming ceteris paribus, this increase in (X-M)</p>	

would increase AD and real national income by the multiplier effect.

Need to rethink:

While the aim of this policy is to increase domestic consumption (C) and investment (I), Japan's domestic demand is weak given the fact that it has been facing deflationary pressures in the past.

The increase in money supply could also run into a situation known as the liquidity trap, whereby any further increase in money supply by the Bank of Japan (BoJ) would not cause any fall in the interest rates. This would then render the effectiveness of this policy to be limited as C & I may not increase as desired.

Moreover, as mentioned in Extract 6, the weakening currency did not increase export competitiveness as "growth in Japanese exports has failed to keep pace with the rising cost of imports". The weakening of the Japanese yen would cause price of imports to be relatively more expensive in Japanese yen and could lead to imported inflation reducing competitiveness of domestic goods which are highly dependent on imported raw materials. This, according to Extract 6, "is an unsustainable source for growth in the long-run." Thus Japan would need to adjust in response to the challenges faced for monetary policy.

○ **Fiscal policy**

Japan undertook an expansionary fiscal policy and spent a large amount on capital spending to improve its infrastructure. Tax cuts were also introduced to encourage both consumption (C) as well as investment (I).

According to Extract 6, it seems that the focus of fiscal policy seems to be more on government spending. The increase in AD due to higher G would result in higher real national income by the multiplier effect.

Need to rethink:

"To stimulate productive investment, Japan must revamp the second arrow of Abenomics and focus on tax incentives rather than government spending." (Extract 5)

Also focus on government spending would prove to be problematic for an economy like Japan as based on Table 2 as well as Extract 6, we know that Japan is facing a public debt amount of more than twice its GDP. Further increasing the public debt amount would have dire consequences to the Japanese economy as it may erode confidence in the Japanese economy and raise questions of the government's ability to repay the debt.

While the intent of the government spending is to encourage households and businesses to increase C and I, it may not be sustainable for the government to spend in the long term to boost its AD. Thus, Japan would need to adjust in response to the challenges faced for fiscal policy.

○ **Structural reforms**

Japan embarked on "structural reforms—including slashing business regulations, liberalizing the labor market, cutting corporate taxes, and increasing workforce diversity—aims to revive Japan's long-term competitiveness." (Extract 6). These policies aim to reduce cost of production to improve competitiveness of domestic goods and services. While these

reforms help in making Japan more attractive to businesses, with the slashing of business regulations which is more business-friendly, as well as the reduction in corporate taxes which contribute to higher post-tax profits for businesses, stimulating I.

Need to rethink:

However, these policies fail to address the issues that are plaguing them, namely, aging and shrinking population as well as improving the rigidity in the labour market in Japan.

To tackle the aging and shrinking population, Japan may wish to relook its policy on allowing foreign labour in to help plug the gap caused by the aging and shrinking population. The aging and shrinking population could cause labour cost and wages to increase and this would add on to businesses' cost of production. This may lead to firms looking elsewhere where cost of production is much lower. Allowing foreign labour in would help to reduce the pressure of the rising wages.

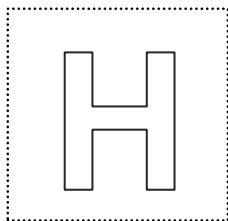
In addition to the above problem, there is also mention of rigidity in the labour market which leads to a 'dual' labour market. To improve this condition, the government may wish to embark on retraining and upgrading programmes to help the development of skills in the workforce. It could focus on retraining and upgrading for those who are stucked in "temporary" jobs so that with the completion of the training programme, they could go out and look for a job which would ensure that his/her skills are put to good use and contributing to the Japanese economy.

Thus Japan would need to adjust in response to the challenges faced for structural reforms.

Evaluation and synthesis

Based on Table 2, Japan seems to be on the rebound as they returned to positive economic growth in 2012 and 2013. In addition, Japan is also starting to move from a state of deflation to inflation again. Unemployment rate also fell during the period of 2009 to 2013. All these are positive signals and could imply that the Japanese economy is seeing an increase in economic activity. Typically, these policies undertaken would require time for the effects to slip in and thus it may be too premature to suggest rethinking of Abenomics in its entirety to solve the problems faced by Japan. There are still some areas of concern. That is when the FP is seen ineffective and may lead to the possibility of over-reliant on the loose MP, there is the need to counter the undesirable effect of a weakening Yen. Moreover, given the ageing population, demand-side management to stimulate the economy is to be supplemented by structural reform which would affect the long term capacity to produce. The policies have to be reviewed, performance to be monitored so that they are adjusted, if necessary, in a timely fashion to help Japan and its economy to achieve its macroeconomic objectives and recover from their predicament.

Level	Knowledge, Application, Understanding and Analysis
L3 (7-8)	<ul style="list-style-type: none"> • Clear 2-sided answers • Answers show clear understanding of the working and the ineffectiveness of the 3 arrows of the Abenomics program outlined in the extracts • Able to analyse the changes suggested to increase the effectiveness of the policies in the context of the problems. • Appropriate data to support the view that Abenomics prog need not be adjusted/rethought.
L2 (4-6)	Undeveloped answer <ul style="list-style-type: none"> • Able to explain at least 2 policies but lack the analysis to explain why the need to rethink the Abenomics program
L1 (1-3)	<ul style="list-style-type: none"> • Able to identify the policies used in Abenomics • Unable to link to the problems pertaining to Japan • 1-sided answer
E2 (2)	Evaluative comments with justification.
E1 (1)	Evaluative comments without explanation.



ST ANDREW'S JUNIOR COLLEGE
PRELIMINARY EXAMINATIONS – 2015
General Certificate of Education Advanced Level
Higher 2

ECONOMICS

9732/02

Paper 2: Essay Questions

14 September 2015

2 hours 15 minutes

Additional Materials: Answer Paper

READ THESE INSTRUCTIONS FIRST

Write your name and class on all the work you hand in.

Write in dark blue or black pen on both sides of the paper.

You may use a soft pencil for any diagrams, graphs or rough working.

Do not use staples, paper clips, highlighters, glue or correction fluid.

Answer **three** questions in total, of which **one** must be from Section A, **one** from Section B and **one** from **either** Section A **or** Section B.

At the end of the examination, fasten all your work securely together.

The number of marks is given in brackets [] at the end of each question or part question.



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This document consists of **3** printed pages.

[Turn Over

Answer **three** questions in total.

Section A

One or two of your three chosen questions must be from this section.

- 1 The removal of an EU quota on milk earlier this year has caused a fall in the world price milk. Recent reports in the media have stated that butter, made from milk, contains greater amounts of heart healthy nutrients than margarine which is generally made from vegetable oils. These changes have affected the markets for butter and margarine.
- (a) Explain how the removal of the EU quota on milk is likely to affect the consumer expenditure on milk of different types of households in the EU. [8]
- (b) Discuss the likely combined effects of both the changes on the markets for butter and margarine. [17]
- 2 Communications and Information Minister Yaacob Ibrahim hit the nail on the head this week when he said Singapore's much-anticipated fourth cellphone operator had to spur competition and bring innovation to the market causing the existing telcos to also innovate.

Adapted from <http://www.businesstimes.com.sg>

Consider the market structure in which Singapore's telecommunications (telcos) industry may operate and discuss if barriers to entry are the main factor influencing the behaviour of these firms. [25]

- 3 Vast tracts of forest in Indonesia were burnt annually to provide land for planting crops.

Adapted from www.scidev.net

- (a) Explain how forest fires in Indonesia could be a cause for concern for its government. [10]
- (b) Assess the various policies that the Indonesian government could implement to reduce the negative impact caused by the forest fires. [15]

Section B

One or two of your three chosen questions must be from this section.

- 4 Assess whether trade-offs between different macroeconomic policy objectives influence macroeconomic policy decisions. [25]
- 5 India's Finance Minister has announced that tackling inflation is the key priority. This came after data showed that inflation rate increased from 9.3% in 2012 to 11% in 2013.

Adapted from Reuters, Dec 2013 & www.inflation.eu

- (a) Explain how firms and households may be affected by inflation. [10]
- (b) Discuss alternative economic policies that the Indian government may consider adopting to alleviate these inflationary pressures. [15]
- 6 Singapore and the EU concluded the Free Trade Agreement (FTA) in Dec 2012, after three years of talks. Under the FTA, the EU will eliminate tariffs on all imports from Singapore over five years, while Singapore will grant duty-free access for all imports from the EU. Singapore is the first ASEAN country to seal the deal on an FTA with the EU.

Source: Todayonline.com, 30th March, 2014

- (a) Explain the changing pattern of trade in Singapore in recent years. [10]
- (b) Assess the extent to which Singapore could benefit from signing Free Trade Agreements. [15]

St. Andrew's Junior College



Economics Department JC 2 Preliminary Examinations (2015)

Suggested Answers

H2 Economics Paper 2 (Syllabus 9732)

Section A

1	The removal of an EU quota on milk earlier this year has caused a fall in the world price of milk. Recent reports in the media have stated that butter, made from milk, contains greater amounts of heart healthy nutrients than margarine which is generally made from vegetable oils. These changes have affected the markets for butter and margarine.
(a)	Explain how the removal of the EU quota on milk is likely to affect consumer expenditure on milk of different types of households in the EU. [8]
(b)	Discuss the likely effects of both the above changes on the markets for butter and margarine. [17]

Suggested Answers:

- a) Explain how the removal of the EU quota on milk is likely to affect the consumer expenditure on milk of different types of households in the EU. [8]**

Introduction

- Explain how the removal of quota on the market for milk leads to a fall in the price of milk – removal of quota on milk → increase in supply of milk → fall in price of milk.
- Consumer expenditure is the amount the consumers spend on the good, which is a product of price and quantity.
- Effect on consumer expenditure of different types of households depends on price elasticity of demand (PED).
- PED is the responsiveness of quantity demanded of a good to changes in its own price, ceteris paribus.

Body

- Use PED to explain the effect of the fall in price on consumer expenditure of → households with price inelastic demand for milk (e.g. households with young children where milk is a necessity) – fall in price of milk from P_0 to P_1 → less than proportionate increase in Qd of milk from Q_0 to Q_1 → consumer expenditure falls as fall in expenditure due to fall in price exceeds the rise in expenditure due to higher quantity consumed.

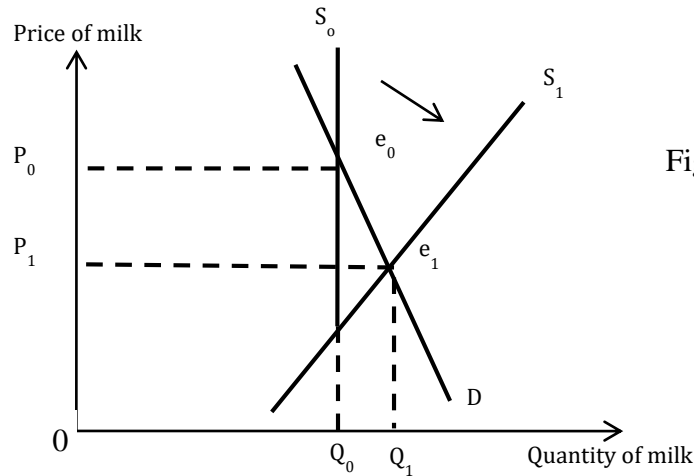


Figure 1

→ households with price elastic demand for milk (e.g. milk not a necessity) – fall in price from P_0 to P_1 → more than proportionate increase in Q_d of milk from Q_0 to Q_1 → consumer expenditure rises as fall in expenditure due to fall in price is less than the rise in expenditure due to higher quantity consumed.

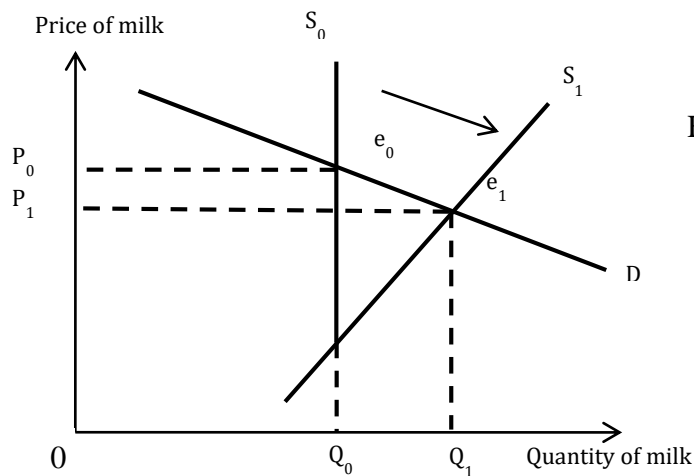


Figure 2

Conclusion

Re-state significance of PED.

Note :

1. Students are just required to highlight an increase in supply due to the removal of quota. No need to penalise students if students illustrate a parallel shift of the supply.
2. Students may define different types of households in different ways (e.g. High income vs. low income households and proportion of income spent on the good), so long as students are able to apply the factors affecting PED to the scenario.

Level	Knowledge, Understanding, Application, Analysis	Marks
L3	Well-developed explanation of factor(s) that affect price elasticity of demand for milk applied to different households with strong link to how it may affect the TE of different households.	6-8
L2	Under-developed explanation of the factor(s) that affect elasticity of demand for milk applied to different households with some link to how it may affect the TE of different households.	3-5
L1	A smattering of valid points Did not understand requirement of question or the concepts to apply.	1-2

b) Discuss the likely effects of both the above changes on the markets for butter and margarine. [17]

Introduction

Butter and margarine are goods in competitive demand (substitutes). The 2 changes above i.e. the fall in the price of milk and the media reports on the benefits of butter may affect the demand and/or supply of butter and margarine, causing changes in the equilibrium price and quantity in the markets for butter and margarine. These may affect the total revenue earned by producers which is the product of price and quantity of the producers of butter and margarine.

Body

Market for butter

Fall in price of milk : Increase in supply of butter due to fall in COP due to lower priced milk → ↓P and ↑Q (Explain using adjustment process)
Effect on TR depends on the PED.

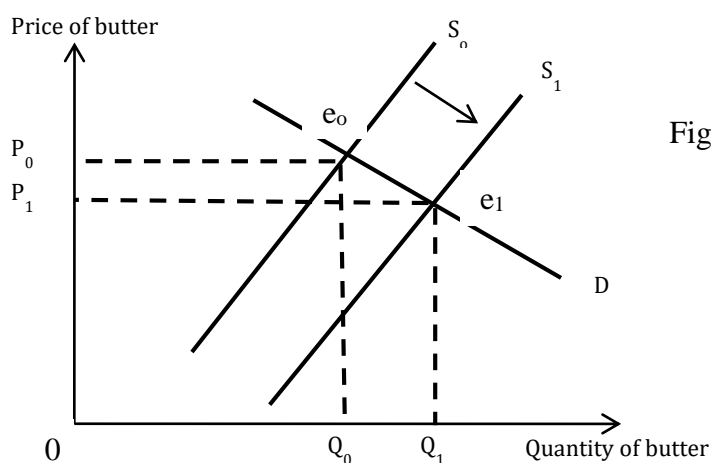


Figure 3

Ev: Demand for butter likely to be price elastic as close substitutes available in the form of margarine → %↓P < %↑Q. ↓P will result in a more than proportionate increase in Q → ↑TR from $0 P_0 e_0 Q_0$ to $0 P_1 e_1 Q_1$ as loss of revenue due to fall in price is greater than gain in revenue due to increase in quantity. This is shown in Fig 3.

Effect of reports on health benefits of butter: Taste and preferences shift in favour of butter → increase in demand for butter → ↑equilibrium price from P_0 to P_1 & quantity from Q_0 to Q_1 (Explain using adjustment process) → ↑TR from $0 P_0 e_0 Q_0$ to $0 P_1 e_1 Q_1$ as shown in Fig 4

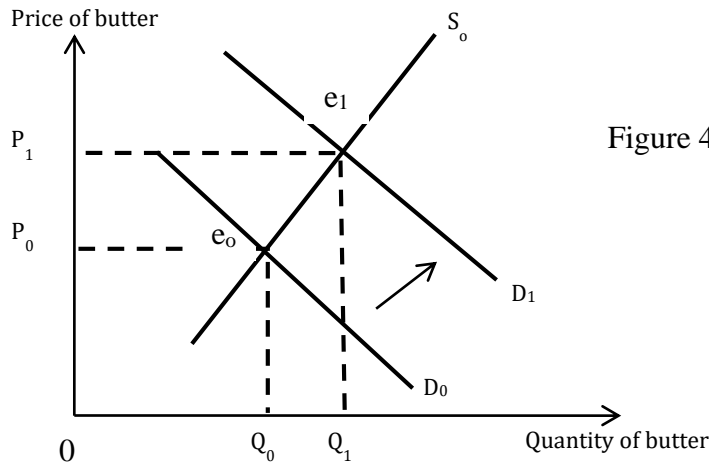


Figure 4

Ev: Supply of butter likely to be price inelastic as it takes time to increase quantity supplied of butter in response to an increase in price. As such $\% \uparrow P > \% \uparrow Q$

Overall effect:

- Equilibrium qty will definitely increase
- Equilibrium price however would depend on magnitude of change in dd and ss.
If $dd \uparrow > ss \uparrow$, equilibrium price \uparrow
If $dd \uparrow < ss \uparrow$, equilibrium price \downarrow

Ev: Judgement : Comment on which is a more likely scenario and why.

E.g. $dd \uparrow < ss \uparrow$ as the demand may only rise for a small group of people who may be concerned with heart health like those in the high risk category or those who are suffering heart problems or that it takes time for tastes and preference to change.

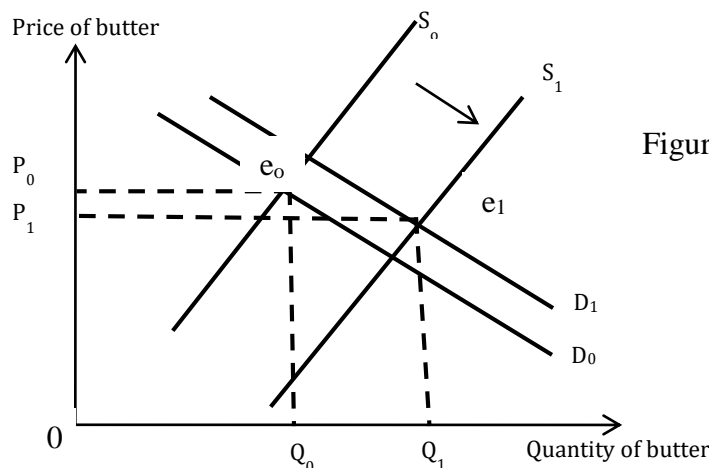


Figure 5

- $dd \uparrow < ss \uparrow$, equilibrium price \downarrow and qty \uparrow as seen in Fig 5 above.
- TR will increase.

(Students may also argue that increase in demand > increase in supply. This too is acceptable so long as they have a valid reason to support)

Market for margarine

SS of margarine, no change as there is no milk used in margarine.

Ev: However, butter and margarine are close substitutes. Therefore the fall in price of butter due to lower cost of production or due to lower equilibrium price in the market for butter may lead to a more than proportionate fall in demand for margarine. (Define XED and explain with reference to XED)

Effect of reports on health benefits of butter: Taste and preferences may shift away from margarine → ↓dd for margarine

⇒ ↓ equilibrium price from P_0 to P_1 & quantity from Q_0 to Q_1 → ↓TR 0 $P_0e_0Q_0$ to $0P_1e_1Q_1$ as shown in Fig 6.

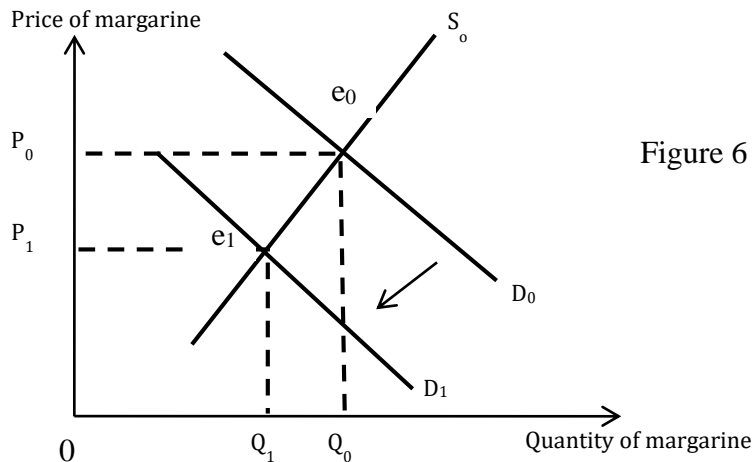


Figure 6

Ev: Supply of margarine likely to be price inelastic as it takes time to reduce quantity supplied of margarine in response to an decrease in price. Therefore, $\% \downarrow P > \% \downarrow Q$

Ev: Judgement: Comment on the extent of the change in dd and therefore equilibrium P & Q and TR.

E.g. fall in demand due to lower price of butter reinforced by fall in demand due to changes in taste and preferences → larger fall in demand → larger fall in equilibrium P & Q → larger fall in TR (compared to a situation where only one of the changes take place)

Conclusion

- Question ceteris paribus assumption and likelihood of more than one factor affecting butter or margarine changing at the same time,
- Other factors may also change e.g. income level, which are not considered here.

Level	Knowledge, Understanding, Application, Analysis	Marks
L3	An excellent balanced and rigorous analysis which includes effects on both the markets for butter and margarine with reference to equilibrium P, Q and TR.	11-13
L2	For an under-developed explanation that lacks sufficient depth / rigour / breadth: Student is able to explain the effects on the market with reference to P & Q with no reference to TR or Student only explains the effect on 1 market	7-10
L1	For a weak superficial, descriptive answer which contains theoretical inaccuracies and a lack of scope and depth	1-6
E2	Evaluation/judgment based on analysis	3-4
E1	Largely unexplained evaluation based on analysis	1-2

2 Communications and Information Minister Yaacob Ibrahim hit the nail on the head this week when he said Singapore's much-anticipated fourth cellphone operator had to spur competition and bring innovation to the market causing the existing telcos to also innovate.

Adapted from <http://www.businessstimes.com.sg>

Consider the market structure in which Singapore's telecommunications (telcos) industry may operate and discuss if barriers to entry are the main factor influencing the behaviour of these firms. [25]

Suggested Answers:

Question Analysis

There are two parts to this question:

- 1) Identify the market structure and explain the characteristics of the telco industry in Singapore
- 2) Explain and analyse how BTE and other factors influence these firms' behaviours and discuss if BTE are the main factor

Part 1

Identify market structure: Oligopoly

Characteristics:

- 1) No. of firms: A few large dominant firms (Singtel, M1 and Starhub) with each firm having a high market concentration ratio
- 2) BTE: High For e.g., high setup costs in terms of satellites, enjoys internal economies of scale which new firms may not be able to achieve and licensing requirement from government to provide the telecommunication services)

- 3) Price Setter: Due to High BTE, each firm is a price setter as it has relatively strong monopoly power
- 4) Products/Services: Differentiated (Telcos attempt to distinguish themselves by coming up innovative subscription plans to suit different market segments.)

Part 2

Introduction:

Barriers to entry affect the degree of competition in an industry and thus firms' behavior in terms of pricing and output. The stronger the barriers to entry, the more market power firms have and thus have a greater ability to set price or output. With more market power or a concentration of market share in a few firms, firms tend to set higher prices as compared to industries in which barriers to entry are weak.

Body:

With strong barriers to entry to the telco industry, these firms face less competition. They are able to set higher prices as there are fewer substitutes for their products and demand for their products is price inelastic. Barriers to entry also usually mean that only larger firms with sufficient capital to bear high fixed costs of initial capital outlay can enter the industry. Thus, firms in the telco industry tend to have more market power and output of the industry is usually concentrated in these few large firms.

- Assume objective of telco firms is profit maximisation: telco firms will restrict output and set higher prices (produce at output where $MC = MR$). Illustrate with diagram.
- Mutual interdependence / non-price competition. Telcos may follow the change in prices by another operator due to the nature of kinked demand model where firms follow a decrease in price but not an increase in prices. E.g. telcos may engage in aggressive price wars but these firms are usually more likely to engage in aggressive advertising campaigns to differentiate their products (give examples).

Other factors influencing firms' behavior in terms of pricing and output (Any 2):

- Other objectives of firms (e.g. revenue maximisation, sales maximisation)
Assuming the objective of these telco firms is revenue maximisation, they will be producing at the output where MR is equal to zero rather than the output where $MC = MR$. The prices set by these firms will change accordingly as well. (illustrate on the diagram)
- Govt intervention
For e.g. A change in government licensing requirements in allowing 4th operator into the industry to increase competition and encourage innovation to benefit consumers. Demand becomes less price inelastic → firms will produce at higher output and lower prices. In addition, the existing firms may engage heavily in R&D to retain their market share.
- Strategies
For e.g. If these telco firms engage in possible collusion, they will behave like a monopoly by restricting output and charge higher prices to the consumers.

Possible Evaluation:

- As most consumers would have signed a period of contract for telco services, even if there is a change in price (increase or decrease), consumers are unlikely to immediately switch to another telco operator until their contract expires.
- In the context of Singapore, collusion is unlikely to occur as there is a strict monitoring by the government with the competition law to promote efficient functioning of Singapore's markets and hence enhance the competitiveness of the economy. Market competition spurs firms to be more efficient, innovative, and responsive to consumer needs. Consumers enjoy more choices, lower prices, and better products and services. The economy as a whole benefits from greater productivity gains and more efficient resource allocation.

Conclusion:

- There are any factors that can influence a firm's pricing and output strategy and BTE is one of the main factors.
- In context of Singapore, BTE could also be affected by changes in government regulations, which will thus affect the pricing and output of the telcos firms in Singapore. As such, government intervention seems to be the main factor influencing the behaviour of telcos in Singapore.

Level	Knowledge, Application, Understanding and Analysis	Marks
L3	Both parts of the question are well-explained. Answer is reasoned, logical and precise in analysis. Coherent, sound, and thorough analysis of characteristics of telcos industry in Singapore and how barriers to entry <u>and</u> other factors (at least 2) affect the behavior of firms. Examples are clearly illustrated and well-explained in the context of Singapore.	15 – 21
L2	Attempt to address both parts of the question but underdeveloped. Undeveloped explanation, which shows some relevant applications of the context to characteristics of telcos industry and how barriers to entry <u>or</u> other factors (One-sided answer) will affect the behavior of firms but answer may be limited in scope, elaboration or development. Examples are given but lack clear illustration. Analysis is present but insufficient or inconsistent (some description). Low L2: Only part 1 (explanation of characteristics) or part 2 (discussion of barriers of entry and other factors affecting firms' behaviour) is given. If only 1 part given but well-explained, can be given max L2 marks (up to 14 marks)	10 – 14
L1	Answer shows some basic correct facts but weak applications to characteristics of telcos industry. Shows some knowledge of how barriers to entry affect firms'	6 – 9

	behavior but answer is unexplained or undeveloped.	
	Smattering of ideas which are largely irrelevant to the question. Answer describing barriers to entry into a market without links to effect on firm's behavior. Answer describing firm's behavior without reference to barriers to entry. Answer contains basic or serious conceptual errors.	1 – 5
E2	Judgement based on economic analysis. For example, able to recognize and justify which is the most significant factor in influencing the behavior of telcos in Singapore	3 – 4
E1	Judgement without justification.	1 – 2

3 Vast tracts of forest in Indonesia are burnt annually to provide land for planting crops.
Adapted from www.scidev.net

(a) Explain how forest fires in Indonesia could be a cause for concern for its government. [10]

(b) Assess the policies that the Indonesian government could implement to reduce the negative impact caused by the forest fires. [15]

Suggested Answers:

(a)

Analysis of Question

- Forest fires = sources of market failure (imperfect info & -ve ext)
- Cause for concern = allocative inefficiency (social welfare not maximised)
- No policies needed for (a)

INTRODUCTION

- One of the roles of govt is to ensure efficient allocation of resources to maximise social welfare.
- Producers in the free market seeking self-interest will freely burn forest that brings harm to the rest of the economy.
- Govt is thus concerned that maximum social welfare will not be achieved in the presence of sources of market failure.

BODY

- Explain market failure due to forest fires
- Determine private eqm output, Q_p ($MPB = MPC$)

- Introduce:
 - o negative externalities (MEC)
 - neighbouring villagers suffer from worsening health conditions and incur extra healthcare costs
 - may affect other industries such as tourism and transport (airport closures)
 - Economic growth negatively affected
 - Many other examples such as disappearance of flora and fauna
 - o imperfect information
 - producers do not realise the extent of damage caused by forest fire and hence, underestimated its own cost of clearing forest. For example, due to very poor visibility, firms may not be able to efficiently transport its workers or raw materials to its own factories for production.
- Determine social eqm output, Q_s ($MSB = MSC$)
- Determine that there is a case of market failure – over-allocation of resources to plantation/farming activities → Presence of DWL (indicate in diagram, if drawn)

(Students may also relate to government being concerned due to its inability to achieve macroeconomic goals due to the haze that results from the forest fires that may affect the workers' productivity and tourism, etc.)

CONCLUSION

- The Indonesian govt is concerned that there had been a sub-optimal level of social welfare due to forest fires and hence would need to intervene in the market to achieve maximum social welfare.

Level	Knowledge, Application, Understanding and Analysis	Marks
L3	Answer clearly explained the sources of market failure that led to government's concern of sub-optimal social welfare. Sound analysis is systematically carried out and supported by good examples to reflect the real-world situation.	7 – 10
L2	Good attempt at explaining the sources of market failure though inaccurate but non-fatal representations or analysis may be present. Answers demonstrate a sufficient understanding of conflict between private desired outcome and socially optimal outcome that led to government's concern.	5 – 6
L1	Mere listing of technical jargons that, when put together, produced the typical rehearsed answer. Candidates who fail to even spot the issue of market failure should deserve bottom marks.	1 – 4

(b) Assess the various policies that the Indonesian government could implement to reduce the negative impact caused by the forest fires. [15]

(b)

Analysis of Question

- *Identify the negative impact caused by forest fires – could come up with a more complete list of impact if have yet done so in (a)*
- *Explain how each of the policies works. Provide brief explanation of its strengths and limitations. Policies need not be those already implemented. Policies should be those that are reactive than preventive, as required by the question.*
- *Provide a well-considered assessment of the policies brought up.*

INTRODUCTION

- There are various policies the Indonesian govt could implement.
- They are:
 - (i) bring in technology that would better put out forest fires (identification of hotspots, better equipment, etc)
 - (ii) public education on harmful effects of haze – stay indoors, reduce physical activities, etc.
 - (iii) provision of health protection equipment – masks, air purifiers

BODY

- Explain at least 3 policies.
- Describe the strengths and limitations of the policies based on economic analysis.

EVALUATION

- Ranking order of policies according to set of criteria (time lag, cost, effectiveness, etc)

CONCLUSION

- The Indonesian govt could implement some policies available to reduce negative impact. While some may be more effective than others, the Indonesian govt should strive to reduce limitations of some of the policies in order to fully realise their potential to reduce negative impact of forest fires in the long run.

Level	Knowledge, Application, Understanding and Analysis	Marks
L3	Ability to identify and explain the various policies in a systematic, analytical and convincing manner to reduce negative impact. Due considerations were given to both strengths and limitations of each of the policies to form the basis for evaluation.	9 – 11
L2	A meek attempt at providing analytical explanation of the policies required. Non-fatal errors do not mar the level of understanding candidate has demonstrated. If only one policy is well-explained, max 6m.	6 – 8
L1	Undeveloped argument, displaying a lack of understanding of the issue. Smattering of points. Basic errors and irrelevancies may be evident. Lack proper economic analysis.	1 – 5
E2	Judgement based on economic analysis. For example, recommended Indonesian govt to collaborate with international agencies in the short term but learn from them so as to adopt/implement more preventive measures in the long term.	3 – 4
E1	Judgement without justification.	1 – 2

Section B

One or two of your three chosen questions must be from this section.

4	Governments generally face trade-offs when implementing different policies aimed at achieving their macroeconomic goals.
	Assess the extent to which the size of an economy affects its government's macroeconomic policy decisions when faced with these trade-offs. [25]

Suggested Answer:

Part 1: Explain at least 2 trade-offs between different macroeconomic policy objectives.

Intro:

The 4 main macroeconomic objectives of an economy are:

1. Strong, stable and sustained economic growth
2. Low inflation rate and price stability
3. Full employment or low unemployment rate
4. Satisfactory/Favourable balance of payment (BOP) position

A government's macro policy decision may lead to potential trade-offs in macro objectives/aims as it is often impossible to simultaneously achieve all four macroeconomic objectives.

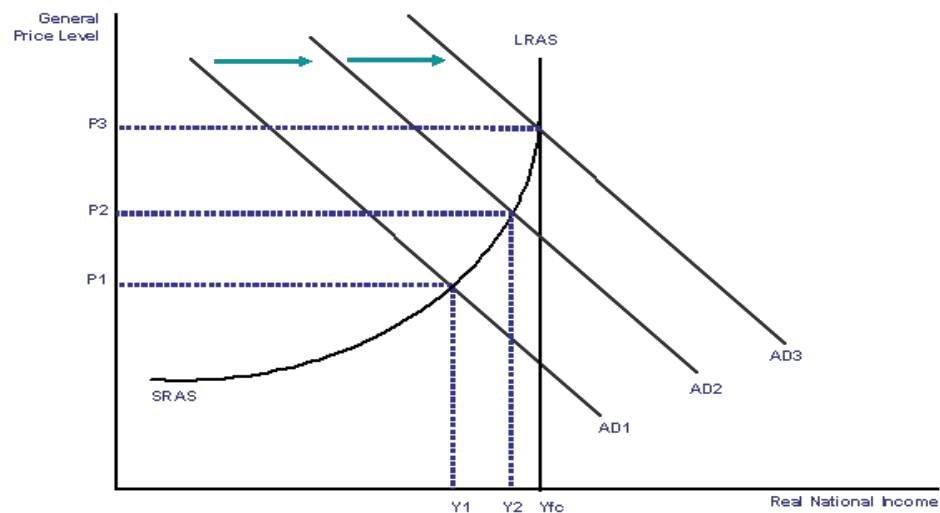
Thus, it is essential for the government to understand these trade-offs well in order to assess the net benefits that these macroeconomic policies may bring when making macroeconomic policy decisions.

Body:

One possible trade-off is trade-off between low unemployment or strong growth and low inflation.

In times of recession, the government attempts to achieve strong growth and/or low unemployment rate by implementing expansionary demand side policies. In such a case, there is a possibility that demand-pull inflation may arise, thus resulting in conflict with the aim of low inflation.

Expansionary demand side policies such as expansionary monetary policy or expansionary fiscal policy will enable the relevant components of AD to rise and if it rises excessively, the AD will move nearer to the full employment level of national income. This increase in AD will be translated into higher price levels (P1 to P2 to P3) due to more intense competition for the increasingly scarce resources.



As a result, the problems associated with DD-pull inflation will emerge such as higher cost of living for workers who may then demand for higher wages, triggering wage-push inflation which would further worsen inflation and bring further negative consequences as lower investment due to greater uncertainty and the resultant adverse effect on sustained economic growth.

Another possible trade-off between different macroeconomic policy objective could be **trade-off between strong growth vs BOP position.**

For a country that experiences strong growth (as a result of successful demand-management policies), its citizens would have a greater taste and preference towards imported normal goods and services so as to satisfy their needs and wants by seeking greater variety which will lead to a higher level of M expenditure. Assuming X revenue remains constant, net X will fall, current a/c worsens and hence BOP position worsens (*ceteris paribus*). A country that had an initial BOP surplus may find its position sliding into a deficit. If this persists, a long term BOP deficit will now pose a new set of problems such as depletion of foreign reserves as well as depreciation of currency giving rise to imported inflation, thus creating further conflicts with other aims of an economy.

Thus, the government needs to weigh the potential benefits and costs carefully before deciding how it should aim to achieve its current macroeconomic objective.

Part 2: Assess whether trade-offs between different macroeconomic policy objectives influence macroeconomic policy decisions is affected by the size of the economy.

Thesis: Trade-offs between different macroeconomic policy objectives influence macroeconomic policy decisions may be affected by the size of the economy.

Let us compare 2 countries, Switzerland and Canada which are both developed and open economies but of different sizes with Switzerland being a smaller economy. Assuming both countries target the objective of strong and sustained economic growth, their choice of macroeconomic policies may differ as Switzerland is likely to prefer ER policy as its growth is externally driven due to its small market size while Canada probably chooses expansionary MP or FP as it has domestically driven growth.

If Switzerland were to use depreciation of its currency to boost economic growth, it may run into the conflict of imported inflation as well as demand-pull inflation if rise in net export results in excessive rise in AD, causing a strong conflict with the aim of low inflation and subsequent conflict with economic growth due to lower export price competitiveness.

On the other hand, if Canada uses expansionary FP or MP, it may also face demand-pull inflation if rise in G, C or I results in excessive rise in AD, causing a conflict with the aim of low inflation. However, compared to Switzerland, the conflict may be weaker since Switzerland had 2 types of inflation reinforcing each other.

Thus, the size of economy plays a significant role in the choice of macroeconomic policy which is internal for countries with the presence of a large consumer base and pool of local investors and external for smaller economies with smaller consumer base.

This choice of policy in turn results in trade-offs with different macroeconomic objectives at different degrees.

Anti-Thesis: Trade-offs between different macroeconomic policy objectives influence macroeconomic policy decisions may be affected by factors other than the size of the economy such as degree of openness and the stage of economic development.

Argument 1: Trade-offs between different macroeconomic policy objectives are affected by the degree of openness.

Define degree of openness as the number of times the total volume of trade is of its GDP.

Let us compare Singapore and Norway (both with similar size of economy with population of 5 million and similar stages of development with Singapore being much more open than Norway).

Given different degrees of openness, the countries may have different macroeconomic objectives. For example, Singapore may focus on price stability and thus concentrate on ER policy while Norway's macroeconomic priority may be strong economic growth which may be achieved with use of expansionary MP or FP.

A small and open economy like Singapore may pursue the priority of price stability given her dependence on the quality of relationships with its trade and investment partners. A gradual and modest appreciation of the S\$ controls imported inflation which is essential since Singapore is highly import reliant. This however conflicts with the aim of BOP since appreciation assuming Marshall-Lerner condition is satisfied, leads to BOT worsening, thus worsening of current account and therefor BOP assuming ceteris paribus.

A less open economy like Norway with a different objective such as economic growth will prefer to rely on its expansionary FP due to a small MPW and hence higher k value to bring about economic growth, which may result in demand-pull inflation, thus conflicting with the aim of low inflation.

Thus, the degree of openness may result in countries having different macroeconomic objective and thus different trade-offs are likely to arise due to different choice of macroeconomic policies.

Argument 2: Trade-offs between different macroeconomic policy objectives are affected by an economy's stage of development

Let us compare Australia and Ivory Coast with high degree of openness, similar size but different stages of economic development.

For a country like the Ivory Coast, economic growth (Y to Y_1) is a likely priority given that a rise in income can allow its citizens to enjoy a higher material SOL and thus may employ expansionary demand side policies such as expansionary FP, MP which may give rise to demand-pull inflation.

In contrast, a developed economy like Australia will prefer to keep watch over its price levels since it is likely to be near its full capacity, so it may implement contractionary demand-side policies such as contractionary MP or FP which may result in slowdown in economic growth and higher unemployment.

Thus, the different stages of development may result in countries having different macroeconomic objective and thus different trade-offs are likely to arise due to different choice of macroeconomic policies.

Argument 3: factors other than nature of economy

- The choice of macroeconomic policy decisions may also depend
 - on the current state of the economy- its most pressing macroeconomic problem at the moment.
 - Effectiveness of policies- limitations may result in policies not useful in achieving the macroeconomic objectives. (explain briefly key limitations of policies)

Evaluation:

- Stand: To what extent do you agree with the statement? Justify.
- In reality, may not be as easy to isolate the differing characteristics of economies. For e.g., small & open economy vs a large & less open economy. The analysis will then be more complex than what was discussed.
- It is also important to take into account the appropriateness and effectiveness of policies when making macroeconomic policy decisions.
- It should also be noted that in any case, trade-offs are inevitable when governments are making macroeconomic policy decisions. Thus, it is essential that the government be forward-looking in their policy decisions, to ensure not just short-term goals, but the long-term prosperity of the economy.

Level Descriptors	
Level (Marks)	Knowledge, Application, Understanding and Analysis
L3 (18-21)	Both parts of the question are well-explained. A well-thought and analytical discussion that critically examines the considerations behind a government's policy making decision. Arguments should not only consider how a government's macroeconomic policy decision may be affected by the trade-offs, but how other factors may also influence a government's choice of policy. Answer is well-substantiated with real-life examples.
L3 (15-17)	Both parts of the question are addressed adequately with some minor gaps in explanation. A generally cohesive argument that is reasoned and demonstrates good knowledge of some of the considerations a government may have with regard to its policy choices. Answer, however, tends to lack relevant examples.

L2 (12-14)	Attempt to address both parts of the question but underdeveloped. Part 1 adequately explained but part 2 answer is one-sided either only thesis or anti-thesis adequately given or a weak explanation of both sides.
L2 (10-11)	Only part 1 (explanation of trade-offs) or part 2 (discussion of size of economy and other factors affecting trade-offs) is given. So the answer lacks an essential part and may contain some minor misconceptions and/or theoretical errors. If only 1 part given but well-explained, can be given max L2 marks (up to 14 marks)
L1 (6-9)	Some relevant points incidentally made but explanation of trade-offs is limited and there is no clear thesis/ anti-thesis discussion of trade-offs being affected by the size of economy or other factors. Contains a number of conceptual errors.
L1 (1-5)	A largely irrelevant answer that merely regurgitates the workings of macroeconomic policies, showing a lack of understanding of the issue on hand.
E2 (3-4)	An evaluative discussion with judgment based on sound economic analysis. Demonstrates a good examination of the considerations that a government may have in its policy making decision.
E1 (1-2)	Mainly unexplained judgment or one that is not supported by economic analysis. Merely stating the stand with no or little justification.
5	India's Finance Minister has announced that tackling inflation is the key priority. This came after data showed that inflation rate increased from 9.3% in 2012 to 11% in 2013. Adapted from Reuters, Dec 2013 & www.inflation.eu
	(a) Explain how firms and households may be affected by high inflation. [10]
	(b) Discuss the appropriateness of demand management policies to alleviate inflationary pressures. [15]
Suggested Answers:	
	<ul style="list-style-type: none"> Explain how firms and households may be affected by high inflation. [10] <p>Approach:</p> <p>1) The main focus of the effects of high inflation is on the real value of money. Hence candidates need to identify the areas of effects of high inflation rate faced by the households and firms.</p> <p>2) In addition candidates can look at how high inflation will affect the behavior of both</p>

firms and households.

Introduction:

- Definition of inflation
- While low and stable inflation has positive effects on the economy, high inflation has destabilising effects on the economy.
- High inflation will cause firms and households to change their consumption and production behaviour because of the respective effects on the real value of households' income and savings and the firms' profitability

Body:

A. Effects of high inflation on Households

- When there is high inflation, the increase in general price level has caused the internal value of money to fall. Thus for the **households**, even though the nominal income has risen, if it is less than the inflation rate, real income will fall. Thus there is a fall in their purchasing power.
- Household consumption might fall. Households will rush to purchase goods and services in advance for fear or with the expectation of even higher future prices and they cannot buy the same amount of goods and services.
- In addition, the real value of their savings and the real interest accrued in the bank may also fall. This will encourage more consumption of goods and services, or in the purchase of gold, properties and financial assets with higher returns than the interest earned in the savings. Households will thus make more trips to the banks and thus increases shoe leather costs.
- On the other hand, households who had borrowed money from the bank to purchase big ticket items, eg car, electrical appliances or houses, will gain as their **real** value of the loans/mortgages (for houses) and interest/mortgage charges will have fallen.
- COL would have risen. SOL may have worsened if the increase in their nominal income has not kept up with the inflation rate. But if their nominal income is higher than inflation, then their SOL may not have fallen.
- Low income households are more negatively affected by high inflation compared to high income households. This is because they spend a larger proportion of their income on consumption of goods and services and so when prices of goods and services increase, they would be more severely affected compared to high income households which spend a smaller proportion of income on consumption.
- Households with fixed income earners, eg pensioners, would also face a greater drop in real income compared to those who earned income indexed to inflation rate because the amount they receive in nominal terms remain constant but their real income is reduced. For those whose income is indexed to inflation rate, they would see an increase in nominal income but their real income would remain unchanged.
- With high inflation, assuming that it is relatively higher than the country's trading partner, households may switch their expenditure on domestic to imports of goods and services

B. Effects of high inflation affects firms – centred around cost of production and real returns

- When inflation rate is high, firms may be able to increase prices to earn higher revenue before workers demand for higher wages (or any other payments to the factors of production) to meet the rising cost of living. When COP increases, firms are less willing and able to produce and thus supply of goods and services fall. Overtime, as costs continues to rise, firms which earn subnormal profit will shut down in the short run, should $AR < AVC$. Larger firms are better able to handle inflation due to the economies of scale they enjoy which allows them to operate at a lower AC than smaller firms in the same industry.
- Banks would increase their nominal interest rate in their attempt to secure a higher real interest rate given the high inflation. Firms will thus be more hesitant to invest as the higher cost of borrowing for investment would have risen and the **real** expected returns could be lower.
- Furthermore if the relative inflation rate is higher in the economy compared to other economies, firms that are dependent on the export market, may become less price competitive causing a fall in their export revenues (assuming $PED_x > 1$). Some will consider relocating their production to other countries, as their cost of production to would have increased.
- Lastly, with high inflation firms will incur higher menu costs as they would have to update their price lists more regularly. However, with greater use of technology, the menu costs incurred is reduced.

Conclusion:

- Due to the negative effects of high inflation rates, governments around the world implement policies to attain low and stable inflation.

Level	Knowledge, Application, Understanding and Analysis
L3 (7 – 10)	<p>Answer provides clear explanation of the effects of high inflation on firms and households.</p> <p>High L3 for candidates who are able</p> <ul style="list-style-type: none"> • Must consider the effect on the real value of money • to distinguish the effects on small vs large firms, and low-income vs high-income households, internal and external consideration.
L2 (5 – 6)	<p>Answer provides undeveloped explanation of the effects of high inflation on firms and households. Such answers would lack adequate links between statements.</p> <p>Max 5 if candidates only addressed effects of high inflation on one economic agent</p>
L1 (1 – 4)	<p>Answer provides some knowledge of the effects of high inflation and relate to why governments want to achieve low and stable inflation.</p>

(b) Discuss the appropriateness of demand management policies to alleviate inflationary pressures. [15]

Approach: Candidates are expected to explain demand management policies in tackling high inflation and to evaluate whether they are suitable to tackle all sources of inflation. Candidates should introduce alternative policies where demand-management policies are inadequate in tackling those inflationary pressures. Candidates should bring in appropriate examples

Note: Limitations of each policy are considered as **evaluative** comments on effectiveness and is not appropriateness)

Introduction:

- Governments aim to attain low and stable inflation
- They have a range of policy tools at their disposal to tackle high inflation.
- Whether DD-management policies are appropriate to tackle high inflation, the main criterion is the source of inflation/root cause of inflation, namely demand-pull or cost-push. Other criteria are: nature of economy (eg open, import dependent on raw materials), trade-off (in relation to the state the economy, ie are they developing, with high unN).

Body:

A. **Thesis:** Demand management policies are appropriate to tackle high inflation, demand pull inflation which are caused by excessive increase in AD relative to AS (Candidates only need to explain one policy as part of the thesis arguments, even if you bring in FP and MP, they should be examples of demand side policies, with different fiscal and monetary tools affecting AD). Focus is on the analysis of whether a fall (leftward shift) in AD is appropriate. Give explanation of a fall in AD can bring down the general price level.

MP

- Where inflation is due to demand-pull inflation, governments can introduce demand-management policies such as monetary policy or fiscal policy
- In 2011, China implemented a contractionary MP to increase the cost of borrowing for households to buy property as the property market was overheating.
- The increase in interest rates made it more expensive to borrow as households would have to return more interest with the loan that they took.
- As such, this helped to reduce the amount of borrowing and thus reduced consumption of property. This caused a fall in AD and thus a fall in GPL, c.p.
- Thus MP helped to tackle the demand-pull inflation
- However, MP has its limitations that may render it ineffective to tackle high inflation. One limitation is that MP would not be an appropriate policy in economies that have free capital flow, like Singapore, as the increase in interest rates would lead to the inflow of hot money and thus cause money supply to increase and thus lower interest rates. Overall this would render the policy ineffective.

FP

- Similarly, government can make use of discretionary fiscal policy to cause a fall in

AD using fiscal tools, government expenditure (G) and/or tax revenue (T). In this case, a decrease in G and/or an increase in T. It might also reduce transfer payments to the households or firms to reduce their expenditure.

- Limitations that would affect effectiveness of policy– elaborate on small K multiplier (assuming there is no global recession like the recent crisis where G are using austerity measures can be appropriate more for managing employment and growth),
- Thus demand-management policies are appropriate for demand pull-inflation.

Exchange Rate Policy (ERP):

- Economies that experience imported inflation, especially of the raw materials or intermediate goods, such as Singapore, can implement the ERP where the government will appreciate the currency. This will make imports cheaper in terms of the domestic currency and thus lower the COP for firms. This will increase SRAS, lower the general price level and real NY
 - This policy is also appropriate to address high inflation due to demand-pull inflation as the appreciation of the currency makes exports more expensive and imports relatively cheaper and leads to fall in net exports assuming Marshall-Lerner condition holds and thus could lower AD.
 - However Marshall-Lerner condition may not hold in the SR due to contractual agreements in trade and thus may not be appropriate to tackle high inflation

B. **Anti-thesis:** Demand management policies are not appropriate to tackle high inflation. This is especially so when the root cause of problem is due to an increase in COP, accelerated increase in AD is not met with an increase in the capacity to produce (increase in LRAS) for a sustainable economic growth, or the dependency of the foreign sector in the consumption or production of goods and services.

MP

- MP is not appropriate to tackle high inflation should the cause of inflation be imported or wage-push. A rise in interest rate does not have a direct/immediate impact on the general price level due to an increase in import prices or imported inflation or wage increase.
- As such, the government needs to employ alternative policies such as exchange rate policy to deal with imported inflation, and supply-side policies for wage-push inflation.

Alternatively :

- **Supply-Side Policies (SSP):** Where the source of inflation is wage-push inflation, governments can implement SSP to increase the productivity of workers. An increase in productivity will allow the workers to produce more units of output per unit time and thus lowers the AC of each unit produced. This will help to alleviate the inflationary pressures due to wage increases with the assumption that wage increase is not matched with increase in labour productivity. Examples in Singapore include the Skills Programme for Upgrading and Resilience (SPUR) where workers can attend courses to develop themselves in their area of work so as to increase productivity.
 - However, increase in productivity through training takes a long time to attain

and it is not guaranteed as the success of the training depends on the attitudes and mindset of the workers undergoing training.

- For developing countries that are growing, supply-side policies must be implemented in tandem to cope with the increase in AD to bring stability to the general price level rather than reducing AD.

(**Note:** the above discussion is not exhaustive. Candidates may add the other criteria given in the approach to answering the question. But looking at the source of inflation as a criterion to judge appropriateness of policies is a must.)

Synthesis/Conclusion:

- Whether demand-management policies are appropriate depends on the source of inflation that the economy is facing.
- Often there are multiple sources of inflation and thus governments should employ a mix of policies that are appropriate to the respective sources of inflation.
- Governments would also have to be mindful of the effect of the policies on the other macroeconomic goals as lowering inflation by lowering AD could lead to a slowdown in growth and may result in higher unemployment should firms find it unprofitable to continue producing in the economy. In addition, a small and open without natural resources may require supply-side policies to reduce inflation.

Level	Knowledge, Application, Understanding and Analysis
L3 (9 – 11)	Answer provides clear analysis of at least 3 policies that a government can employ to tackle inflation with an emphasis on the appropriateness in tackling certain sources of inflation and one other criterion
L2 (6 – 8)	Answer provides an undeveloped analysis of at least 2 policies to tackle inflation without reference to source of inflation Explanation of policies without looking at its limitations will be given max 6m
L1 (1 – 5)	Answer shows some knowledge of the policies to tackle inflation but lacks analysis.
E2 (3 – 4)	Judgement based on analysis.
E1 (1 – 2)	Mainly unexplained judgement.

6		<p>Singapore and the EU concluded the Free Trade Agreement (FTA) in Dec 2012, after three years of talks. Under the FTA, the EU will eliminate tariffs on all imports from Singapore over five years, while Singapore will grant duty-free access for all imports from the EU.</p> <p style="text-align: right;">Source: Todayonline.com, 30th March, 2014</p>	
	(a)	Explain the changing pattern of trade in Singapore in recent years.	[10]
	(b)	Assess the extent to which Singapore could benefit from signing Free Trade Agreements.	[15]
<p>Comments on a): This question is not asking for Singapore's pattern of trade but the CHANGING pattern of trade. However, content related to pattern of trade is required as basic information before students can explain how those determinants changes. Recent years is to set the time frame and context so that students are supposed to use recent examples.</p> <p>Suggested outline to a): Introduction</p> <ul style="list-style-type: none"> - Define trade - Explain what is pattern of trade - Optional: Singapore is small and open <p>Changes in Supply factors:</p> <ul style="list-style-type: none"> - The theory of Comparative Advantage (CA). Differences in factor endowments affecting opportunity costs of production can be used to determine what countries should specialised, export and import. - Signing of Free-Trade Agreements (FTA). Changes the relative price of import and export between countries that sign FTA and those without. <p>Changes in Demand Factors:</p> <ul style="list-style-type: none"> - Governmental interventions - Relative income level - Demographics & Taste and Preferences <p>Conclusion Singapore's changing patterns of trade with the rest of the world can be explained with the changes in the demand and supply factors mentioned above.</p> <p>Suggested Answer to a): Introduction International trade is the exchange of goods and services between countries. Singapore's pattern of trade refers to:</p> <ul style="list-style-type: none"> • Who Singapore trade with in terms of both imports and exports • What do Singapore imports and exports 			

- How much do Singapore imports and exports

The pattern of trade between Singapore and the rest of the world can be explained by demand and supply factors. Therefore, changes to these demand for and supply factors will affect and change Singapore's pattern of trade.

Changes in Supply factors:

The theory of Comparative Advantage (CA). Differences in factor endowments affecting opportunity costs of production can be used to determine what countries should specialise, export and import.

Theory of Comparative Advantage argued that specialisation and trade can take place and benefit all countries as long as each country has comparative advantage in the production of one good over another country. A country should produce and export what it has CA in and import what it does not have comparative advantage in. A country is said to have comparative advantage in the production of a commodity when it can produce a particular good at a lower opportunity cost than another country.

The opportunity cost of production will change when:

- Changes in Factor endowment
- Changes in Quality of factor of production

Therefore, pattern of trade will change.

Changes in Supply factors:

Signing of Free-Trade Agreements (FTA) will change the relative price of import and export between countries that sign FTA and those without.

FTA signed between countries can also influence patterns of trade. More trade tends to take place with countries that Singapore has signed free trade agreement due to lowering of import restriction such as cheaper import tariff to member countries that lower the price of the import. This leads to artificial comparative advantage, as the price of imports from member countries is lower than that from non-member countries.

Changes in Demand Factors:

- Governmental interventions

1) Imposition Export Subsidies

Exports from countries might change due to Export subsidies given by different countries therefore will change the relative price which will change Singapore's trade patterns.

2) Imposition of Protectionism measures

Import tariff might be imposed on goods imported from Singapore, would raise the price of on goods imported from Singapore which will change Singapore's trade patterns.

3) Changes in Exchange rate

Appreciation and depreciation of currencies will change the relative price of goods and services between countries in different currencies which will change Singapore's trade patterns. This could be done by Singapore as well as our trading patterns.

Changes in Demand Factors:

- Relative income level

Demand factors such as rising affluence for example emerging economies that experiences strong rates of economic growth will have increasing demand for the goods and services produced by other countries like tourism related services. Therefore this increases the exports of such goods from Singapore to these emerging economies. Where there are changes in the lifestyles or improvement and innovations in the design of a product the composition of imports will also be altered significantly,

Strong regional economic growth may lead to an increase in the demand for goods and services which Singapore specialises in producing, for example financial services and logistical services. The strong growth of the emerging economies like China as well as the rest of the world would mean that Singapore is able to cater their services to the needs of this higher-income population.

Changes in Demand Factors:

- Demographics & Taste and Preferences

Where there are changes in population sizes as well as population demographics, the global demand pattern will also change. For example, ageing countries like japan will demand more goods and services like medical tourism and wheelchairs for the elderly from Singapore.

Conclusion

Singapore’s changing patterns of trade with the rest of the world can be explained with the changes in the demand and supply factors mentioned above.

Level	Knowledge, Understanding, Application and Analysis	Marks
L3	High L3 9-10m: Well-developed explanation with least 3 demand and supply factors using good and relevant examples that apply to Singapore.	7-10
	Low L3 7-8m: Well-developed explanation with least 2 demand and supply factors using relevant examples that apply to Singapore.	
L2	Average explanation with least 2 demand and supply factors using relevant examples that apply to Singapore.	5-6
	Max at 6m for well-written answers that focused only on pattern of trade instead of changing pattern of trade relating to Singapore.	
	Max at 5m for good explanation comprising of at least one-supply and one-demand factors NOT applied to Singapore.	
L1	Max at 5m for well-written answers that focused only on pattern of trade instead of changing pattern of trade relating to Singapore.	1-4
	Max at 4m for well-written answers that focused only on pattern of trade instead of changing pattern of trade NOT relating to Singapore.	
	Max at 4m for average written one-sided answers that focused either on Demand or Supply factors	
	Scattering of points	

Suggested Outline to b):

Introduction

- Define Free Trade Agreements and its components
- Singapore is small and open
- Singapore could be affected in terms of the 4 Key Economic Indicators and SOL

Thesis: Singapore would benefit from Free Trade Agreements

- Improved Balance of Payments
- Economic Growth, both potential and actual
- Lower GPL or Low inflation
- Decrease Unemployment
- Improved Standard of Living, both material and non-material

Anti-Thesis: Singapore would not benefit from Free Trade Agreements

- Worsen Balance of Payments
- Recession, negative actual Growth
- Inflation
- Increase Unemployment
- Worsen Standard of Living, both material and non-material

Evaluation & Conclusion

Suggested answer to b):

Introduction

A Free Trade Agreement (FTA) is a legally binding agreement between two or more countries to reduce or eliminate barriers to trade, and facilitates the cross border movement of goods and services between the territories of the Parties. Singapore's FTAs help both foreign and Singapore-based firms increases cross-border trade by eliminating or reducing import tariff rates as well as making it easier to invest.

Singapore's network of FTAs cover 20 regional and bilateral FTAs with 31 trading partners.

Thesis 1: Singapore would benefit from Free Trade Agreements with improved Singapore's Balance of Payments.

Reduction of trade barriers reduces tariffs imposed on Singapore's exports and imports from other countries. Both X and M will become relatively cheaper than before FTAs begin signed. Therefore, both X and M will increase. Assuming the increase in exports is more than the increase in imports, Net Exports ($X-M$) will increase which will increase Aggregate Demand (AD).

Also FTAs, helps to promote investment between countries, which will increase Foreign Direct Investments (FDIs) between both countries. Assuming the net FDI into Singapore is positive, there will be an injection into Singapore's circular flow of income causing investment within Singapore will increase, which also increases AD.

Thesis 2: With an increase in AD due to FTAs, Singapore would benefit in term of

actual economic Growth, decrease unemployment (UnE) and improvement in material standard of living (SOL).

When AD increases, RNY will increase, as real output increases, employment of factors of production increase, including labour. Therefore unemployment will decrease, especially cyclical unemployment.

Assuming Real national income increase more than the rate of population growth, RGDP per capita will increase, household's standard of living will increase as disposable income of average person had increase.

Firms that are relative more price competitive will enjoy an increase in output and revenue which will help firms enjoy more economies of scale.

Thesis 3: Singapore would benefit from Free Trade Agreements with lower GPL or decrease in inflation rate.

Due to decrease in Cost of Production and Price of imported goods and services: Also firms can experience a lower in cost of production due to an fall in price of imported factors of productions, making their goods and services even more price competitive. On a macroeconomic perspective, Singapore might experience a increase in SRAS which will help to reduce the GPL and inflationary pressure.

Household will enjoy more goods and services at a lower price and higher quantity. This increases consumer's surpluses and the amounts of goods consumers are willing and able to consumers. This increases material SOL. This could be link to non-material SOL as consumers have better quality and choices.

Thesis 4: Singapore would benefit from Free Trade Agreements potential growth.

Singapore's LRAS with increase in capital accumulation, transfer of technology due to increase in trade and investment from abroad. Increase labour mobility would also increase quality and quantity of labour which also increases LRAS.

Anti-Thesis 1: Singapore would not benefit from Free Trade Agreements with Worsen Balance of Payments

Assuming the increase in exports is less than the increase in imports, Net Exports (X-M) will decrease which will decrease Aggregate Demand (AD).

Assuming the net FDI into Singapore is negative, there will be an withdrawal from Singapore's circular flow of income causing investment within Singapore will decrease, which also decreases AD.

Anti-Thesis 2: With an decrease in AD due to FTAs, Singapore would not benefit in term of recession, increase unemployment (UnE) and worsen in material standard of living (SOL).

- Fall in AD and its impact.

Other factors:

- Non-competitive firm will close down due to lesser protection from foreign goods.
- Sun set industries will shut down earlier. Infant industries will find it harder to survive.
- Increase labour mobility from abroad may reduce wage rate or increase unemployment especially low skilled labour (increase income inequality)

Anti-Thesis 3: Singapore would not benefit from Free Trade Agreements with increase GPL or increase in inflation rate when AD increases.

Evaluation & Conclusion

To a large extent Singapore could benefit more from signing Free Trade Agreements due to the nature of our economy being small and open.

There will be some who will benefits while others will not from free trade. Whether the extent to which Singapore could benefit from signing Free Trade Agreements would depend on whom in the economy, example competitive and non-competitive.

Impact from FTAs can also be more evident in the long run compared to short run as other countries are signing free trade agreements among themselves. Therefore, Singapore will eventually lose out by not signing FTAs

Negative effect from FTAs can be cushion with interventions from government but only in the short term.

Level	Knowledge, Understanding, Application and Analysis	Marks
L3	High L3 10-11m: Well-developed discussion with least 3 thesis and anti-thesis points using good and relevant examples that apply to Singapore.	8-11
	Low L3 8-9m: Well-developed discussion with least 3 thesis and anti-thesis points using relevant examples that apply to Singapore.	
L2	Average discussion with least 3 thesis and anti-thesis points using relevant examples that apply to Singapore.	6-7
	Well-developed discussion with least 3 thesis and anti-thesis points using good and relevant examples that DO NOT apply to Singapore.	
	Max at 6m for well-developed one-sided answers using good and relevant examples that apply to Singapore.	
L1	Max at 5m for well-developed one-sided answers using example NOT related to Singapore.	1-5
	No use of economic theories.	
	Scattering of points	
E2	Evaluation with justification related to the Singapore context	3-4
E1	Evaluation without justification or without relation to the Singapore context	1-2

SERANGOON JUNIOR COLLEGE
 JC2 Preliminary Examination 2015
 H1 Economics 8819
 Suggested Answers

Question 1

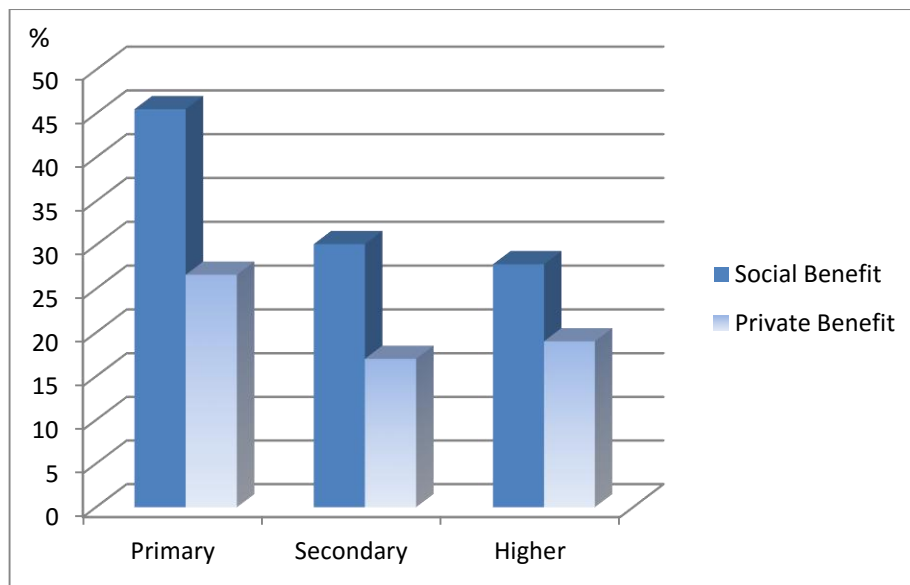
Higher Education

Table 1: Enrolment vs Tuition Fees

Year	University Enrolment	Average Tuition Fees (S\$) (Excluding Dentistry, Medicine, Music)
2008	11,472	29,693
2009	11,947	30,948
2010	12,451	31,028
2011	13,325	31,678
2012	13,456	32,945

Source: <http://www.moe.gov.sg>, accessed July 2015

Figure 1: Returns to Education (%)



Source: *Economics Education*, Vol. 12, No. 2, August 2004

Extract 1: Is degree all that important?

Even as the Government opens up more university places, it has been urging young Singaporeans, including diploma holders, to consider other pathways. PM Lee, who addressed polytechnic students recently, told them that getting a degree was not the only option. He encouraged them to work for a few years or start their own business.

Although sound, such advice is not going to sway polytechnic students very easily. About 17% of a polytechnic cohort will land a place in university, compared to more than 70% of those coming out of the junior colleges. The remaining diploma holders are unlikely to give up on their degree ambitions. A few thousand will head overseas, mostly to British and

Australian universities. These institutions give students generous credit exemptions, allowing them to complete their degrees in one to two years. Those who cannot afford the cost will look to private schools such as the Singapore Institute of Management and EASB Institute of Management. Those whose financial circumstances require them to go out to work will turn to UniSIM to study part-time to fulfil their degree aspirations.

Five years ago, the estimate was that 60% of all polytechnic graduates go on to secure a university degree within five years. These days, polytechnic officials estimate that the figure is probably close to 80%. But why the hankering for a degree? Ask any diploma holder and the answer is likely to be "better jobs and higher salaries".

Source: *The Straits Times*, 18 May 2013

Extract 2: University brings massive boost to earnings and economy

University study delivers huge benefits to both graduates' earnings and the wider UK economy. Supporters of student aid subsidies argue that higher education is a "public good" that would be underprovided in a free market.

University study has shown to contribute significantly to the economy, with around 20% of the UK's economic growth between 1982 and 2005 attributable to an increase in the number of graduates, as well as at least one third of the increase in labour productivity from 1994 to 2005. A degree remains one of the best pathways to achieving a good job and a rewarding career – as well as a hugely enjoyable experience for most students.

What is more, there is a real incentive for working hard, because the research finds that gaining a higher degree classification boosts earnings even further. The earnings of a first-degree holder were found to be about six times that of a worker with primary education. And the benefits of university go beyond individual graduates, with the economy greatly enhanced by having a highly-skilled university-educated workforce.

Source: <https://www.gov.uk>, 15 Aug 2013

Extract 3: Engineering the shortage

What's going on? For engineers, the problem is too much learning. Graduates are plentiful; it is technicians that are in short supply. UK needs 10,000 apprentices a year, but it is only getting 6,000.

There are too many graduates with degrees in subjects that are popular with students but not with employers. Forensic science is one example. Police dramas have made it a popular undergraduate degree, meaning that universities increasingly offer it at the expense of more rigorous courses like chemistry. There were no forensic science courses offered in Britain in 1990; now there are more than 50. The result is a glut. There are about 2,000 forensic science students graduating every year, but only 100 jobs for them to fill—and these usually require a post-graduate qualification, not just a first degree.

Government policy plays a part here, too: chemistry and physics are expensive to teach compared with watered-down degrees like forensic science, and the universities get the same amount of money either way. But universities will make money only if they offer courses that are popular with students, who seem content to ignore what the market is telling them. That may be the result of state-funded higher education. If students had to pay the full cost of their courses, then employment prospects might loom larger in their minds when deciding what to study.

Source: *The Economist*, 6 January 2005

Extract 4: A forward-looking, integrated planning system

In modern Singapore, education has consistently been the building block for economic and national development. Former Prime Minister Goh Chok Tong famously stated, "The wealth of a nation lies in its people." Since the founding of the republic, the high value placed on education as the key to economic growth and national cohesion in a country with no natural resources is evident in the statements of Singapore's senior leaders. But the statements about "nurturing every child" are not just political rhetoric. They have been accompanied by willingness at each stage to invest considerable financial resources in education. Education spending rose to 3.6% of GDP in 2010, approximately 20% of total government expenditure and second only to defence.

The linkage to economic development is tight and is driven from the top of the government. As Singapore evolved from an economy based on port and warehousing activities, through a low-wage, labour-intensive manufacturing economy, and then to a more capital and skill-intensive industry and finally to its current focus on knowledge intensive industrial clusters, the education system was expected to ramp up the quality of its education and the supply of specific skills needed to make Singapore globally competitive.

Source: <http://www.oecd.org>, 2010

Questions

- (a) Using demand and supply analysis, explain why there was a rise in university enrolment despite the increase in tuition fees as seen in Table 1. [4]
- (b) Supporters of student aid subsidies argue that higher education is a "public good" that would be underprovided in a free market.
- Do you agree that higher education is an example of a public good? [4]
- (c) (i) Explain why there is a difference between social and private benefit of education. [2]
- (ii) Explain why the difference between the social and private benefit of education is larger for primary education as compared to higher education. [2]
- (iii) Discuss the case for subsidising education to solve the problem of market failure. [8]
- (d) Suggest one possible concern to an economy of a large increase in university graduates. [2]
- (e) Discuss the extent to which you agree with the view that education is key to economic growth in Singapore. [8]

[Total: 30]

Suggested Answers

- (a) **Using demand and supply analysis, explain why there was a rise in university enrolment despite the increase in tuition fees as seen in Table 1. [4]**

When there is an increase in tuition fees [Table 1], based on law of demand, there should be a fall in university enrolment, ceteris paribus. However, the rise in university enrolment means that the assumption of ceteris paribus does not hold true.

There could be other non-price determinant reasons such as taste and preference. [Extract 1: better jobs and higher salaries or Extract 2: research finds that gaining a higher degree classification boosts earnings even further.] As more and more people believe that with higher education, it would be able to provide them with better jobs and higher salaries, hence demand curve would shift to the right.

At the original price level, there will be a shortage. This will exert an upwards pressure on the price. As a result, the equilibrium price rises from $0P_0$ to $0P_1$ until equilibrium is attained. In this case, there will be a rise in equilibrium quantity from $0Q_0$ to $0Q_1$. This explains why there is a rise in university enrolment despite the increase in tuition fees as seen in Table 1.

- (b) **Supporters of student aid subsidies argue that higher education is a "public good" that would be underprovided in a free market.**

Do you agree that higher education is an example of a public good? [4]

No, I disagree that higher education is an example of public good.

Higher education is rivalry in consumption. One person's consumption of higher education does reduce the places available to another person. Higher education is excludable in consumption. It is easy to exclude non-payers from enjoying the good. In the case of higher education, if the students do not pay school fees, they will be excluded in the consumption of education.

Given the characteristics of rivalry and excludability in consumption, higher education is not a public good but a private good.

- (c)(i) **Explain why there is a difference between social and private benefit of education. [2]**

The difference between private and social benefit to education is the external benefits. The social benefits are the total benefit to a society from the consumption of education. Social benefits include all the private benefits that accrue to individuals who spend on education plus any external benefits of consumption of education.

- (ii) **Explain why the difference between the social and private benefit of education is larger for primary education as compared to higher education. [2]**

Assuming that social benefits are the same for both education levels, the difference between social and private benefits of education is the differing levels of private benefits. Private benefits for higher education is larger compared to primary education as the premium on higher education provides a strong incentive for

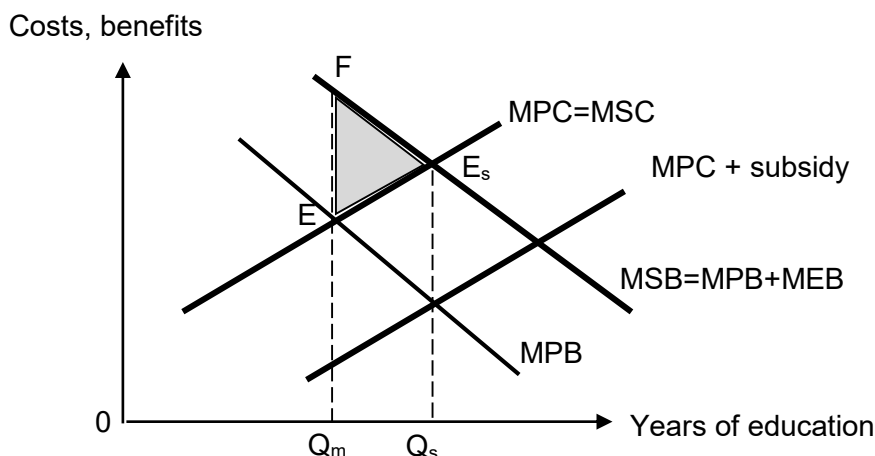
individuals to pursue university qualifications (Extract 2: earnings of a first-degree holder were found to be about six times that of a worker with primary education.) Hence, the differing private benefits explain why there is a difference between the social and private benefit of education.

(iii) Discuss the case for using subsidy to solve the market failure in education. [8]

Higher education is a merit good. Merit goods are goods that the government deems to be socially desirable and intrinsically good. Thus, their consumption should be encouraged. The essence of merit goods is to do with a **failure of information** to the consumer. The individuals who make decision about how much education to receive do not perceive its full benefits at the time of making the decision about how much education to consume. As such, consumers under-value the product and this give rise to underconsumption of higher education.

Simple elaboration of 5 steps

The external benefit of education is that of economic growth to a country. This is because with education the quality of our labour force would improve and thus bring about an increase productivity and economic growth. The external benefit thus results in a divergence between the marginal social benefit and the marginal private benefit.



Therefore there is an under consumption of education is the market equilibrium will be at Q_m whereas the socially optimum output level is at Q_s . If additional $Q_m Q_s$ units were consumed, these units of output would add more to total benefits than to costs. Hence, society's welfare would be higher if firms produce these additional units, but they do not. The **deadweight loss of area EFE_s** is thus incurred.

Subsidy

To correct the problem of market failure due to positive externalities, the government could give a subsidy equal to the amount of marginal external benefit.

A subsidy could be offered on the production of education as it has external benefits. As MSB is greater than MPB, a subsidy equivalent to MEB at the socially optimal level, Q_s would shift the MPC curve vertically down by that amount of subsidy to MPC + subsidy. The imposition of the per unit subsidy results in an output that corresponds to socially efficient level of output Q_s .

The advantages of using subsidies are that it can be adjusted according to the estimated external benefits arising from the consumption of higher education.

Case against subsidy:

Government may fail to measure external benefits accurately as there are many factors that could have attribute to the country's economic growth. This may results in giving too much subsidies and can lead to unnecessary wastage of nation's reserves. The reserves could have been better used in other areas such as the maintenance of our transport infrastructure.

Furthermore, substantial funding from the government distort free market allocation system. [Ext 3: But universities will make money only if they offer courses that are popular with students, who seem content to ignore what the market is telling them If students had to pay the full cost of their courses, then employment prospects might loom larger in their minds when deciding what to study.] If the amount of subsidy given is fixed regardless of the course of study, popular courses with limited benefits in terms of job prospect will be overconsumed as the cost of study has been artificially lowered. In addition the courses that are less popular but with greater benefits in terms of job prospect will be under consumed.

Conclusion:

Despite the costs of subsidy, government is still willing to invest 'Ext 4] considerable financial resources in education. Education spending rose to 3.6% of GDP in 2010, approximately 20% of total government expenditure and second only to defence.' The aim is to '[Ext 4] ramp up the quality of its education and the supply of specific skills needed to make Singapore globally competitive.'

Marks	
L3	Detailed explanation of the case for subsidy by explaining the market failure involved and how the subsidy works to help solved the market failure. Explained clearly the case against subsidy. Made a personal judgement on the case for subsidy
L2	Some explanation of the case for subsidy. Some attempt to explain the case against subsidy. Limited attempted to make a personal judgement on the case for subsidy
L1	Smattering of knowledge with some relevant points. Answer lacks precision and there are a lot of inaccuracies. One sided analysis. Only considered either the case for or the case against subsidy. No personal judgement on the case for subsidy made

- (d) **Suggest one possible concern to an economy of a large increase in university graduates. [2]**

Large increase in university graduates may result in structural unemployment. . As seen in Ext 3, 'Graduates are plentiful; it is technicians that are in short supply.' Structural unemployment is a *mismatch* between the *skills* of the *unemployed* workers which are the graduates and the *skills* needed for the technician jobs that are available.

OR

A large increase in university graduates will lead to a fall in the wages and this may discourage upgrading of skills. With the lack of relevant skills in the economy, this could result in a leftward shift of AS curve as there is a fall in productive capacity due

to a fall in the quality of labour. With a fall in productive capacity, this will result in a fall in potential economic growth.

- (e) **Discuss the extent to which you agree with the view that education is key to economic growth in Singapore.** [8]

Economic growth can refer to actual growth or potential growth. Actual growth is the increase in national output actually produced and it can be achieved through an increase in aggregate demand. Potential growth refers to an increase in the full-employment level of national output and it can be achieved through an increase in aggregate supply. Therefore the key to achieve growth in Singapore will be to develop our resources (e.g. land, labour, capital and entrepreneurship) and improve our technology.

Thesis: High value placed on education is key to an economy like Singapore as it helps improve the quality of our labour force.

Singapore being highly dependent on trade will need to produce based on its comparative advantage. Hence it will need to produce goods that which it has the lowest opportunity cost in. In light of increasing globalisation, Singapore comparative advantage has changed from one which is heavily reliant on capital and skill-intensive industries (e.g. electronics) to one which is more focus on knowledge intensive (e.g. pharmaceutical). Hence in order to prepare Singapore for the changing structure of its economy, Singapore will need to ensure that it has the workers with the right skills for the job through education. With the right workers for the jobs it will ensure that Singapore can produce these goods at the lowest cost and ensure its export competitiveness. This will then bring about economic growth for the country Singapore only form of resources lies with its people. This coupled with our dwindling birth rates, will mean that we will need to invest heavily in the education of our people to ensure growth. With higher education, the quality of labour in Singapore will have improved. This would mean a more productive and efficient workforce. Hence this brings about an increase in productive capacity of the country and an increase in the aggregate supply. With that that the full employment output level of the country increase and thus potential growth is achieved.

Anti-thesis: Other factors like infrastructural development is also key to an economy like Singapore as improve the quality of capital available

With our economy moving to one that is more focus on knowledge based economy, it is important to we ensure that we focus on education to ensure that we have the people with the skills for these industries. However this would not have been possible without the rapid infrastructural development of the country. The development of Biopolis, Fusionpolis and Mediapolis at One-North has helped to support the growth of the knowledge based industries. The state-of-the-art facilities, scientific infrastructure and specialised services have allowed companies to cut research and development costs significantly and accelerates the development timeline.

These infrastructural developments thus help to increase the productive capacity of the country and bring about potential growth. Furthermore the first class infrastructure will also help to ensure that Singapore remains an attractive destination for foreign investors thereby ensuring actual economic growth.

Conclusion

Given that Singapore is an economy with no natural resources other than its people, it will have to constantly invest in the education to ensure high quality of labour that is

needed for growth in Singapore. However having said that it does not mean that Singapore should only focus on its labour as there is also a need to invest in research and development and other resource available to it such as capital, entrepreneurs and even land.

Mark Scheme

Marks	
L3	<p>Shows understanding that economic growth are determined by AD and AS factor (e.g land, labour, capital, entrepreneurs and technological advancement.)</p> <p>Detailed and thorough explanation of how education is key economic growth in Singapore. Clear analysis to show how education can bring about both actual and potential economic growth.</p> <p>Considered carefully other factors that could be key to economic growth in Singapore or examine carefully why education might not be key to economic growth in Singapore.</p> <p>Personal judgement made on whether or not education is key to economic growth in Singapore.</p>
L2	<p>Some attempt to explain how education can bring about actual and/or potential economic growth.</p> <p>Consider other factors that could be key to economic growth or explain why education might not bring about economic growth.</p> <p>Limited attempt in making a personal judgment.</p> <p>CAP 4m: 1 sided analysis</p>
L1	<p>Smattering of knowledge with some relevant points.</p> <p>Answer lacks precision and there are a lot of inaccuracies.</p> <p>No attempt to make personal judgement</p>

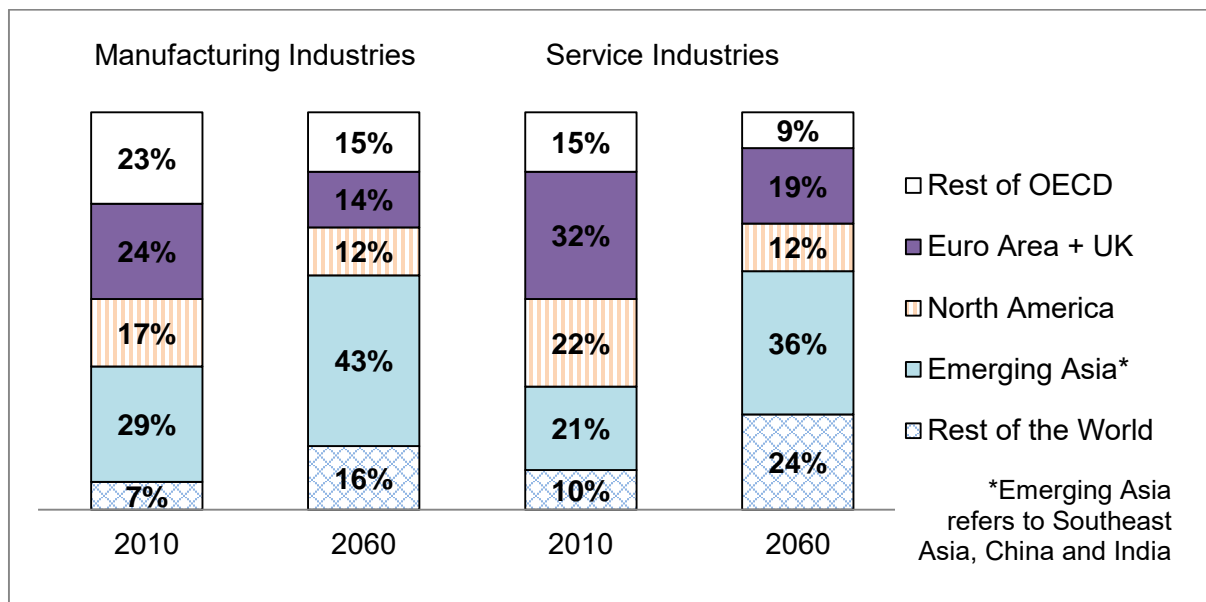
Question 2

Internal and External Imbalances

Extract 5: Changing trade patterns

The relative importance of different countries and regions in specific markets is set to change markedly over the coming decades, driven by diverging growth performance, changes in relative productivity and production prices. Notably, China, India, other Asian economies and Africa are projected to become the dominant players in manufacturing, while most OECD countries are expected to lose ground.

Figure 2: Countries' share in world exports by industry, 2010 and 2060 (%)



Source: *Trade patterns in the 2060 World Economy*, OECD, December 2014

Extract 6: Fragile economies under pressure

The "fragile five" – Turkey, Brazil, India, Indonesia and South Africa – are considered particularly vulnerable to an exodus of foreign capital as the prospect of higher interest rates diverts funds back to the US in search of higher returns. The fate of the fragile five is important, not least because they account for more than 12% of global GDP, and have contributed almost one-fifth of world economic growth since 2009.

Ben Bernanke, the Fed chairman, has argued that emerging markets will ultimately benefit from policies that are designed to create a stronger US economy. He, along with the world's policymakers, will be hoping that the waves in emerging markets created by the winding down of the US Federal Reserve's quantitative easing programme will prove to be a bump on the road to global recovery, and not the beginning of a fresh crisis. Here we look at the problems that some emerging markets are facing.

Brazil

According to the IMF, the government budget deficit of Latin America's largest economy will reach 3.3% of its GDP this year, while the current account deficit is estimated at 3.6%. Brazil's trade balance in 2013 is the worst for 13 years.

Meanwhile, consumers are now laden down with record levels of debt. The country's decade-long consumption binge has helped drive annual inflation close to the 6.5% ceiling of the central bank's tolerance band, forcing the government to enforce costly fuel subsidies to help cap prices.

Brazil has also been steadily increasing interest rates in the battle against inflation and a weakening real – the currency which has fallen by about 15% against the dollar over the past year. Rates have risen by 3.25% points over the past nine months, and the central bank's latest move was to push them up a further half-point, to 10.5%, in January. Economists are expecting another rise this month.

But growth prospects are deteriorating. Some analysts had expected the tightening of monetary policy to stop after the economy shrank in the third quarter of 2013, for the first time since 2009. But the increases have continued, underlining some of the unenviable choices faced by the country's policymakers.

India

In 2013, India's current account deficit reached a record of 4.8% of GDP, in part due to high gold imports. The yellow metal is one of the biggest contributors to the country's trade imbalance, second only to oil.

The government budget deficit of India is expected to reach 7.2% of its GDP and the current account deficit 2.4% in 2014. Like several of its emerging market peers, India raised interest rates last week, in its case by a quarter-point, to 8%, in an attempt to rein in consumer price rises and prop up the currency.

It was a surprise move by Asia's third-largest economy, with analysts predicting no change before the decision was made. Inflation has been slowing, but consumer price inflation remains high: it was close to 10% in December. The Reserve Bank of India has proposed a target of 4% inflation by 2016.

Despite these figures, the country is currently lifted by optimistic sentiments as reform-minded Narendra Modi won the election, while the current account deficit has narrowed rapidly as exports improved, remittance inflows remained solid and higher import duties and quantitative restrictions discouraged gold imports. In addition, non-oil, non-gold imports have declined in line with weak domestic demand, and capital inflows have strengthened.

Indonesia

Indonesia resisted increasing interest rates for a second month in January, against a backdrop of stable inflation, at 8.4% in December. The central bank said it was closely monitoring the impact of the Fed's tapering programme, after growth in south-east Asia's largest economy slowed to its weakest rate in four years last year, with a poor trade position and the outflow of foreign capital taking their toll. The current account deficit is expected to be around 3% of its GDP. The rupiah was the worst-performing emerging market currency in 2013, down around a fifth against the dollar.

The Indonesian government and central bank (Bank Indonesia) are making efforts to curb the current account deficit and combat high inflation. Therefore, it kept the benchmark interest rate at the relatively high level of 7.50%.

Adapted from *The Guardian* & www.indonesia-investments.com, February 2014

Extract 7: Only structural reforms can reduce current account deficit: ADB

“The Asian Development Bank (ADB) forecasts that Indonesia’s economic growth will soften slightly to 5.7% in 2014, before picking up to 6.0% in 2015,” ADB’s country director for Indonesia, Adrian Ruthenberg, said in a release made available to The Jakarta Post on Tuesday. The current account is also projected to post a deficit for 2015.

The ADB said reducing Indonesia’s current account deficit, which is mainly caused by trade deficit in the oil and gas sector, would remain a challenge in 2014 and beyond. Domestic oil output has been in a state of decline for almost two decades due to a lack of investments and exploration in combination with maturing oil fields and, secondly, domestic fuel consumption has risen sharply in recent years amid solid economic growth and generous government fuel subsidies. Structural factors have also contributed to the problem. The deterioration that started in 2003 suggests that Indonesia’s export competitiveness, particularly in manufacturing, has eroded. The rupiah has appreciated in real effective terms, and labour productivity in manufacturing has fallen below rates achieved in neighbouring countries.

“To address this challenge, Indonesia’s government has taken steps to slow domestic demand, spur exports, and dampen imports,” said Edimon Ginting, ADB’s deputy country director for Indonesia.

Source: *The Jakarta Post*, April 2014 & Asian Development Bank, 2014

Questions

- (a) (i) Using Figure 2, describe the changes in the relative shares of world exports of manufacturing and services for North America and Emerging Asia between 2010 and 2060. [2]
- (ii) Explain how the concept of opportunity cost can be used to explain the changes you observed in (a) (i). [4]
- (b) Using AD/AS analysis, explain how emerging economies can benefit from a stronger US economy. [4]
- (c) Explain a possible link between the level of interest rates in a country and its exchange rate. [2]
- (d) Explain why there is a need for government to rein in consumer prices. [2]
- (e) Discuss whether Indonesia or India should be concerned with its current account deficit. [8]
- (f) Discuss what policies you would recommend to a government when faced with the twin problems of current account deficit and inflation as described in the case study. [8]

[Total: 30]

- (a) (i) Using Figure 1, describe the changes in the relative shares of world exports of manufacturing and services for North America and Emerging Asia between 2010 and 2060. [2]**

North America's relative share of world exports of both manufacturing and services industries have fallen, while Emerging Asia's relative shares of world exports of both manufacturing and services industries have increased.

- (a) (ii) Explain how the concept of opportunity cost can be used to explain the changes you observed in (a) (i)? [4]**

The change in the relative shares of world exports of the 2 regions could be due to the changes in technology that affect productivity and opportunity costs of producing these goods.

The decline in North America's share of world's exports of manufacturing and services might be attributed to the rise in its opportunity costs of producing these goods or its loss of comparative advantage in these industries to Emerging Asia. Due to rapid gains in technology in Emerging Asia and the increase in the level of education and skills in its labour force, Emerging Asia is increasingly able to produce lower-end manufactured goods and certain types of services (low-end) at a lower opportunity costs compared to North America.

For example, in 2010, North America might incur a lower opportunity cost of producing machines in terms of its next best alternative good forgone such as food crops, compared to Emerging Asia. The reason could be that the factor endowments in North America such as its highly skilled labour force and advanced technology are more suited to the production of machines than food crops. Thus its comparative advantage lies in machines (manufactured goods).

However, by 2060, Emerging Asia could have made great gains in technology advancements and also increased the skills and education levels of its labour force such that its opportunity cost of producing machines is lowered to a level that is lower than that incurred by North America. As such, by 2060, Emerging Asia has gained comparative advantage in machine production at the expense of North America. The same explanation could be advanced for the rising share of world exports of services too. In this case, North America might have lost comparative advantage in low-end services.

- (b) Using AD/AS analysis, explain how emerging economies can benefit from a stronger US economy. [4]**

With a stronger US economy, emerging economies such as India, China and Indonesia will experience a faster economic growth and an improvement in their balance of payments. As the US experience economic growth, there is a rise in purchasing power of the US consumers that raises their demand for imports. US firms would also increase demand for imported inputs from emerging economies. These will lead to a rise in import expenditure of US. As US is a key trading partner of many emerging economies, the rise in import expenditure in US will lead to a rise in export revenue of emerging economies.

At the same time, the stronger US economy improves the financial ability and confidence of the US firms to invest in other countries such as the emerging economies.

Both the rise in export revenue and inward investment of US firms into emerging economies increase the level of AD in emerging economies. This is because export revenue and investment are components of AD. Due to the rise in AD, there will be a shortage of goods and services in the economy.

Assuming that the emerging economies are not operating at full employment, as the price rises, the firms will respond by increasing the production of the goods and services. This will lead to a rise in real national output and hence economic growth.

Alternatively, students can include the multiplier process as follows:

Assuming economy is not near full employment (AS curve horizontal), when AD rises, shortage results that induces firms to hire more factor inputs to increase production. Thus incomes rise and this will lead rise in induced consumption which further increases production and incomes. The multiplier process continues until a new equilibrium level of national income where $AD=AS$ is attained. Eventually total rise in national income is more than the initial rise in export revenue and investments.

- (c) Explain a possible link between the level of interest rates in a country and its exchange rate. [2]**

The rise in interest rates in a country will lead to an appreciation of the domestic currency relative to a foreign currency. This is because the rise in interest rates will attract hot money from abroad (short term capital inflow) as the returns are higher. Hence, this will lead to a rise in demand for the domestic currency, resulting in a shortage. Therefore, the price of domestic currency, which is the exchange rate, will appreciate.

- (d) Explain why there is a need for the government to rein in consumer prices. [2]**

When there is a persistent increase in consumer prices, this means that there is inflation in the country. High inflation is usually harmful to an economy. High inflation discourages savings and investments. This is because of the increased uncertainty and greater risk because firms are not able to accurately project future prices and costs of production. They will postpone investments. Fall in investments lead to fall in aggregate demand as well as fall in aggregate supply. The fall in AD leads to surplus of goods and services and in the short run, firms reduce production, leading to fall in national income and economic growth. In the long run, the fall in AS lowers the potential economic growth of the country. Thus there is a need for government to rein in consumer prices.

- (e) Discuss whether Indonesia or India, should be concerned with its current account deficit. [8]**

Introduction

A current account deficit means that the country's total expenditure on imports of goods and services, factor incomes from abroad and net unilateral transfers exceed its total earnings from export of goods and services and factor incomes paid to abroad. A current account deficit implies that a country is living beyond its means.

Whether this deficit should be of concern to the government depends on a few factors such as the size and nature of the deficit and its causes.

Body

The size of current account deficit as % of GDP for both Indonesia and India are comparable, 3% and 2.4% respectively (Extract 7). This size in itself may be considered small and thus not a cause for concern for both economies.

However, if we study the trends, Indonesia's deficit seems to be more persistent than that of India's. In fact, Indonesia's current account deficit has started in 2003 (Extract 8). On the contrary, India's deficit has declined somewhat. Also, upon closer examination into the causes of the deficit, Indonesia's deficit is a result of fundamental structural issues. For example in Extract 8, it was mentioned that part of the deficit was due to the country's "lack of investments" in the oil and gas sector and "maturing oil fields." The lack of investments resulted in fall in productivity and efficiency in the sector and this coupled with the maturing oil fields means that it is increasingly difficult to increase the domestic supply of oil. Hence, the country is forced to increase its oil imports and this explains the rise in import expenditure.

In addition, labour productivity in Indonesia is falling relative to its neighbours. Ceteris paribus, this means that its unit labour costs in particular in manufacturing, rises and so this may force its firms to increase its export prices. Hence, it is not surprising that Indonesia is also losing its export competitiveness in manufacturing as mentioned in Extract 8.

The situation for India is different. India's deficit was attributed to the rise in gold imports (Extract 7) as the people buy gold as a store of value. Government attempts to reduce gold imports by imposing tariffs have been successful in reducing gold imports. This coupled with the rise in India's exports have narrowed the current account deficit.

Synthesis & Conclusion

From the data provided, I think that Indonesia should be more concerned with its current account deficit than India because the problem has persisted for a long time which suggests that there are serious fundamental structural weaknesses in the economy that the government has not addressed successfully. Reducing the deficit would require painful structural adjustments which can be costly yet necessary. However, it seems that the Indian government has less to worry about its current account deficit because the current policies seem to work.

Even so, my conclusions above are based on a set of data that is really inadequate and incomplete. Thus, understandably, more information such as the ability of the country to finance the current account deficit and the other reasons for the deficit are required to be able to make more accurate conclusion as to which country should be concerned with its current account deficit.

Mark scheme

L3	<p>Adequate to rigorous economic analysis is consistent throughout the answer.</p> <p>Good use of relevant data to support key ideas.</p> <p><i>Clear and logical reasoning to determine choice of country with reference to setting criteria for decision-making.</i></p> <p><i>Awareness of the limitation of data.</i></p>
L2	<p>Adequate to rigorous economic analysis is evident.</p>

	<p>Some use of relevant data to support key ideas. Some attempt to apply and explain criteria for decision making. Coherent and logical response. If response is largely theoretical, with very limited reference to case material, then award max 4m.</p>
L1	<p>Some understanding of the problem of current account deficit and its causes. Limited attempt to address the question. Lack of clarity in explaining choice of country.</p>

- (f) **Discuss what policies you would recommend to a government when faced with the twin problems of current account deficit and inflation described in the case study.** [8]

Introduction

The choice of government policies most often depends on the relative effectiveness of the policies in solving the problem and consideration of their trade-offs. Most often, the government that faces twin problems of current account deficit and inflation, certainly would need more than one policy.

Body

The government can consider expenditure-reducing policies such as contractionary monetary and fiscal policies to reduce both the current account deficit and inflation. As mentioned in Extract 7, in all economies, Brazil, India and Indonesia, interest rates have been raised or kept high to rein in consumer prices. Rise in interest rates makes it more costly for firms and households to borrow money. Thus there will be a fall in both investment and consumption. The fall in AD creates a surplus of goods and services, thereby bringing down the general price levels. (AD/AS diagram is optional).

This policy may be more effective in reducing inflation in countries like Brazil and Indonesia than in India. The reason is that consumption and investment demand may be more sensitive to higher interest rates because the economic outlook for both Indonesia and Brazil is not good as stated “growth prospects are deteriorating” and its people are heavily indebted. In contrast, India is “currently lifted by optimistic sentiments” which suggests that the positive economic outlook may instil confidence in the economy such that the higher interest rates may not be very effective in curbing investment and consumption.

The higher interest rates will also help the country to reduce its current account deficit through its contractionary effect on national incomes. The resultant fall in national income reduces the people’s purchasing power and hence reduces their ability to buy imports. As a result import expenditure falls. The more income elastic is the demand for imports, the larger will be the fall in demand for imports. However, this policy is most effective if the cause of deficit is high economic growth. In the case of countries like Indonesia, part of the deficit is due to structural problems. As such, a more appropriate policy to consider would be supply-side policies.

Supply-side policies like interventionist or market-oriented policies can be used to increase efficiency and productivity thereby solving the stated twin problems. For example, in Singapore, the government introduced SkillsFuture, a scheme that subsidises training to encourage more workers to upgrade their skills. This move aims to increase the quality of the labour force and with greater efficiency, unit costs of production can be lowered. This in turn will translate to lower prices of the country’s exports which will lead to rise in quantity demanded and hence rise in export revenue. The government e.g. the Indonesian

government can also subsidise investment in its oil and gas sector to improve efficiency and hence increase AS. When the oil sector is able to increase production to meet the rise in domestic demand, that will help to reduce the country's demand for oil imports and so improve its current balance. Supply-side policies is a long-term policy. However it has positive impact not only on the current balance but also on inflation although there are limitations to its successful implementation such as lack of willingness of the people to take up training due to financial constraints or lack of willingness of firms to send their workers for training due to loss of man-hours currently.

Conclusion

Solving the twin problems of current account deficit and inflation can be challenging to any government. Contractionary demand management policies such as monetary policy can help to solve both problems simultaneously and thus could be recommended although there is a trade-off in terms of slower economic growth. Still the government may be forced to adopt that solution especially when inflation is quite severe. The government should also actively use supply-side policies because in this age of globalisation, competition is keen and thus, to maintain its competitiveness and maintain a healthy current balance, innovation and increasing efficiency are key. In this respect, supply-side policies are necessary.

Mark scheme

L3	Rigorous explanation of at least 2 appropriate policies. Makes a recommendation after considered evaluation. Coherent response. Use case material to support ideas.
L2	Adequate explanation of at least 2 appropriate policies. Some attempt at evaluation. May use case materials to support ideas.
L1	Limited explanation of appropriate policies. May explain the solution to only one problem. Very limited evaluation of the solutions.

Section B

Answer **one** question from this section.

- 3 (a) Explain, with the help of examples, how scarce resources are allocated in the free market. [10]
- (b) Discuss the usefulness of price elasticity of demand to a government. [15]

PART A

Introduction

Define key term: Scarcity arises because there are limited resources but unlimited human wants. Thus, resources are scarce or insufficient to satisfy all wants. A free market economy is one in which the decisions of individual households and firms determine the allocation of resources.

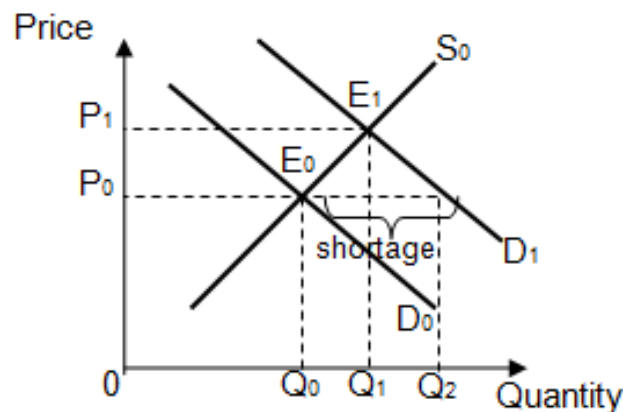
Direction of essay: In the allocation of scarce resources, the producer faces the problems of what and how much to produce, how to produce and for whom to produce. In a market economy, the price mechanism is able to solve these problems.

P1: The price mechanism solves the problem of what and how much to produce.

EE: In a free market economy, resources are allocated through the price mechanism. The free play of market forces of demand and supply determines price which then acts as a signal to firms to allocate scarce resources.

The consumers signal their demand for the goods by offering a price that they are willing and able to pay for the good. The producers will then respond by producing the quantity of the goods that they are willing and able to produce for the price that is offered to them.

For example, in Figure 1, the initial equilibrium price is P_0 and the equilibrium quantity of waffles is at Q_0 . If demand for waffles rises from D_0 to D_1 and supply remains unchanged, this will cause a shortage of Q_0Q_2 at the original price of OP_0 which will exert an upward pressure on price as unsuccessful buyers are willing to pay a higher price. As price rises, quantity demanded falls and profit maximising sellers increase the quantity supplied.



A new market equilibrium is reached at point E_1 where quantity demanded will once again be equal to the quantity supplied. Both the new equilibrium price and quantity exchanged are

higher following an increase in demand. Hence the equilibrium price will increase from OP_0 to OP_1 and equilibrium quantity will increase from OQ_0 to OQ_1 .

L: Thus the price mechanism solves the problem of what and how much to produce.

P2: The price mechanism solves the problem of how to produce.

EE: Due to the competitive environment that exists in markets, firms are motivated to produce goods as cheaply as possible and keep their prices as low as possible. Often the prices of inputs used by firms are dependent on the demand and supply of inputs in the market as well.

To produce goods at the lowest possible cost, firms compare the prices of labour, land and capital and use the least cost combination of inputs by using more of cheaper resources and less of more expensive resources. For example, SBS Transit buses hire less conductors. The company tries, whenever possible, to rely more on machines (ticketing machines) than labour (conductors). The reason is that labour is more expensive.

L: Thus the price mechanism solves the problem of how to produce. This is in this case the use of more machines than labour.

P3: The price mechanism solves the problem of for whom to produce.

EE: Different people are willing and able to pay different prices for a good. This is partly due to differences in incomes and tastes and preferences. In a market economy, consumers' dollar votes or the willingness and ability of consumers to pay for a good determine the pattern of resource allocation. Those who are able and willing to pay more will exert a greater influence on resource allocation resulting in producers allocating scarce resources to produce goods and services for them. For example, premium durians in Malaysia are exported to other countries where consumers are willing and able to pay the premium price.

L: This illustrates that demand largely determines resource allocation decisions where the consumer is king in the free market.

Conclusion

Summary: The price mechanism will determine how scarce resources are being allocated by addressing the basic problems of what and how much to produce, how to produce and for whom to produce.

Link to part b: However in some circumstances, it may not result in efficient allocation of resources and thus the government might need to intervene in certain markets.

Levels	Descriptors
L3	<ul style="list-style-type: none"> • Good explanation how the price mechanism can address the basic problems of what and how much to produce, how to produce and for whom to produce with a well explained price adjustment process. • Real-life examples used to illustrate the workings of the price mechanism.
L2	<ul style="list-style-type: none"> • Good explanation of how the price mechanism can be used to allocate scarce resources efficiently. • Some understanding of how the price mechanism can address the basic problems of what and how much to produce, how to produce and for whom to produce. Or a well explained price adjustment process. • Some examples given but lacking in elaboration.
L1	<ul style="list-style-type: none"> • Smattering of points with little understanding of the price mechanism can result in efficient allocation of scarce resources.

- Many conceptual errors.

PART B

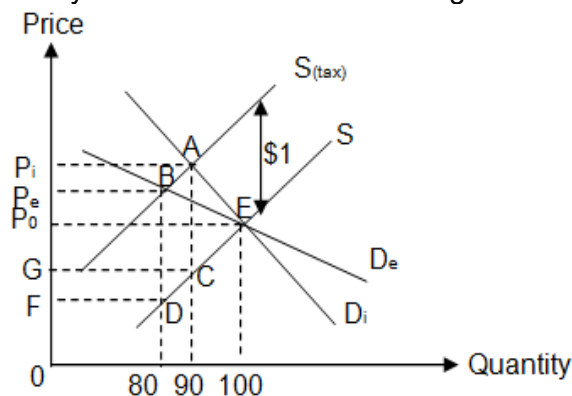
Introduction

- Define key term: Price elasticity of demand (PED) refers to the degree of responsiveness of quantity demanded of a good to a change in the price of the good itself, ceteris paribus.
- Direction of essay: The concept of PED is useful to the Government to a certain extent as it can help assess the impact and effectiveness of:
 - 1) Tax policies implemented with the purpose of raising government tax revenue
 - 2) Implementation of taxation to reduce undesirable consumption of a demerit good OR subsidies to increase consumption of merit good and
 - 3) Depreciation policy in reducing a trade deficit.

P1: Knowledge of PED is useful to determine the amount of tax revenue that can be collected when a tax is imposed on various goods

EE:

- In order to raise tax revenue to finance its government policies or correct a budget deficit problem, a government may seek to impose an indirect tax, such as an ad valorem tax (ie. GST) on various goods and services sold in the economy.
- However, the effectiveness of such a policy is determined by the amount of tax revenue that the policy can raise, which in turn is affected by the PED of the good.
- The more price inelastic the demand of the good is (ie. habit forming goods such as cigarettes, alcohol and addictive drugs), the less responsive quantity demand is to the price increase when tax is imposed. Hence, when quantity demand falls less than proportionately than when $PED > 1$, so the tax revenue which is determined by the amount of tax multiplied by the amount of tax will be larger.



- As shown in Figure 2, the initial equilibrium quantity traded of a particular good is 100 units. When a specific tax of \$1 is imposed on production, this raises the cost of production. Hence, the producer is willing and able to produce this same level of output only if he can charge a price higher by the amount of the tax. This shifts the supply curve vertically upwards by the amount of the tax from S to $S_{(tax)}$. The resulting shortage at price OP results in a new market equilibrium.
- If demand for the good is relatively more price elastic, as represented by demand curve D_e , quantity falls more than proportionately with the price increase and the new market

equilibrium is pt B. The new equilibrium quantity is 80 units, hence the total tax revenue collected is \$80 (80 units x \$1) or the area P_eBDF .

- However, if the demand for the good is relatively more price inelastic, as represented by a steeper demand curve D_i , quantity is less responsive to the price change, hence the new equilibrium quantity is 90 units and the total tax revenue collected is \$90 (90 units x \$1) or the area P_iACG .
- Therefore in reality, when a tax such as a GST or road tax is imposed, the government will be able to collect more tax revenue when it is imposed on goods whose demand is price inelastic such as cigarettes or sections of roads which are heavily utilised. The same goes for the imposition of casino entrance levy when it is imposed on habit forming goods such as gambling.

L1: Therefore, if the same amount of tax was to be imposed on each unit of a good, the total tax revenue collected will be larger when the tax is placed on a good whose demand is more price inelastic and the government can increase government tax revenue more substantially.

P2: Knowledge of price elasticity of demand enables the government to analyse the effectiveness of a tax policy in reducing undesirable levels of consumption of a demerit good.

EE:

- The use of tax to reduce consumption of socially undesirable goods will be more successful the greater the price elasticity of demand.
- Tax increases the price of a good. If demand for the good is price elastic, a small amount of tax per unit would be sufficient to reduce consumption significantly. However, if the demand for the good is price inelastic, as in the case of cigarettes and alcohol, even a large amount of tax may not reduce the quantity demanded very much.
- For example, in 2013, exercise duties on non-cigarette alcohol products such as beedies, ang hoon and smokeless tobacco was raised by 25 per cent. Such unfiltered tobacco products are seen to be more dangerous to health than cigarettes and tend to be the choice for poorer smokers. Since demand is price inelastic due to its habit forming nature, there has to be a substantial rise in the amount of tax in order to reduce consumption of it significantly to the socially optimal level of output.
- In Figure 2, the original equilibrium quantity is 100 units. When the demand for the good is price elastic, as represented by the demand curve D_e , the imposition of a tax will reduce the quantity demanded from 100 to 80 units. However, when the demand for the good is price inelastic as represented by the demand curve D_i , the quantity demanded is reduced from 100 to 90 units only.

L2: Thus if demand for a good is price inelastic, it might be necessary to impose a very high tax in order to reduce consumption to the socially desirable level. Other supplementary measures like legislation and education are also necessary.

P3: Knowledge of PED can also determine the effectiveness of the implementation of a depreciation policy when a country is faced with a trade deficit

EE:

- To correct a trade deficit, the government can depreciate its currency to boost export competitiveness and it can do so by selling its domestic currency in the foreign exchange market.
- When domestic currency depreciates, the price of the country's exports in foreign currency will fall. Assuming the demand for its exports is price elastic, this will lead to a more than proportionate increase in quantity demanded for exports, ceteris paribus, and hence a rise in its export earnings.

- Currency depreciation will also increase price of imports in domestic currency. If the demand for imports is price elastic, a rise in price will result in a more than proportionate fall in quantity demanded for imports, ceteris paribus, leading to a fall in import expenditure.
- With a rise in the country's export earnings and a fall in its import expenditure, there will be a rise in net exports (X-M). The trade balance will improve.
- For this policy to be effective in targeting the trade deficit problem, it must fulfil the PED conditions, which is the Marshall-Lerner condition where the sum of price elasticity of demand for exports and price elasticity of demand for imports is more than one, so that the currency depreciation will lead to a rise in net exports.

L: Thus, the concept of price elasticity of demand is useful as the value of price elasticity of demand for the country's exports and imports will determine the outcome of this policy.

P4: However, in reality, there are limitations to the usefulness of the PED concepts to a government.

(i) Ceteris Paribus assumption:

- Knowledge of the concepts of elasticity of demand is certainly useful in the government in decision-making but to a limited extent. This is because the concepts operate under "ceteris paribus" assumption. In the real world, more than one factor affecting demand can change simultaneously, for example, price, income and tastes and preferences can all change at the same time.
- For example, the government might impose a tax on a good whose demand is price inelastic in order to earn larger tax revenue. However, other factors such as a fall in income might result in a fall in demand resulting in a smaller amount of tax revenue earned.

(ii) Accuracy and Reliability of the Data:

- The value of price elasticity of demand of a good may also not be accurate for the following reasons:
 - Sample size and characteristics are too small to be representative.
 - Time period selected is far from the current period, hence data is outdated.
 - Data collected is inaccurate for various reasons such as households do not reveal their preferences accurately due to personal reasons.

L: Under such circumstances, the use of PED by a government is limited due to the inaccuracy of the data

Conclusion

Summary and personal opinion:

- The concept of price elasticity of demand ~~is~~ may be useful to a government in formulating policies to achieve its goals. However, there are also limitations to the use of these concepts and government should be aware of the limitations in order to make accurate judgement of the effectiveness of the policy.
- In view of such limitations, the government must make an effort to constantly update the elasticity concept data through yearly consumer household expenditure surveys and also be aware of factors that might affect the demand or supply of the good or service in question.

Levels	Descriptors
L3	<ul style="list-style-type: none"> • Rigorous and clear two-sided explanation of how the PED concepts can be

	<p>used to assess the effectiveness of various government policies. (Max 7m if only candidate only explain Micro policies)</p> <ul style="list-style-type: none"> • Clear and relevant examples given in answer.
L2	<ul style="list-style-type: none"> • Good explanation of the usefulness of PED concepts to the government. • Some understanding of how the PED concept can be used to help assess the effectiveness of various government policies (Micro or Macro). • Some examples given but lacking in elaboration.
L1	<ul style="list-style-type: none"> • Smattering of points, showing little or superficial understanding of Price elasticity of demand concept with many conceptual errors.
E2	<ul style="list-style-type: none"> • For an evaluative discussion, or one that is supported by rigorous economic analysis. • Eg: ability to explain the limitations of using the PED concept with clear examples. • Able to provide a personal view.
E1	<ul style="list-style-type: none"> • For an unexplained judgment, or one that is not supported by analysis.

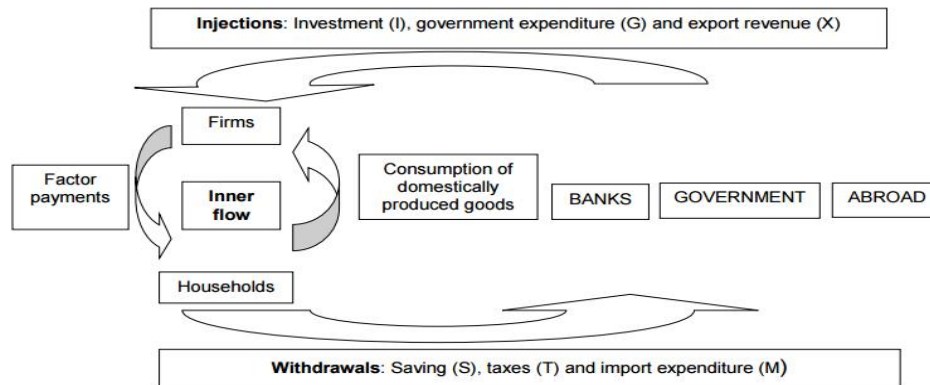
- 4 (a) Explain the key components of the circular flow of income of Singapore. [10]
- (b) Globalisation has resulted in improvements in standard of living in all countries. Discuss. [15]

Part A

Introduction

Define key term: The circular flow of income describes both the flow of money and goods and services between firms, households, government and the external sector in an economy. Direction of Essay: Singapore is an open and small country which relies heavily on trade and foreign direct investments. This results in imports, exports, investments and savings being the key components of its circular flow of income.

P1: Explain the circular flow of income



The interaction between firms and households takes place in two different markets – goods and factor markets. The goods market is where trade in goods and services takes place whereas in the factor market, services of factors of production are traded. These interactions involve the flow of income between firms and households.

Firms hire factors of production from households or individuals to produce goods and services. In return for the use of factors of production such as labour services, land, capital and entrepreneurship skills owned by households, the firm pays income to the households or individuals. These incomes can be in the form of wages, rent, interest and profits. The sum of all these factor payments makes up the national income of the country.

With the income received, households spend all their incomes on goods and services produced by the firms. This flow measures income in real or output terms. The total expenditure by households equals the total income received.

Besides consumption expenditure that arises from household's current income, there are also other forms of expenditure that do not arise from household's current income. These are investment expenditure on capital goods by firms, government expenditure on goods and services and expenditure by foreigners on the country's domestically produced goods and services or exports. These expenditures are called injections.

On the other hand, there are also leakages or withdrawals from the circular flow of income. They are called so because they are part of income that is not spent on currently produced goods and services. Examples of withdrawals are savings, taxes and import expenditure.

P2: The key injections into the circular flow of income of Singapore are investment expenditure and export revenue.

EE: Being an open economy and our status as a financial hub, there is less restriction in the inflow and outflow of foreign direct investments. Thus more investments will flow in and out of the country resulting in a change in injections in the economy. A country like Singapore is

most likely to experience a high inflow of FDI due to its characteristics of having the 2nd lowest corporate tax rate in the region, a stable and non-corrupted government.

Being a country with a small population, Singapore has a small domestic market for the sale of its goods and services. Thus, there is a need to export its goods and services to other countries. Being endowed with skilled labour with a high productivity level will enable Singapore to produce high quality exports at a lower price resulting in high export earnings. Singapore also signed a number of Free Trade Agreements (FTAs). A FTA is a legally binding agreement between 2 or more countries to reduce or eliminate barriers to trade and investment making it easier to trade with her FTA partners and to invest in their markets.

L: Therefore investment expenditure and export revenue are the key injections.

P3: The key withdrawals from the circular flow of income of Singapore are savings and import expenditure.

EE: The level of savings is high in Singapore. This arises from compulsory savings through CPF contribution where 20% of gross income is saved. In addition, households save another proportion for precautionary and other purposes. Overall, Singapore's savings as a percentage of GDP is about 50% which is one of the highest in the world.

Being a small country lacking natural resources, Singapore is also heavily dependent on imported final goods and services for consumption and raw materials for production of goods and services.

L: All these resulted in high levels of savings and import expenditure.

Conclusion

Summary: In conclusion, due to Singapore's characteristics of being a small, open country which relies on trade, the key components of its circular flow of income are savings, import expenditure, investment expenditure and export revenue.

Link to part b: The changes to injections and withdrawals caused by factors such as globalisation will have an impact on the level of national income in the country both in the short run and in the long run. This will also impact a country's standard of living.

Levels	Descriptors
L3	<ul style="list-style-type: none"> • Thorough explanation of the circular income flow with all key components described with relevant examples. • Clear explanation of these why these components are the key injections and withdrawal from the circular income of flow with reference to the Singapore economy.
L2	<ul style="list-style-type: none"> • Adequate explanation of the circular income flow • Some explanation of any 2 components with some reference to the Singapore economy
L1	<ul style="list-style-type: none"> • Broad overview of the circular income flow • Limited explanation of the key components of the circular flow of income of Singapore.

Part B

Introduction

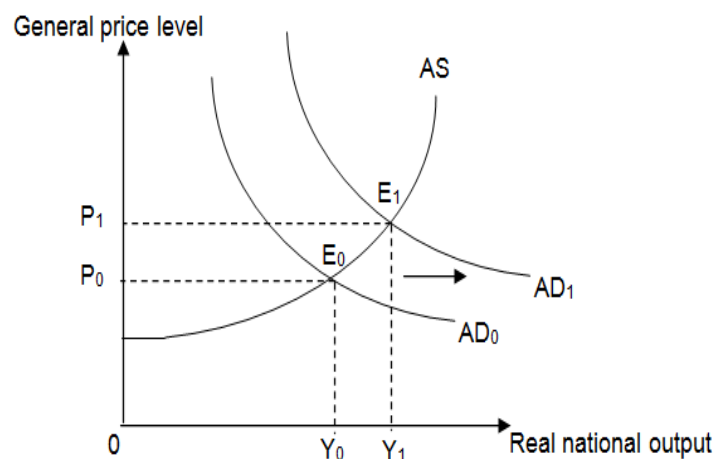
Define key terms: Globalisation is the process of continuing integration of countries in the world where national markets become increasingly interlinked. Globalisation leads to a lowering of trade barriers and greater mobility of goods and services, labour, capital and technological know-how.

The standard of living refers to the level of material and non-material well-being of an individual or household. The material well-being is measured by the quantities of goods and services consumed while non-material SOL is measured by factors such as the quality of healthcare and education standards, happiness and stress levels.

Direction: Globalisation is one of the main reasons to account for economic growth and higher standard of living in many countries. But globalisation also poses serious challenges to other countries. The extent to which a country's standard of living will improve depends on a few key factors which are both economic and non-economic in nature, which we will discuss in this essay.

P1: Globalisation will result in greater flows of goods and services and economic growth and hence countries enjoy an improvement in its material standard of living.

EE: Globalisation leads to a rapid expansion of international trade in goods and services and greater mobility of factors of production. Countries win when they gain market access for their exports due to trade liberalisation. With trade, the demand for the country's exports by the rest of the world increases. This will result in a rise in export earnings. Assuming that the rise in demand for exports is higher than the rise in demand for imports, there will be a rise in net exports causing the aggregate demand to rise.



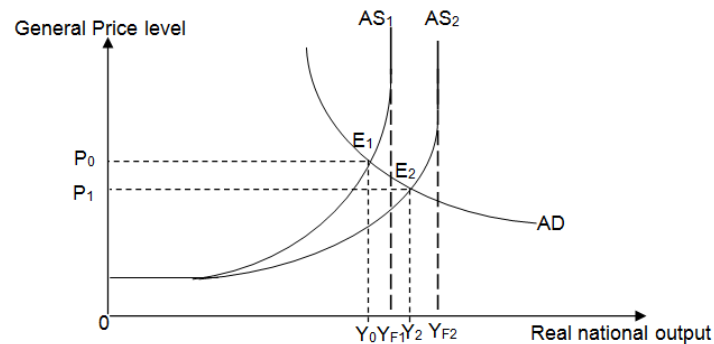
PAP: The original equilibrium is at E_0 . When there is an increase in aggregate demand, the AD curve will shift to the right from AD_0 to AD_1 . At the original price level of P_0 , the level of aggregate demand is now greater than that of aggregate supply. The resultant shortage causes prices to be bid up. As price levels rise, firms have incentive to increase production because of the higher profits. At E_1 , the general price level and real national output are higher at P_1 and Y_1 respectively. Unemployment will also fall as labour is a derived demand of production. The rise in real national output, assuming that population is constant, implies that people in the country are better off because it could be that more goods and services have been produced and made available for consumption. Hence more wants are satisfied. The rise in national income and fall in unemployment will result in higher purchasing power of the people.

L: Thus, with globalisation and expansion of trade due to trade liberalisation, most exporting countries enjoy a rise in its material standard of living as a result of trade fostering its economic growth and employment.

EV: The extent of the rise in net exports and economic growth depends on the level of competitiveness of the country's exports. Countries like Singapore who adopted supply side policies to encourage innovation and R&D will be able to produce quality goods and services at a lower price. This will enable it to enjoy a higher increase in net exports and thus a higher material SOL.

P2: Globalisation might also result in inflow of foreign direct investment which will result in a rise in future standard of living.

Globalisation has led to greater financial flows across national border. Since 1990, there has been a huge upsurge in international capital flows and a growing integration of international capital markets. Total foreign direct investment (FDI) flows in the world have increased over the years.



In the long run, the rise in quantity of capital goods due to the rise in FDI will result in a rise in productive capacity. This will result in a rise in the country's LRAS causing the AS curve to shift from AS_1 to AS_2 rise resulting in a rise in full employment level of real national output from Y_{F1} to Y_{F2} . This results in potential economic growth.

L: As a result, the country's future living standard can be expected to improve due to the ability to produce more goods and services in the future.

EV: The level of inflow of FDI depends on the country's ability to attract it. Countries whose conditions are not favourable for investments will suffer from an outflow of FDI. Eg. Political instability and poor infrastructure development. Countries facing political turmoil such as Thailand during the recent coup experienced an outflow of investments. This will in turn worsen its standard of living. On the other hand, some developing countries that boast of a skilled low cost labour force, sound infrastructure and lower cost of production will be able to attract more FDIs due to the higher rates of returns they offer on investments.

P3: Globalisation might result in structural unemployment which will worsen the country's material standard of living.

EE: With globalisation, large numbers of (mainly low-skilled) workers from China and India enter into the global labour force. This results in the loss of comparative advantage in low-end manufactured goods due to outsourcing of jobs. There will be loss of jobs mainly for low-skilled workers and older workers, thus resulting in structural unemployment due to mismatch of jobs as these workers find it difficult to switch to the sunrise industries due to the lack of skills. Eg. In Singapore, hard-disk maker Seagate Technologies shut its manufacturing plant in Ang Mo Kio and retrenched 2,000 workers in 2010 when it decided to

move its production plant to Thailand to take advantage of cost competitiveness that is present in Thailand. While Seagate Technologies retrenched the workers in their production facilities in Singapore, it expanded the R&D team to work on researching and developing new hard drives in the country. This created jobs for skilled workers. However, without the relevant skills, workers who have lost their manufacturing jobs previously will not be able to take up employment in the new sector.

L: This results in structural unemployment in the country which worsens the SOL.

EV: However, the extent to which a country will suffer from structural unemployment and a fall in material SOL depends on its ability to train workers to take up jobs in the new sunrise industries with the relevant SS- side policies. In Singapore, the government emphasises on continuous upgrading of skills and implemented many training and re-training programmes which increases labour mobility. This enables workers to switch and find new jobs and mitigates the negative impact of structural unemployment that arises from globalisation.

(Candidate might also explain how the change in demand for high skilled and low skilled workers might result in rising income inequity. Thus not everyone's standard of living will improve.)

P4: Globalisation might also cause a country's non-material standard of living to worsen.

EE: Despite the rise in income, due to increase in export earnings and investment, non-material quality of life might deteriorate with more globalisation. The resultant rise in production might increase the level of pollution in a country. For example, in 2012, Indonesia and its surrounding countries experienced its worst haze problem when the pollution standard index (PSI) shot to 400. The haze was caused by a Singapore-based company. Due to the lack of enforcement, the slashing and burning of the Indonesian forests was to make way for palm oil plantations for biofuels. Despite the rise in FDI in the country which resulted in a rise in income, the Indonesians suffered from the worsening air quality which in turn worsened their non-material standard of living.

The increase in level of output may also mean that workers in some developing countries are working long hours assuming that labour productivity level remains unchanged. This reduces the amount of leisure time reducing quality of life. For example, the emergence of sweat shops in countries with low labour costs such as China and Bangladesh due to globalisation resulted in workers working long hours under unfavourable conditions despite the rise in output.

L: Thus there will be a fall in non-material standard of living. The government of the country must therefore intervene by implementing regulations to curb the level of pollution and ensure the welfare of workers is well taken care of in order to lessen these negative impacts. The extent of this negative impact on SOL will be therefore dependant on how the governments of different countries react and prevent pollution from going out of control.

Conclusion

Globalisation is beneficial because it brings about increased output and income, thereby raising the standard of living of the people. However, in the short run, countries may face some problems like unemployment, pollution and the fall in quality of life. The extent of these

impacts also depends on the characteristics and conditions of these countries. Countries may use regulation and supply side policies to address the impacts. This is so that the full benefits of globalisation can be realised while minimising its negative impact.

Level	Descriptors
L3	<ul style="list-style-type: none"> • Sound analysis of the impact (both positive & negative) of globalisation on current, future material SOL and Non-material SOL. • Examples given are clear and relevant. • Conclusion is reasonably supported.
L2	<ul style="list-style-type: none"> • Adequate understanding of the impact of globalisation on standard of living with some recognition of the differing impact on different countries. • Shows impact on only 1 form of SOL
L1	<ul style="list-style-type: none"> • Splattering of points. • Very weak response to question, with vague understanding of the impact of globalisation on various aspects of standard of living.
E2	<ul style="list-style-type: none"> • For an evaluative discussion, or one that is supported by rigorous analysis. • Able to provide a reasonable personal view.
E1	<ul style="list-style-type: none"> • For an unexplained judgment, or one that is not supported by analysis.

SERANGOON JUNIOR COLLEGE
JC2 Preliminary Examination 2015
H2 Economics 9732 Paper 1
Suggested Answers

Question 1

From Farm to Supermarket

Figure 1: Price Indices for Farm and Retail Food Products, 2006-2013

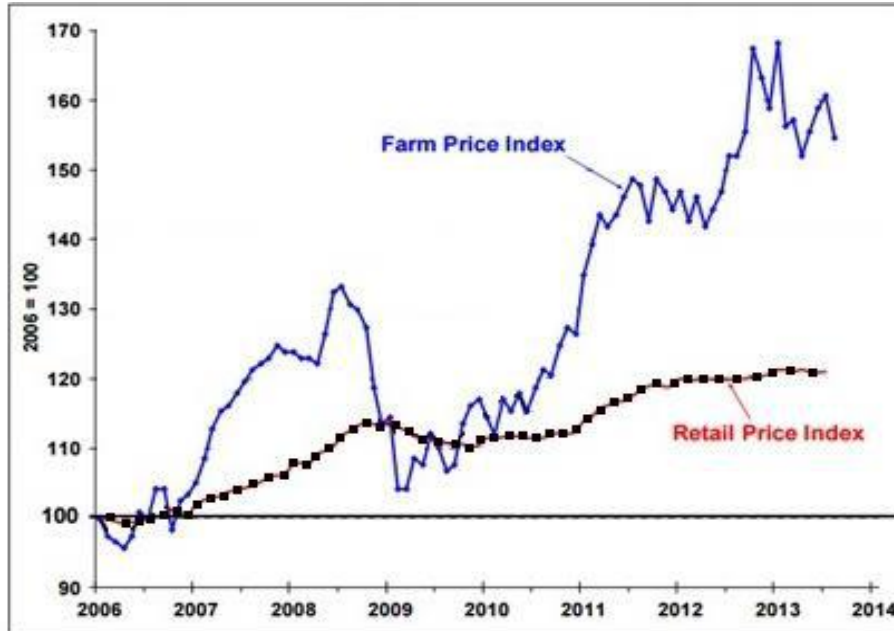
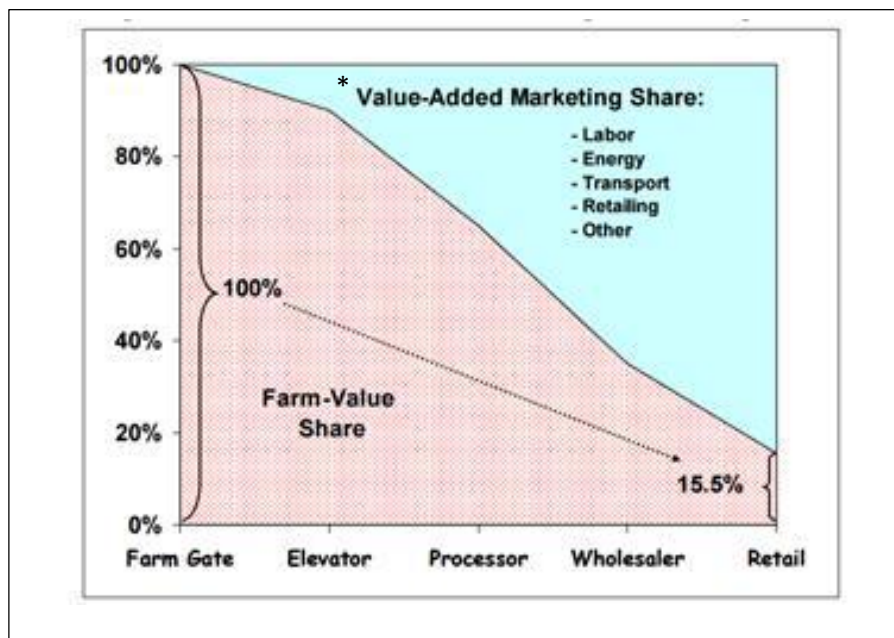


Figure 2: Value-Added to Farm Products along the Marketing Chain



*Value-Added Marketing Share costs include labour expenses for handling, sorting, cleaning, and packaging the product, transportation charges to move the product along at each stage, and fees for processing, storing, insuring, financing, and retailing the product (e.g., store maintenance and utilities, refrigeration, labelling, shelf display, advertising and promotional costs).

**Table 1: Farm and Value-Added Marketing Share for Major Food Groups
(as % of Final Retail Price)**

Food Group	Farm Share (%)	Value-Added Marketing Share (%)
Eggs	53.7	46.3
Beef	49.4	50.6
Processed Fruits & Vegetables	17.0	83.0
Processed Cereals & Bakery Products	8.3	91.7

Source (Figure 1, 2 and Table 1): Congressional Research Service, *Farm-to-Food Price Dynamics*, 27 September 2014

Extract 1: Certain technologies create benefits that affect others in the community

Agricultural technologies that create spillovers often remain at low levels of adoption because some or all of the benefits from these technologies accrue to individuals other than the adopting farmer. For example, practices that conserve water, or control pests may benefit the wider community, not just the individual farmer. Similarly, the first farmers to adopt a new technology in a village may benefit other farmers. In all of these cases, as long as individual farmers are not rewarded for the benefits that they generate for others, they will invest less in a new technology than is preferable from the point of view of society.

Source: <http://www.atai-research.org>, accessed July 2015

Extract 2: How technology can boost African farming

The one area where information technology and communication technologies (ICT) can have the greatest impact in Africa is in the agricultural industry. One of the largest challenges traditionally experienced by Africa's smallholder farmers has been a lack of transparent information about the market prices of crops. One service that gives farmers access to market prices via their mobile phones is called Esoko. Esoko also allows farmers to place buy/sell orders.

"Our goal is simply to put more money into the hands of smallholder farmers, and try to address the problem of middlemen taking advantage of illiterate farmers who are frequently disadvantaged price-takers, often selling at a loss. After receiving better information, income improvements for farmers are estimated to be between 10-30%", says the company.

Source: <http://www.howwemadeitinafrica.com>, 18 December 2012

Extract 3: Food fight! Stores, producers, consumers battle over high food prices

In the past year, consumer food prices have increased 4.4%, compared with a 2.9% price increase for all consumer purchases. The costs of a few foods in particular have skyrocketed. In 2011, meat, coffee and peanut-butter prices rose 9%, 19% and 27%, respectively.

Increased production costs will continue to mean higher food prices for wholesalers, and these higher costs will inevitably be passed on to consumers. Retailers and producers are strategising, and sometimes battling it out head to head, to try to avoid sudden and exorbitant price increases on consumer goods — in order to keep consumers spending. What has developed is a push and pull between retailers and producers over which entity will absorb the higher costs. Some of these costs, of course, are passed off to consumers directly, in the form of higher retail prices. Companies are trying to innovate and increase efficiency to lower their own costs. Procter & Gamble is cutting 5,700 jobs. General Mills introduced a smaller Cheerios box that lowers production costs as well.

Source: TIME online, <http://business.time.com>, 12 March 2012

Extract 4: British farmers forced to pay the cost of supermarket price wars

You can pick up a punnet of British raspberries on a two-for-one offer in most supermarkets. But as shoppers reach for that quintessential summer treat, they should perhaps ponder the fact that it is the farmer, not the supermarket, who is paying for the generous discount.

The farmer may well be making no profit at all, with no choice in the pricing and little or no idea, when he picked and shipped the raspberries, how much he would get for them. Farmers do not talk about these things. Many of them dare not risk annoying the big processors and shops. There is a "climate of fear" — the National Farmers Union's phrase — in the monopolistic world of modern food retail: small farm producers are too frightened to speak out about the abuses that are impoverishing them because they risk "reprisals", which may mean losing the only customers there are.

Source: *The Guardian*, 2 July 2011

Extract 5: Choosing the right strategies for increasing farmers' market power

In the face of agrifood enterprises' concentration, farmers remain 'fragmented' and are the only ones to be subject to true competition. In an international context that is characterised by economic, technical and financial concentration leading to the increasingly large and powerful firms, farmers are an exception. Most of them are effectively isolated and small compared to other sectors and especially compared with the agrifood concerns (processors, distributors and retailers) that are their major buyers.

In this context, farmers can use several strategies to increase their market power. These strategies can be collective or individual. The collective strategies can be based on instruments such as market discipline (aimed at managing supply such as quota), forming cooperatives etc. The individual strategies entail searching for market niches (eg product differentiation by branding or labelling) and having direct access to consumer (eg through IT).

Source: Sophia Murphy, *Concentrated Market Power and Agricultural Trade*, 2011

Questions

- (a) (i) Using Figure 1, compare the changes in farm price and retail food price from 2006 to 2013 . [3]
- (ii) Using Figure 2, explain a possible reason for any difference between changes in farm price and retail food price. [2]
- (b) With reference to Table 1 and Figure 2, suggest a possible reason for the difference in the marketing share of the final retail price among the different food groups. [2]
- (c) With reference to Extract 1, explain how the market fails. [5]
- (d) Discuss whether consumers or retailers of food are more likely to bear the burden of increased farm prices. [8]
- (e) Improvements in technology cannot benefit farmers as much as measures to help them acquire greater market power. Discuss. [10]

[Total: 30]

Suggested Answers

(a) (i) Using Figure 1, compare the changes in farm price and retail food price from 2006 to 2013. [3]

- Overall both increase
- Farm price shows greater price fluctuation whereas retail food price shows a more stable price increase.
- From end 2009 to end 2011, both farm price increases retail price increases but from 2011 to mid - 2012, farm price falls but retail price still increases.

(ii) Using Figure 2, explain a possible reason for any difference between changes in farm price and retail food price. [2]

Possible reason for greater price fluctuation for farm price

- **The supply of farm products is more affected by weather rather than retail food products.**

The supply of farm products eg wheat is directly affected by weather conditions. Good weather → bumper harvest → SS increases → surplus → price falls and vice versa for bad weather.

However, most of the inputs used for producing retail food such as labour, machines and equipment and other raw materials are not affected by weather. Thus its supply is less subjected to the vagaries of the weather causing its price to fluctuate less.

Possible reason why farm price increase but retail price increase but when farm price falls, retail price still increases

- **Share of farm product cost to total retail cost is small.** The cost of farm products is very small as a proportion of total cost of the retail product. As such large increase in farm price will not have much impact on retail price as profits are not affected. So the increased in retail price could be due to other factors that affect the costs of the other inputs for eg price of fuel. Likewise when farm price falls, retailers will not adjust price downwards as the impact on profits is minimal.

(b) With reference to Table 1 and Figure 2, suggest a possible reason for the difference in the marketing share of the final retail price among the different food groups. [2]

Mkt structure: Different Degree of product differentiation/degree of competition

Process food such as cereal and bakery products is not as homogenous as unprocessed food like eggs and beef and they are sold in a monopolistically competitive market or oligopoly. Firms usually try to differentiate their products by spending heavily on advertising and promotions to inform as well as persuade consumers to buy their products. This is also partly due to imperfect knowledge as these products are very different from what they are originally made from. Thus there is more marketing cost needed to inform consumers about the product. On the other hand, the nature of products like eggs and beef do not lend themselves to as much product differentiation and there is little need for information as most consumers would already know what they are. So their marketing cost is much lower.

OR

Different length of marketing chain

Cereals and bakery products are goods that have a longer marketing chain as they are transformed from farm to the final product. They have to complete many stages of production before they are sold to consumers at retail outlets. At each stage of production, there are labour expenses, transportation charges, fees for processing and retailing the product, their value add marketing costs. In contrast, eggs and beef are primary/intermediate products have a shorter marketing chain as they are sold direct from farm to consumers. They require less processing and therefore less value add marketing cost.

(c) With reference to Extract 1, explain how the market fails. [5]

Mkt fails because of the presence of positive externalities associated with the use of better technology.

Define positive externality

Case material: technologies accrue to individuals other than the adopting farmer. For example, practices that conserve water, or control pests may benefit the wider community, not just the individual farmer.

Private benefit of adopting pest control: higher yields as farmers' crops are protected from pests such as rodents and bugs

External benefit of adopting pest control: When pests such as rodents and bugs are terminated in one farm, third parties such as other farmers in the surrounding areas also benefit as they will have a good harvest as their crops are protected from harm.

Explain analysis of how the presence of external benefit leads to partial market failure and inefficiency in resource allocation.

(d) Discuss whether consumers or retailers of food are more likely to bear the burden of increase farm prices. [8]

Effect of increase in farm prices on retail food prices

Increase in price of farm prices → increase COP of final products eg price of fresh turkey increases → COP of roast turkey increases → supply of roast turkey falls → SS curve shifts leftward S to S2. The vertical distance between the supply curves represents the increase in COP → at original price there will be a shortage → price increases.

The increase in COP is shared between consumers and producers and the proportion borne by each is determined by the relative price elasticity of demand and supply for the good as well as other factors such government intervention.

Case 1: DD is price inelastic relative to supply

Define PED and PES

DD for roast turkey during Christmas period is price inelastic as it is a necessity for the Christmas season. Supply is more elastic as uncooked turkey can be kept in cold storage and as long as retailers have the inventories, they are able to respond to a price increase.

Initial price is P_0 → SS curve shifts to S_e → increase in cost is P_2P_1

Before price increase, consumers pay P_0 but after price increase consumers pay P_1 . The remainder is paid by retailers. Consumers burden: P_0P_1 . Retailers burden: P_0P_2

Outcome: consumers bear a higher burden compared to retailers. Reason: Since demand is price inelastic relative to supply, shifting more of the higher cost to consumers will only result in a less than proportionate fall in quantity demanded and so total revenue of producers increase.

Case 2: DD is price elastic relative to supply

After Christmas: DD for roast turkey is price elastic as roast turkey is no longer a festive food and consumers have many substitutes such as other meat products. SS is less price elastic as the stocks that are left over have to be sold quickly as there are expiry dates for their consumption.

Consumers burden: P_0P_1

Retailers burden: P_0P_2

Thus, consumers bear a lower burden than retailers. Reason: Since demand is price elastic relative to supply, a small increase in price will result in a more than proportionate fall in quantity demanded and total revenue falls. Thus retailers would not dare to shift a higher proportion of the increase in cost to the consumers and would rather absorb more of the cost.

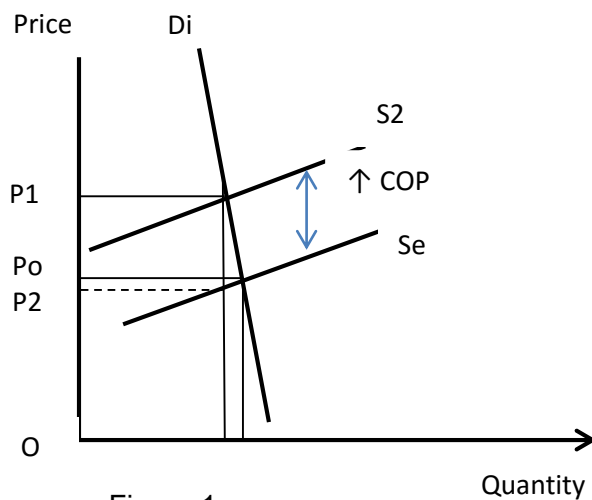


Figure 1

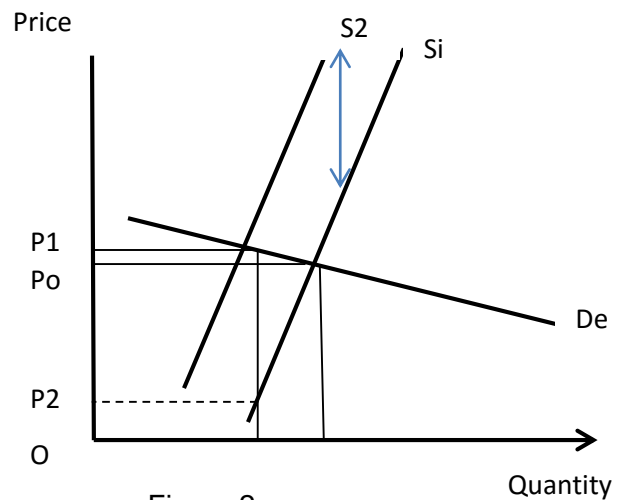


Figure 2

Case 3: Government intervention such as price ceiling and subsidies

When government implements a price ceiling which is a maximum price below the equilibrium price, consumers need not have to pay the full extent of the increase in price. So the burden borne by the consumers is lesser.

In conclusion, the major determinants of who will bear more of the burden of increase in farm prices are mainly the relative elasticity of demand and supply for retail food assuming no government intervention. If there is government intervention in the form of subsidies to consumers, then the share of consumers' burden will be passed on to the government.

L3	Students need to give just 2 cases. Shows clearly at least 2 cases who bear more or less of the burden of the increase in farm prices. Clear explanation with relevant examples as to why PED and PES are elastic or inelastic and the effect of increase in farm price on price of retail food. Diagrams are correctly drawn and explained.
L2	Answers cover only one case, with clear explanation of why demand or supply is elastic or inelastic OR Answers cover 2 cases but explanation is not very thorough.
L1	Answer may consist of just an explanation of why retail price increase but there is no real understanding of what the question is asking about.

(e) Improvement in technology cannot benefit farmers as much as measures to help them acquire greater market power. Discuss. [10]

Market power refers to the ability of a firm to influence price of its product by varying output.

P1: Faced with buyers who have substantial market power, farmers lack of market power results in them making lesser profits

Assumption: Farmers are producers who want to maximize profits. Profits = TR –TC

Farmers sell their products to supermarkets which have monopoly power (Extract 4).

But: “ farmers are fragmented ... small” compared to other firms. This implies that every farmer produces a very small proportion of the total market supply and therefore he has no power to influence the market price of the product he sells. He is a price taker. Retailers are the only major buyers of farm products. As these retailers are monopolies and the price that farmers received may be below their marginal cost.

Result: Due to their absence of market power, farmers make less profit.

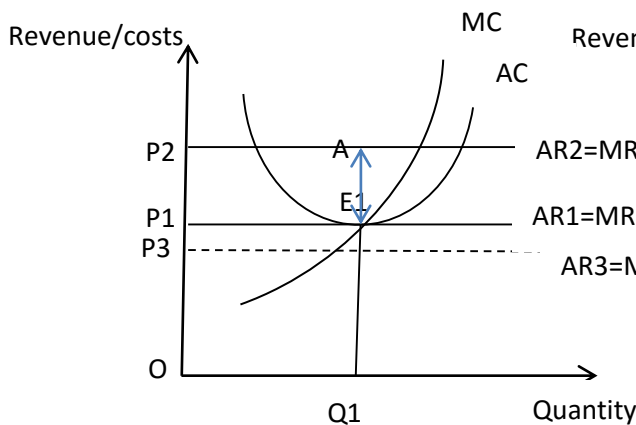


Figure 1

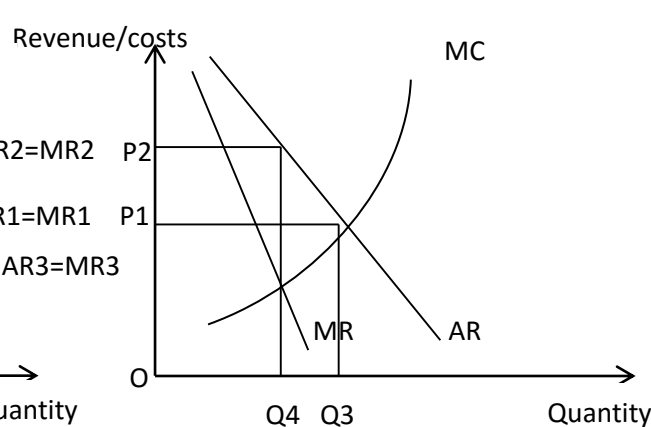


Figure 2

Under a perfectly competitive market, the market price is determined by market demand and supply which is P1 (Fig2). Individual farmers as price takers will accept this price and produce at the profit maximizing output at Q1 where MC=MR1 and earn normal profits where AR=AC as shown in Fig 1.

However, the buyers of the farm products are the retailers who are monopolies (Extract 4) and therefore the price that the farmers received may be less than P1 as they know that individual farmers have no market power. If the price offered to farmers is P3, farmers will be making a loss as AC is now higher than AR3 for all output levels.

Thus, the lack of market power results in farmers making losses.

P2: But if farmers have greater market power to negotiate with retailers they can earn higher profits

Farmers can increase their market power by forming cooperatives. If farms pool their products together and sell them through the cooperatives, they will have greater bargaining power. By collectively reducing their output, they can influence market price as they can cause a shortage in the market. Thus, farm cooperative will have greater market power and therefore its demand curve is downward sloping and AR is now greater than MR.

With reference to figure 2, the cooperative will maximize profits for all farmers by selling output where MC=MR at output Q4 and price is P2. Once again, individual farmers are price

takers and at P_2 , at its profit maximizing output Q_1 , the farmer can sell its product at P_2 instead of P_1 and is making supernormal profits of E_2A per unit of output. With more profits, farmers are better able to afford to adopt new technology to increase farm output which will increase farm income further.

Thus, having greater market power allows individual farmers to sell their goods at a higher price and therefore earn higher profits.

Evaluation

Having greater market power may not necessarily benefit farmers.

Although the cooperative is able to negotiate a higher price for farm products, how much revenue a farmer can earn is dependent on the volume of output he has available for sale. Take the example of an extreme case, serious flooding (drought, pests) can totally destroy a farmer's output and much as the price is higher, his total revenue is zero. For farmers who are subjected to such regular flooding advance technology such as flood control could be more beneficial to farmers as this will ensure him a regular income as farm output is not disrupted.

P3: Improvement in technology helps farmers to enjoy lower cost of production and therefore higher profits.

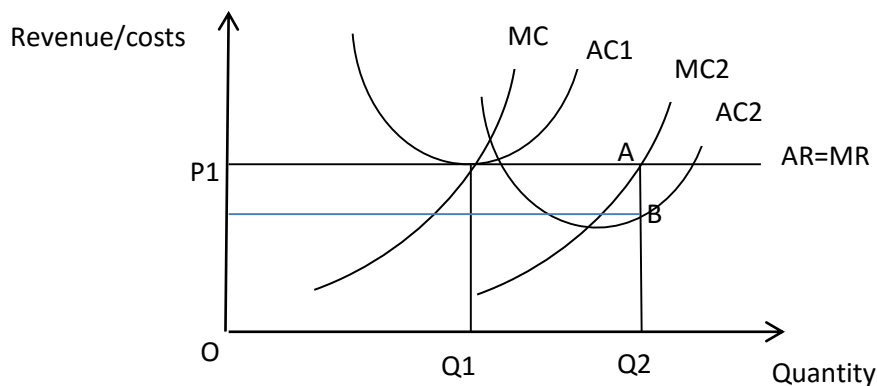


Figure 3: Effect of improvements in technology on costs and profits

Use of agricultural technologies such as using better quality seeds and fertilizers, better machinery and equipment, etc leads to increase in productivity which lowers the cost of production. Output per hectare increases and so with a given market price, ceteris paribus, total revenue increase.

Initially, individual farmers make normal profits at Q_1 . But with the improvement in technology, MC and AC falls to MC_2 and AC_2 . At the given market price of P_1 , the firms total revenue increase as output is higher now (Q_2). The farmer is also making supernormal profits of AB per unit.

Thus, improvements in technology lead to higher profits for the individual farmer.

P4: Technology helps farmers to overcome problem of imperfect knowledge and thereby helping farmers to earn higher revenue.

With the use of IT, farmers are able to access information concerning prices of inputs from different suppliers and the prices offered by different buyers. In this way they are able to source for the lowest cost producers and highest price buyers which allow them to earn more profits. Alternatively, farmers can also use make use of IT to sell directly to consumers instead to retailers only. In this way they are enlarging their market and demand thus total revenue to increase. They can also develop niche markets through product differentiation

and with the use of ICT they are better able to market their products thus increasing their total revenue.

Evaluation:

Though with better technology output may increase but without market power and if they have to sell to monopolist retailers, the price that they received for their products will be very low. Also, if all farmers are using better technology, the market supply will increase and eventually driving the price down. The supernormal profits will be eroded away. Individual farmers may not be able to benefit from advances in technology as better quality seeds and fertiliser are more expensive and as small farmers they may not be able to obtain loans to purchase them. The excessive use of fertilisers may also cause pollution and eventually causes yields to fall. Moreover, due to illiteracy, farmers may not know how use new technology, or may not know the information of new breakthroughs in technology. Thus, improvements in agricultural technology may not benefits farmers as much.

L3	Thorough analysis of benefits of market power and the improvements in technology supported by some examples and good use of case materials. There is evaluation of benefits with a clear expression of judgement.
L2	Student demonstrated understanding of the benefits of either improvement in technology or market power. Or the explanation is not sufficiently thorough when attempting to explain benefits of both cases. Explanation makes little reference to the context. There should at least be demonstration of knowledge of what is market power, profits and total revenue and how market power and technology affect these. Very limited evaluation.
L1	Sketchy explanation of the benefits of improvements in technology and market power.

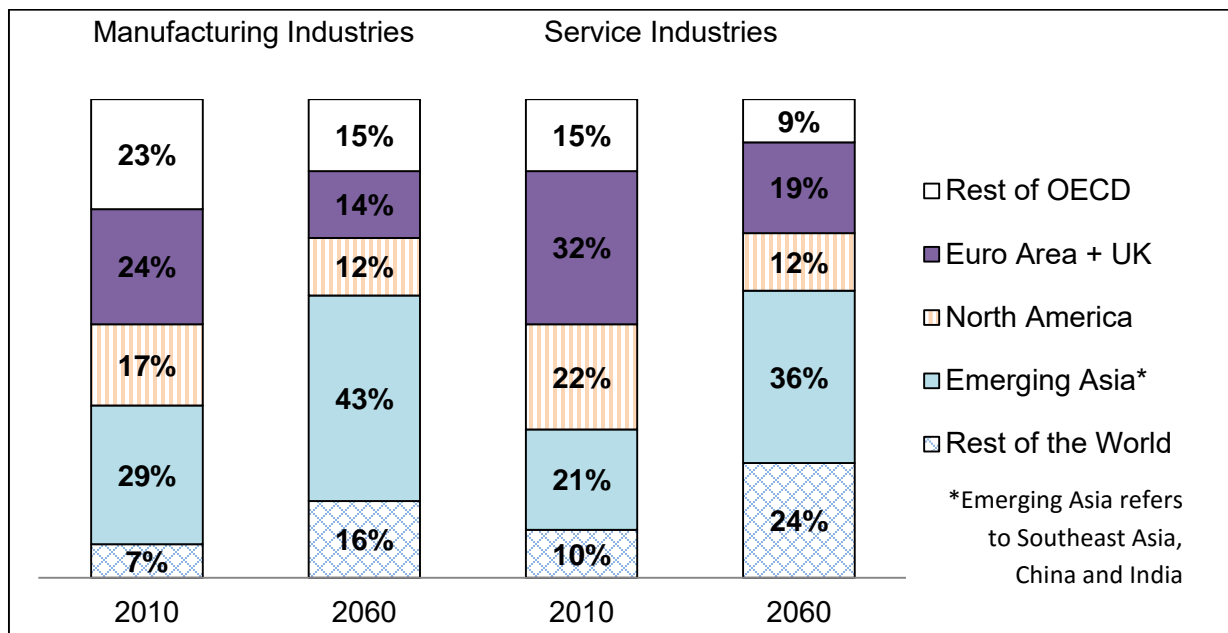
Question 2

Internal and External Imbalances

Extract 6: Changing trade patterns

The relative importance of different countries and regions in specific markets is set to change markedly over the coming decades, driven by diverging growth performance, changes in relative productivity and production prices. Notably, China, India, other Asian economies and Africa are projected to become the dominant players in manufacturing, while most OECD countries are expected to lose ground.

Figure 3: Countries' share in world exports by industry, 2010 and 2060 (%)



Source: *Trade patterns in the 2060 World Economy*, OECD, December 2014

Extract 7: Fragile economies under pressure

The "fragile five" – Turkey, Brazil, India, Indonesia and South Africa – are considered particularly vulnerable to an exodus of foreign capital as the prospect of higher interest rates diverts funds back to the US in search of higher returns. The fate of the fragile five is important, not least because they account for more than 12% of global GDP, and have contributed almost one-fifth of world economic growth since 2009.

Ben Bernanke, the Fed chairman, has argued that emerging markets will ultimately benefit from policies that are designed to create a stronger US economy. He, along with the world's policymakers, will be hoping that the waves in emerging markets created by the winding down of the US Federal Reserve's quantitative easing programme will prove to be a bump on the road to global recovery, and not the beginning of a fresh crisis. Here we look at the problems that some emerging markets are facing.

Brazil

According to the IMF, the government budget deficit of Latin America's largest economy will reach 3.3% of its GDP this year, while the current account deficit is estimated at 3.6%. Brazil's trade balance in 2013 is the worst for 13 years.

Meanwhile, consumers are now laden down with record levels of debt. The country's decade-long consumption binge has helped drive annual inflation close to the 6.5% ceiling of the central bank's tolerance band, forcing the government to enforce costly fuel subsidies to help cap prices.

Brazil has also been steadily increasing interest rates in the battle against inflation and a weakening real – the currency which has fallen by about 15% against the dollar over the past year. Rates have risen by 3.25% points over the past nine months, and the central bank's latest move was to push them up a further half-point, to 10.5%, in January. Economists are expecting another rise this month.

But growth prospects are deteriorating. Some analysts had expected the tightening of monetary policy to stop after the economy shrank in the third quarter of 2013, for the first time since 2009. But the increases have continued, underlining some of the unenviable choices faced by the country's policymakers.

India

In 2013, India's current account deficit reached a record of 4.8% of GDP, in part due to high gold imports. The yellow metal is one of the biggest contributors to the country's trade imbalance, second only to oil.

The government budget deficit of India is expected to reach 7.2% of its GDP and the current account deficit 2.4% in 2014. Like several of its emerging market peers, India raised interest rates last week, in its case by a quarter-point, to 8%, in an attempt to rein in consumer price rises and prop up the currency.

It was a surprise move by Asia's third-largest economy, with analysts predicting no change before the decision was made. Inflation has been slowing, but consumer price inflation remains high: it was close to 10% in December. The Reserve Bank of India has proposed a target of 4% inflation by 2016.

Despite these figures, the country is currently lifted by optimistic sentiments as reform-minded Narendra Modi won the election, while the current account deficit has narrowed rapidly as exports improved, remittance inflows remained solid and higher import duties and quantitative restrictions discouraged gold imports. In addition, non-oil, non-gold imports have declined in line with weak domestic demand, and capital inflows have strengthened.

Indonesia

Indonesia resisted increasing interest rates for a second month in January, against a backdrop of stable inflation, at 8.4% in December. The central bank said it was closely monitoring the impact of the Fed's tapering programme, after growth in south-east Asia's largest economy slowed to its weakest rate in four years last year, with a poor trade position and the outflow of foreign capital taking their toll. The current account deficit is expected to be around 3% of its GDP. The rupiah was the worst-performing emerging market currency in 2013, down around a fifth against the dollar.

The Indonesian government and central bank (Bank Indonesia) are making efforts to curb the current account deficit and combat high inflation. Therefore, it kept the benchmark interest rate at the relatively high level of 7.5%.

Adapted from *The Guardian* & www.indonesia-investments.com, February 2014

Extract 8: Only structural reforms can reduce current account deficit: ADB

“The Asian Development Bank (ADB) forecasts that Indonesia’s economic growth will soften slightly to 5.7% in 2014, before picking up to 6.0% in 2015,” ADB’s country director for Indonesia, Adrian Ruthenberg, said in a release made available to The Jakarta Post on Tuesday. The current account is also projected to post a deficit for 2015.

The ADB said reducing Indonesia’s current account deficit, which is mainly caused by trade deficit in the oil and gas sector, would remain a challenge in 2014 and beyond. Domestic oil output has been in a state of decline for almost two decades due to a lack of investments and exploration in combination with maturing oil fields and, secondly, domestic fuel consumption has risen sharply in recent years amid solid economic growth and generous government fuel subsidies. Structural factors have also contributed to the problem. The deterioration that started in 2003 suggests that Indonesia’s export competitiveness, particularly in manufacturing, has eroded. The rupiah has appreciated in real effective terms, and labour productivity in manufacturing has fallen below rates achieved in neighbouring countries.

“To address this challenge, Indonesia’s government has taken steps to slow domestic demand, spur exports, and dampen imports,” said Edimon Ginting, ADB’s deputy country director for Indonesia.

Source: *The Jakarta Post*, April 2014 & Asian Development Bank, 2014

Questions

- (a) (i) Using Figure 3, describe the changes in the relative shares of world exports of manufacturing and services for North America and Emerging Asia between 2010 and 2060. [2]
- (ii) Explain how the concept of opportunity cost can be used to explain the changes you observed in (a) (i). [4]
- (b) Using AD/AS analysis, explain how emerging economies can benefit from a stronger US economy. [4]
- (c) Explain a possible link between the level of interest rates in a country and its exchange rate. [2]
- (d) (i) Discuss whether Indonesia or India should be concerned with its current account deficit. [8]
- (ii) Using the data provided and your own relevant knowledge, discuss the factors that might influence a government’s choice of policy options when faced with the twin problems of current account deficit and inflation as described in the case study. [10]

[Total: 30]

Suggested Answers

- (a) (i) Using Figure 1, describe the changes in the relative shares of world exports of manufacturing and services for North America and Emerging Asia between 2010 and 2060. [2]**

North America's relative share of world exports of both manufacturing and services industries have fallen, while Emerging Asia's relative shares of world exports of both manufacturing and services industries have increased.

- (a) (ii) Explain how the concept of opportunity cost can be used to explain the changes you observed in (a) (i)? [4]**

The change in the relative shares of world exports of the 2 regions could be due to the changes in technology that affect productivity and opportunity costs of producing these goods.

The decline in North America's share of world's exports of manufacturing and services might be attributed to the rise in its opportunity costs of producing these goods or its loss of comparative advantage in these industries to Emerging Asia. Due to rapid gains in technology in Emerging Asia and the increase in the level of education and skills in its labour force, Emerging Asia is increasingly able to produce lower-end manufactured goods and certain types of services (low-end) at a lower opportunity costs compared to North America.

For example, in 2010, North America might incur a lower opportunity cost of producing machines in terms of its next best alternative good forgone such as food crops, compared to Emerging Asia. However, by 2060, Emerging Asia could have made great gains in technology advancements and also increased the skills and education levels of its labour force such that its opportunity cost of producing machines is lowered to a level that is lower than that incurred by North America. As such, by 2060, Emerging Asia has gained comparative advantage in machine production at the expense of North America. The same explanation could be advanced for the rising share of world exports of services too. In this case, North America might have lost comparative advantage in low-end services.

- (b) Using AD/AS analysis, explain how emerging economies can benefit from a stronger US economy. [4]**

With a stronger US economy, emerging economies such as India, China and Indonesia will experience a faster economic growth and an improvement in their balance of payments. As the US experience economic growth, there is a rise in purchasing power of the US consumers that raises their demand for imports. US firms would also increase demand for imported inputs from emerging economies. These will lead to a rise in import expenditure of US. As US is a key trading partner of many emerging economies, the rise in import expenditure in US will lead to a rise in export revenue of emerging economies.

At the same time, the stronger US economy improves the financial ability and confidence of the US firms to invest in other countries such as the emerging economies.

Both the rise in export revenue and inward investment of US firms into emerging economies increase the level of AD in emerging economies. This is because export revenue and investment are components of AD. Due to the rise in AD, there will be a shortage of goods and services in the economy.

Assuming that the emerging economies are not operating at full employment, as the price rises, the firms will respond by increasing the production of the goods and services. This will lead to a rise in real national output and hence economic growth.

Alternatively, students can include the multiplier process as follows:

Assuming economy is not near full employment (AS curve horizontal), when AD rises, shortage results that induces firms to hire more factor inputs to increase production. Thus incomes rise and this will lead rise in induced consumption which further increases production and incomes. The multiplier process continues until a new equilibrium level of national income where $AD=AS$ is attained. Eventually total rise in national income is more than the initial rise in export revenue and investments.

(c) Explain a possible link between the level of interest rates in a country and its exchange rate. [2]

The rise in interest rates in a country will lead to an appreciation of the domestic currency relative to a foreign currency. This is because the rise in interest rates will attract hot money from abroad (short term capital inflow) as the returns are higher. Hence, this will lead to a rise in demand for the domestic currency, resulting in a shortage. Therefore, the price of domestic currency, which is the exchange rate, will appreciate.

(d)(i) Discuss whether Indonesia or India, should be concerned with its current account deficit. [8]

Introduction

A current account deficit means that the country's total expenditure on imports of goods and services, factor incomes from abroad and net unilateral transfers exceed its total earnings from export of goods and services and factor incomes paid to abroad. A current account deficit implies that a country is living beyond its means. Whether this deficit should be of concern to the government depends on a few factors such as the size and nature of the deficit and its causes.

Body

The size of current account deficit as % of GDP for both Indonesia and India are comparable, 3% and 2.4% respectively (Extract 7). This size in itself may be considered small and thus not a cause for concern for both economies.

However, if we study the trends, Indonesia's deficit seems to be more persistent than that of India's. In fact, Indonesia's current account deficit has started in 2003 (Extract 8). On the contrary, India's deficit has declined somewhat. Also, upon closer examination into the causes of the deficit, Indonesia's deficit is a result of fundamental structural issues. For example in Extract 8, it was mentioned that part of the deficit was due to the country's "lack of investments" in the oil and gas sector and "maturing oil fields." The lack of investments resulted in fall in productivity and efficiency in the sector and this coupled with the maturing oil fields means that it is increasingly difficult to increase the domestic supply of oil. Hence, the country is forced to increase its oil imports and this explains the rise in import expenditure.

In addition, labour productivity in Indonesia is falling relative to its neighbours. *Ceteris paribus*, this means that its unit labour costs in particular in manufacturing, rises and so this may force its firms to increase its export prices. Hence, it is not surprising that Indonesia is also losing its export competitiveness in manufacturing as mentioned in Extract 8.

The situation for India is different. India's deficit was attributed to the rise in gold imports (Extract 7) as the people buy gold as a store of value. Government attempts to reduce gold imports by imposing tariffs have been successful in reducing gold imports. This coupled with the rise in India's exports have narrowed the current account deficit.

Synthesis & Conclusion

From the data provided, I think that Indonesia should be more concerned with its current account deficit than India because the problem has persisted for a long time which suggests that there are serious fundamental structural weaknesses in the economy that the government has not addressed successfully. Reducing the deficit would require painful structural adjustments which can be costly yet necessary. However, it seems that the Indian government has less to worry about its current account deficit because the current policies seem to work.

Mark scheme

L3	Adequate to rigorous economic analysis is consistent throughout the answer. Good use of relevant data to support key ideas. <i>Clear and logical reasoning to determine choice of country with reference to setting criteria for decision-making.</i> <i>Awareness of the limitation of data.</i>
L2	Adequate to rigorous economic analysis is evident. Some use of relevant data to support key ideas. Some attempt to apply and explain criteria for decision making. Coherent and logical response. If response is largely theoretical, with very limited reference to case material, then award max L2.
L1	Some understanding of the problem of current account deficit and its causes. Limited attempt to address the question. Lack of clarity in explaining choice of country.

(d)(ii) Using the data provided and your own relevant knowledge, discuss the factors that might influence a government's choice of policy options when faced with the twin problems of current account deficit and inflation as described in the case study. [10]

Introduction

The choice of government policies most often depends on the relative effectiveness of the policies in solving the problem which are affected by the conditions in the economy as well as the effects of the policies on other economic goals of the government. Faced with the twin problems of current account deficit, the government may need to prioritise especially when the policy measures used to solve one of the problems conflict with the other goal.

Body

Factors that affect the government's choice of policy:

1. Effectiveness of policy in solving each of the 2 problems (does the policy tackle the root cause of the problem? do the economic conditions in the country support the use of the policy?)
2. Consequences of the policy on other economic goals of the government
3. Feasibility & Sustainability (Is the solution feasible? Is it sustainable?)

Policy	Current account deficit	Inflation
<p>Contractionary FP/MP</p> <ul style="list-style-type: none"> - Explain how the policy can solve both problems simultaneously. - The choice of policy largely depends on effectiveness to solve each of the 2 problems <p><u>Implication on government's choice of policy</u></p> <p>Contractionary demand management policies can solve the 2 problems simultaneously and might be a good choice if inflation also happens to be the cause of the deficit problem. Assuming that all the conditions for the effective working of the policies are satisfied, whether this is the best policy option really depends on whether the country is prepared to accept the ensuing slower economic growth and unemployment.</p>	<p>Effectiveness depends on:</p> <ol style="list-style-type: none"> 1. Interest elasticity of consumption and investment demand 2. IED for imports 3. PED_x determines the extent of rise in qty dd for exports given a fall in its price <p><u>Some application</u></p> <p><u>IED for M:</u> India – part of the deficit problem is due to high importation of gold (held as a store of value). Hence, IED may be high – the higher the income level, the greater will be the % rise in DD for gold imports. Thus contractionary MP may be effective in reducing imports. But Brazil: consumption-led growth may mean C of all including luxury goods. Thus IED is high. So contractionary policy more effective in reducing M and hence reduce the deficit.</p> <p>XED_m wrt P_d – Are dom gds good substitute for M? Indonesia: import capital goods not produced much in dom economy. So limited substitution despite lower domestic prices.</p>	<p>Effectiveness depends on:</p> <ol style="list-style-type: none"> 1. Interest elasticity of consumption and investment demand 2. Openness of the economy to capital flows such as “hot money” <p><u>Some application:</u></p> <p>Brazil: high ratio of household debt. So C expected to be sensitive to higher interest rates as people are already concerned with ability to repay the debt.</p> <p>India: optimistic outlook. So higher interest rates and hence cost of borrowing may not deter C or I significantly as firms expect higher future profit and households expect higher future incomes.</p>
<p>Supply-side policies</p> <p>Necessary for all economies e.g. Brazil – mkt friendly policies, Indonesia – structural reforms. Suggest any e.g. of one policy option and explain how supply-side policies can solve the twin problems.</p> <p><u>Implication on govt's choice of policy</u></p> <p>Supply-side policies can be very costly and the effects are not immediate. However, delaying its</p>	<p>Effectiveness depends on:</p> <ul style="list-style-type: none"> - Time lag - Funding - Willingness of firms/people to train, invest etc 	<p>Effectiveness depends on:</p> <ul style="list-style-type: none"> - Time lag - Funding - Willingness of firms & people to train, invest etc <p>All countries in the case study are emerging economies. Budget deficit is a constraint for all. May consider market-oriented reforms instead</p>

<p>implementation may make the deficit problem worse esp when other trading partners are constantly innovating and improving their technology. As such, although cost may be a big problem for many emerging economies, these policies must still be undertaken even if in small scale. The returns to investment in the future can be used to pay for the debt incurred in financing these programmes today.</p>		
<p>Depreciation</p>	<p>Effectiveness depends on:</p> <ul style="list-style-type: none"> - PED for exports and imports (Marshall-Lerner condition) - PES 	<p>Depreciation worsens inflation ☹️</p> <p>Govt may not use currency depreciation because it will worsen inflation, thus may aggravate the deficit problems. This is because the inflation could erode the country's export competitiveness.</p>
<p>Subsidies/price ceiling to solve inflation</p>	<p>Indonesia: subsidies increase import spending. By artificially lowering the price of fuel, it encourages more consumption and hence more imports. This worsens the deficit problem. Also, subsidies distort the allocation of resources and leads to over-consumption problem. Finally, government budget balance is also adversely affected. Subsidies thus impose very high cost to the country. Thus, should be considered only if the benefits (making it affordable to the poor) outweighs the costs.</p>	<p>SR effective but budget deficit, so not sustainable. Also does not solve the root cause of the problem.</p>

Conclusion

Governments often face many problems simultaneously and this makes choice of policy option more complicated. Besides considering the effectiveness of each policy, there are also costs and trade-offs to consider. The most effective policies to solve a problem today need not necessarily be the best policy option for the country in the future. Thus, governments must constantly consider all these factors so that the best outcomes can be attained for the country.

Mark Scheme:

L3	<ul style="list-style-type: none">- Good explanation of the factors that affect choice of policy when dealing with the twin problems.- Competent and balanced discussion of the significance and importance of these factors with reference to the examples given in the case study.- Clear explanation of the implication of the above on government's choice of policy option (see example in answer for contractionary MP/FP & supply-side policies).- Well-reasoned conclusion.
L2	<ul style="list-style-type: none">- Adequate explanation of the policies to deal with the twin problems.- Some attempt to explain the factors that might influence the government's choice of policy option.- Some limited attempt to discuss the significance or importance of these factors and its implications on the government's choice of policy option.- <u>Note</u>: for responses that largely but adequately explain and evaluate the policies with no clear attempt to respond directly to the question, award max L2
L1	<ul style="list-style-type: none">- Some explanation of the policies to deal with the twin problems or one of the 2 problems.- Answer is largely regurgitation of policies and with limited evaluation of policies. Answer may not directly address the question.- Limited application to the case study material.

SERANGOON JUNIOR COLLEGE
JC2 Preliminary Examination 2015
H2 Economics 9732 Paper 2
Suggested Answers

- 1 Cheaper smartphones with built-in cameras, a proliferation of mobile applications that allow photos to be shared instantly on social media and technological advancements in the production of digital cameras are affecting the digital camera and related industries.

Discuss the impact of these developments on the sales revenue of digital camera and photo print producers. [25]

Introduction

- Briefly state how equilibrium price and quantity are determined in a free market via interaction of downward sloping demand curve and upward sloping supply curve.
- **Definition:** Total revenue of producers is calculated by multiplying the price by the quantity sold in the free market.
- **Direction:** The introduction of smartphones with their built in cameras have been causing creative destruction to many industries. As a growing number of consumers finding it much easier to use their smartphones to capture and share images, versus using their dedicated digital cameras for the same purpose, producers of digital cameras and related industries are likely to see a big hit to their revenue. The extent of the impact would however depend on several factors which will be examined in this essay.

Body

P1: A technological advancement can lead to an increase in supply of digital cameras and an increase in total revenue for the digital camera producers.

E/E:

The technological advancement could have lead to an improvement in production processes, lowering the cost of production → increase willingness and ability of producers to produce at each and every price level → rise in the supply of digital cameras → represented by a rightward shift of supply curve from S_0 to S_1 .

A rise in supply of digital cameras would lead to surplus of Q_1Q_2 at original price OP_0 → producers would reduce price to clear excess stock → as price falls, quantity demanded rises while quantity supplied falls → price keeps on falling until surplus is eliminated → at the new equilibrium point, there is a fall in equilibrium price (from P_0 to P_1) and rise in equilibrium quantity (from Q_0 to Q_1) of digital cameras.

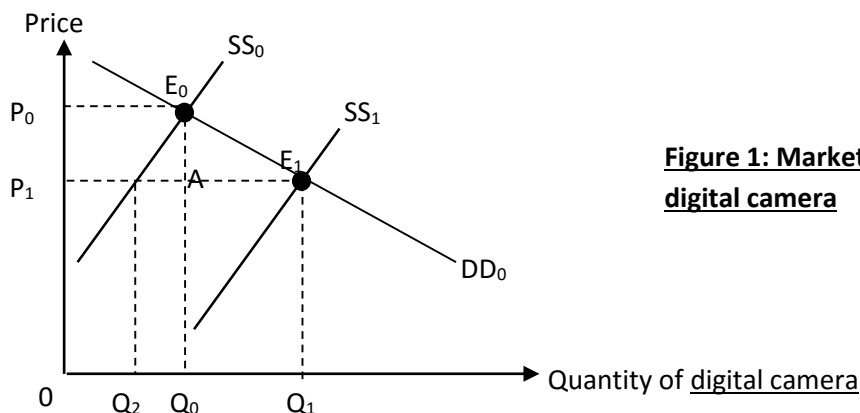


Figure 1: Market for digital camera

Demand for digital camera is likely to be price elastic \rightarrow availability of close substitutes such as smart phones with camera functions + digital cameras are not needed for survival, more of a luxury good for most people than a necessity \rightarrow fall in price of digital cameras would lead to a more than proportionate rise in quantity demanded, ceteris paribus \rightarrow hence, rise in total revenue due to the more than proportionate increase in quantity demanded, i.e. area $AE_1Q_1Q_0$, is greater than the fall in total revenue that's due to the fall in price, i.e. area $P_0E_0AP_1$.

P2: The cheaper smart phones coupled with a proliferation of mobile applications will result in a fall in demand for digital cameras.

E/E:

Given that almost all, if not all smart phones are equipped with cameras, the smart phone can be a substitute for digital cameras. Both can be used to satisfy our wants to take photos. The lower prices of smart phones will increase the quantity demanded for smart phones and reduce the demand for digital cameras, giving a positive cross elasticity of demand between the price of smart phone and demand of digital cameras.

In addition, the proliferation of mobile applications that allow photos to be shared instantly on social media such as facebook and twitter increases the convenience for consumers to share the photos instantly, without having to upload them to a personal computer and process them first \rightarrow result in a change in their taste and preference away from digital cameras \rightarrow consumers less willing to buy digital cameras despite the ability to do so \rightarrow fall in demand for digital cameras \rightarrow represented by a leftward shift of demand curve from D_0 to D_1 .

P3: Combining the fall in the demand for and the rise in the supply of digital cameras, total revenue on this product is indeterminate as it depends on the extent of the change in demand and supply.

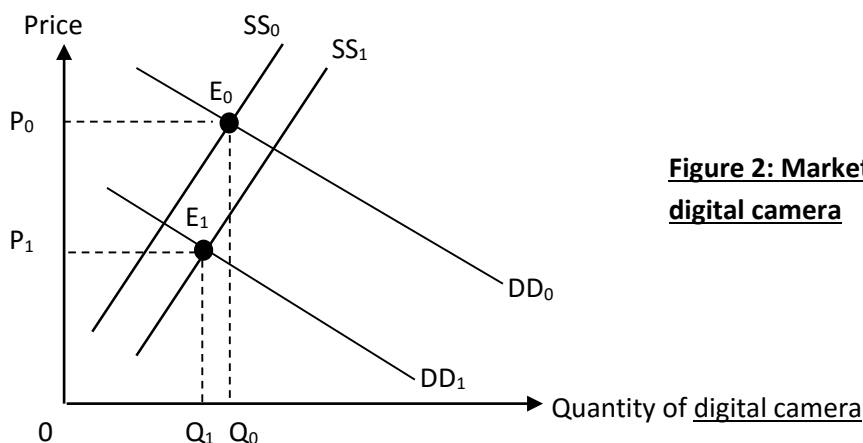


Figure 2: Market for digital camera

E/E:

Given that the quality of the photos taken by smartphones is close to the quality of photos taken with a low to mid range point and shoot digital camera, smartphones and digital cameras are likely close substitutes. The high XED value would mean that the fall in price of smartphones will result in a more than proportionate fall in demand for digital cameras especially for the low end point and shoot digital cameras. Together with the change in taste

and preference, the fall in demand is likely going a much greater extent than the rise in supply as shown in Figure 2 → leftward shift of demand curve by a larger extent relative to rightward shift of supply curve → surplus at original price exerts downward pressure on the price of digital cameras → fall in equilibrium price and equilibrium quantity of digital cameras → Since equilibrium price falls from $0P_0$ to $0P_1$ and equilibrium quantity falls from $0Q_0$ to $0Q_1$ → overall, fall in total revenue of digital cameras from Area $0P_0E_0Q_0$ to Area $0P_1E_1Q_1$

Evaluation: Extent of fall in demand relative to supply and thus the fall in TR depends on

- Type of digital camera → lower impact on the high-end digital cameras e.g. digital single-lens reflex (DSLR) cameras targeted at professionals and enthusiasts as these cameras. These cameras offer a level of control and picture quality that a smartphone's tiny lens and sensor can't replicate, making the smartphone a weak substitute → low XED value → smaller fall in TR.
- Whether the digital camera producers can increase the connectivity options in compact digital cameras. If the cameras becomes equally capable of uploading images directly to photo sharing and social media, due to the inclusion of Wi-Fi in digital camera → smaller fall in demand and TR
- Whether the digital camera producers are also producing the camera parts for smartphones. E.g. Sony, a digital camera producer, supply image sensors for smartphones and was increasing the production capacity for these image sensors → the increased in revenue here can make up for the fall in revenue from the sales of digital cameras.

P4: A fall in price of digital cameras that was due to the technological advancement would lead to a fall in total revenue on photo print.

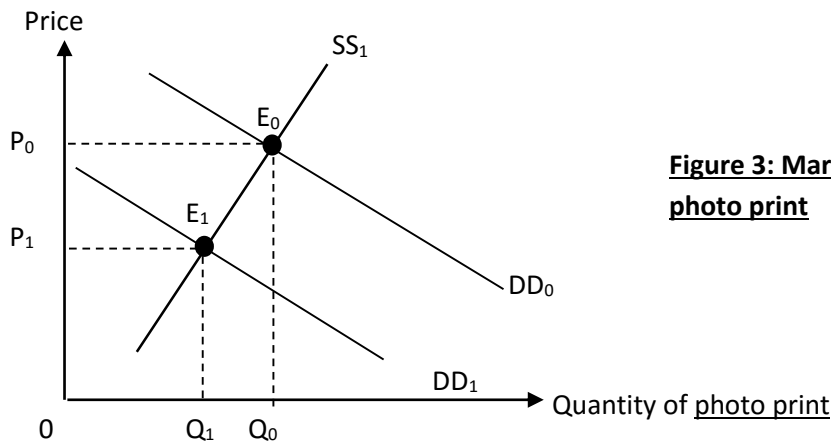


Figure 3: Market for photo print

E/E:

A fall in price of digital cameras → rise in quantity demanded for digital cameras, ceteris paribus → since digital cameras and photo print are considered as complements as they are used jointly to satisfy a particular want (to have physical copies of the photos) → fall in demand for photo print from DD_0 to DD_1 as shown in Figure 3 (negative XED) → Since equilibrium price falls from $0P_0$ to $0P_1$ and equilibrium quantity falls from $0Q_0$ to $0Q_1$ → overall, fall in total revenue of photo print producers from Area $0P_0E_0Q_0$ to Area $0P_1E_1Q_1$

Evaluation:

- the trend towards keeping photos in the digital format for easier storage instead of developing the photos → weak complements → low XED value → less than proportionate fall in demand and thus small fall in TR of producers of photo print

- Also, smartphone's built in camera and photo print are also complements. The fall in price of smartphones can thus increase the photos taken and thus increase the demand for photo print. The closeness of relationship between smartphone and photo print is likely to be comparable to that between digital camera and photo print. Thus the TR of photo print producers might not fall but rise with the strong demand for smartphones. That however depends on how the photo print producers prove to be strong complements for phototaking via smartphones e.g. via online photoprint with delivery services, customised photo finishing services etc
- However, it is worth-noting that even if sales revenue from the digital print segment increases, sales revenue from the film photography segment will fall. Digital camera and smartphones' built in camera are substitutes to analogy film camera and more consumers taking and storing photos in digital format → reduce demand for analog cameras and film → photo print producers such as Kodak might still suffer a loss in TR.

Level Marking Scheme

Level	Descriptors
Higher Level 3	<ul style="list-style-type: none"> • Well-explained diagrams with thorough and accurate analysis • Clearly explained combined impact on total revenue of digital camera with simultaneous shift diagram • Explained impact on both digital camera and photo print producers • Accurate applications of XED and PED concepts • Good evaluation and consideration of other possibilities
Lower Level 3	<ul style="list-style-type: none"> • Well-explained diagrams largely accurate and sufficient analysis • Explained impact on both digital camera and photo print producers • Consider only XED or PED only or both but lacks depth • Must consider combined impact on the producers of digital camera and photo print • Some evaluation of the other possibilities
Level 2	<ul style="list-style-type: none"> • Diagrams which may not be consistently explained • Sufficient applications of at least 1 elasticity concept • Some reference to correct endpoint on revenue but may not be always focused • A detailed answer on digital camera producers and a descriptive answer on photo print producers • Only shift DD OR SS → maximum L2
Level 1	<ul style="list-style-type: none"> • Diagrams but no clear explanation • Did not focus on correct endpoint on total revenue • Did not use elasticities concept

Personal Judgement

Level	Descriptors
E2	<ul style="list-style-type: none"> • Make a well-reasoned judgement on the final impact on revenue of the producers e.g. the 1-2 key factors that weigh heavily on the extent of impact.
E1	<ul style="list-style-type: none"> • Make a judgement on the final impact on revenue of the producers. For e.g. how digital camera producers are likely to be badly hit by the emergence of smartphones with some supporting reasons
E0	<ul style="list-style-type: none"> • No attempt to make a judgement.

- 2 (a) Explain the considerations of a firm when making pricing and output decisions. [10]
- (b) With the use of relevant examples, examine the extent to which industries in Singapore are dominated by a few large firms. [15]

Part A

Introduction

Pricing and output are important decisions of a firm as it determines the profitability and survivability of the firm. The considerations of a firm when making these decisions really depend on several factors, beginning with the objective of the firm.

P1: One of the considerations when making pricing and output decision is the objective of the firm

- The common assumption is that most firms aim to maximise profit. Sometimes, a firm may be willing to forego profit maximisation objective because it does not serve its interests in the short run. Firms might choose to maximise other objectives e.g. to maximise sales revenue instead
 - Firms might want to maximise sales revenue in order to increase market share and thus market power. Also, banks and financial institutions are more willing to lend to firms with large and growing sales.
 - If sales revenue maximisation is the objective → the firm owner would consider setting a price and selling an output where marginal revenue equals to zero
- If however, the objective of the firm is assumed to be profit maximisation → firm will determine pricing and output based on the profit maximising condition of $MC = MR$ where MC is rising.

P2: Assuming the firm owner aims to maximise profits, they will produce where $MC=MR$ when MC is rising.

In the following analysis, it is assumed that the firm is a perfectly competitive one. This means that it is a price taker and hence, its demand curve is also its MR curve.

- **When MR is more than MC** ($0Q_1$ in Fig. 1), the firm should increase output to maximise profit.
 - If MR is more than MC , this means that the addition to total revenue from the sale of the last unit of output is greater than the additional cost incurred to produce it. Hence, the firm should produce that unit of output because it results in an increase in the firm's profit.
- **When MR is less than MC** ($0Q_2$), the firm should decrease output to maximise profits.
 - When MR is less than MC , this means that the revenue earned from the sale of the last unit of output is less than the additional cost incurred to produce it. Hence, it is not worthwhile for the firm to produce that unit because it will only result in a fall in total profit.
- The firm will maximise profits when MC is equal to MR **where MC is rising.**
 - At $0Q$, MC curve cuts the MR line on the falling portion of the MC curve (point A). Thus $0Q$ is not the profit maximising level of output. If the firm were to increase production beyond $0Q$, for each additional unit of output beyond $0Q$ (up to $0Q_e$) marginal revenue exceeds the marginal cost. Thus, the firm should increase production to earn more profit. However, once the firm reaches output level $0Q_e$, any further increase in output means MC is more than MR . Thus, firm's profit will fall. So to maximise its profit, the firm should produce at $0Q_e$.

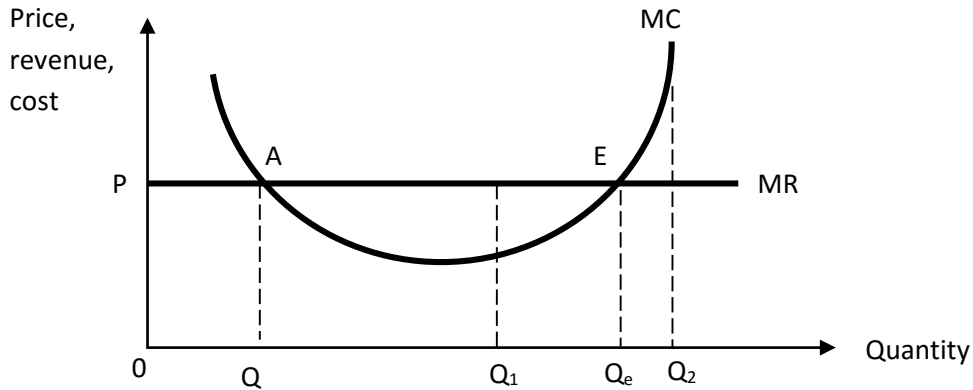


Fig 1: Profit Maximising Conditions of a (perfectly competitive) Firm

P3: Another objective is the type of market structure and competition that it faces

- If the firm is an oligopolistic firm, the firm owner needs to consider if it is able to collude with the others or it has to compete. A collusion would mean that the pricing and output of the firm would have to be aligned with the agreed decision of the collusive oligopoly.
- On the other hand, in a non-collusive oligopoly, mutual interdependence exist among firms and influences a firm's pricing strategy → The firm owner could therefore have to consider the reaction of competitors and likely would not change its price easily → price rigidity.
- As explained using kinked demand theory: The upper portion (AE) illustrates how when the firm increases its price, it will suffer a large fall in quantity demanded as its customers now purchase from other firms. Hence, its total revenue will fall. Thus, the firm will not increase its price. Conversely, when the firm lowers its price below P, its quantity demanded will not increase greatly. This is because other firms also lower their prices. Thus oligopolists may be reluctant to lower their prices. The profit-maximising firm will produce an output where $MC=MR$. This is output $0Q$ and he will charge a price of $0P$.

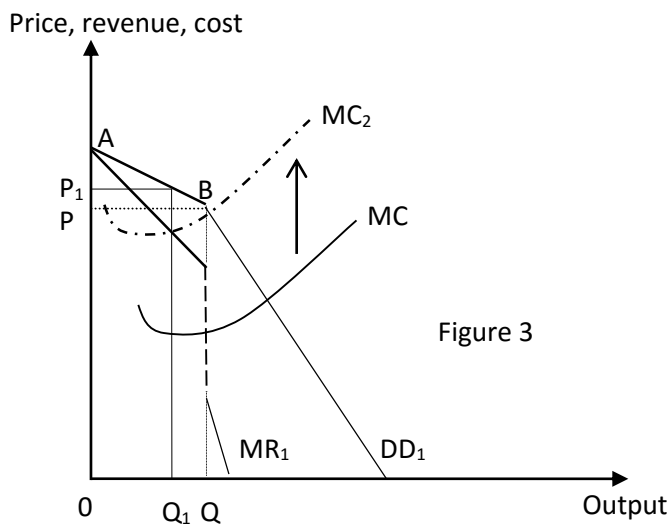


Figure 3

- L: So, each firm must consider the reactions of its competitors when formulating its pricing decision.

L3	<ul style="list-style-type: none"> Clearly explained at least 2 considerations, including the profit maximising condition Clearly explained how a firm determine profit maximising output leading to the considerations of the firm when trying to set price and output to maximise profits
L2	<ul style="list-style-type: none"> Explained at least 2 considerations
L1	<ul style="list-style-type: none"> Smattering of points Stating of many considerations without elaboration

Part (b)

With the use of relevant examples, examine the extent to which industries in Singapore are dominated by a few large firms. [15]

Introduction

- Definition:** Industries dominated by a few large firms are characterised by the Oligopoly market structure. The few large firms account for a large proportion of the market share and each have a high level of market power. Such a characteristic enables the firms to gain revenue and cost advantages which allows them to maintain a high level of supernormal profits.
- Direction:** Industries in Singapore are varied. While some are dominated by a few large firms, there are also many that are dominated by many small firms.

Body

P1: Industries in Singapore such as the Telecommunication, Media/Newspaper and Pay TV industries are dominated by a few large firms due to the presence of economic BTEs such as substantial economies of scale

E/E:

- In industries where the initial capital investment is large and/or technology is complex, such as the industries mentioned above, economies can only be enjoyed over a large range of output level.
- For example, in the Telecommunication and the Pay TV industries, they require the use of large scale and advanced equipment such as the laying of cables and the use of satellite. They might also need to incur huge cost in securing exclusive rights to TV content and hiring of a large pool of talents. In the media and newspaper industry, large and complex printing and filming equipment have to be employed.
- These factors contribute to the high fixed cost incurred by firms in the industry. This means that the firms' minimum efficient scale (MES) of production can only occur at a high output level. Hence, only large firms can achieve lower average cost and operate under decreasing cost conditions because of their large output level.
- Thus, production has to be on a very large scale for the firm to be operating efficiently and the industry may be better off with a few large firms, reaping economies of scale, than with many firms supplying the same good but at a higher average cost.

P2: Some industries such as the firms in the petrochemical industries are also dominated by a few large firms because of the control of essential raw materials and heavy spending on R&D

E/E:

- The Petrochemical industry in Singapore is also dominated by a few large firms such as Esso, Caltex, Shell and SPC because of the presence of economic BTE such as exclusive control of essential raw materials.

- These companies own oil fields around the world which give them exclusive access to the raw material (ie. crude oil), the raw material to produce petroleum. This coupled with the high cost of setting up and operating the oil refineries due to the complex equipment and technology also explains why the petrochemical industries are dominated by a few firm firms in Singapore and also globally. In addition, petrochemical industries also carry out a substantial amount of R&D to improve the quality of their petroleum (ie Caltex Techron, Shell V-power) as well as the production processes to reduce unit cost.
- This makes the existing firms more competitive in the market and gives them a structural advantage over potential rival firms.

Evaluation:

- Economic BTE faced by entrants may not necessarily be permanent due to the dynamic nature of an economy. The lure of huge supernormal profits that can be reaped by these Oligopoly firms acts as a driving force to motivate potential entrants to innovate and create products that can surpass the BTE and enter the industry.
- Rapid technological advancement in telecommunications has also enabled consumers to enjoy programmes online. Potential entrants can tap on this technology and expand into the cyberspace and raise the contestability of markets. This will significantly lower the demand for existing firms and reduce market dominance since firms in the industry are constantly subjected to threats of entry by new firms.

P3: There are other reasons such as the presence of institutional BTEs which explains the existence of a few large firms in the transport industry

E/E:

- The degree of government regulation also determines the level of contestability in the market. For example in the transport industry, the Singapore government is seeking to introduce more licences into the bus industry to improve efficiency, promote innovation and provide consumer with more choices. This will prevent firms from being lax and complacent, reduce cost of production and improve service standards.
- Under the new transport plan announced in June 2015, LTA will gradually carve up bus routes here into 12 packages, with about 300 to 500 buses for each area. For a start, it will tender out three packages of bus services. SBS Transit and SMRT will run the remaining nine packages, which comprise about 80 per cent of existing buses. In the long term, the plan is to have three to five operators running buses here to promote greater competition and efficiency.
- Commercial banks in Singapore are also licensed under and governed by the [Banking Act](#). In Singapore, MAS issues licenses for banks to operate here. In 1998, POSB was acquired by DBS, as the Singapore Government sought to allow the commercial institution to garner sufficient economies to scale to be a competitor to foreign banks. The merger of the two local banks allowed them to exploit more EOS and increase market share to gain cost and revenue advantages. Consumers were able to enjoy lower prices and better products as a result of the reduction in competition. This also resulted in the banks becoming more competitive to be able to cope with foreign competition when they were introduced into Singapore.

Evaluation

- It is important to note that the government has adopted a significant amount of deregulation in the financial industry today. Singapore is now home to over 200 banks as part of our aim to establish Singapore as an international financial centre.

P4: While a large no of industries in Singapore are dominated by a few large firms, there are also many that are characterised by many small sellers when product differentiation is key.

E/E:

- In industries such as the bakeries, hair salon and restaurants, consumers prefer a wide range of products to choose from that can increase consumer welfare.
- With more competition, consumers benefit from both the price competition among the firms, (ie. lower prices) and non-price competition (ie. real product differentiation) such as enjoying a greater variety and range of bread and dishes, better customer service and personalised services.
- Coupled with the presence of low institutional and economic barriers to entry, the easy entrance of new firms into the industry when the existing firms are earning supernormal profits is a reason why such industries are characterised by many small firms.

Mark Scheme

Knowledge, Application, Understanding and Analysis	
L3	<ul style="list-style-type: none"> • Thorough discussion on the characteristics of the firms operating in the industries in Singapore and explanation of the reasons behind their existence. • Good discussion of the characteristics/conditions of the Singapore economy that results in the industries operating in the relevant market structure. • Good examples to support your observation.
L2	<ul style="list-style-type: none"> • For an attempt to explain characteristics of the firms operating in the industries in Singapore but is undeveloped or lacking in detailed analysis.
L1	<ul style="list-style-type: none"> • Smattering of points with little understanding of the question requirement.
Personal Judgement	
E2	For an evaluative assessment based on economic analysis and understanding of the conditions and characteristics in the Singapore economy. A sound judgement made in the conclusion.
E1	For an unexplained judgement, or one that is not supported by analysis.

- 3 In 2012, the British government issued licenses for Virgin Atlantic Airlines to start short-haul domestic flights within the UK to challenge the current monopoly enjoyed by British Airways on these routes. This raised concerns that with more landing and take-off, local air quality will be degraded.
- (a) Explain the two sources of market failure mentioned above. [10]
- (b) The potential benefits of removing market failure can never outweigh the costs of government failure. Discuss. [15]

Introduction

- **Definition:** Market failure refers to a situation where resource allocation concerning what, how, how much and for whom to produce based on the market mechanism fails to achieve efficiency in resource allocation and equity among various income groups.
- **Direction:** The two sources of market failure above refer to the market dominance that arises from the monopoly power enjoyed by British Airways before the entrance of Virgin Airlines and the presence of negative externalities due to more landing and take-off which degrades the air quality. Both of which leads to allocative inefficiency and hence market failure.

Body

P1: Presence of market dominance due to the monopoly power enjoyed by British Airways leads to allocative inefficiency.

- Allocative efficiency is attained when society produces the right amount of goods and services from society’s point of view and hence society’s welfare is maximised. This situation is attained when all firms produce an output level where $P=MC$ for the last unit of output produced.
- Firms like British Airways who possesses monopoly power on the short-haul domestic flights in the UK have some degree of market power and there is a divergence between AR and MR.
- With reference to Fig 1, the socially optimum price and output are $0P_c$ and $0Q_c$ respectively where $P=MC$ as in a perfect competition where $AR=MR=P=MC$. This means that the value the society places on last unit of output produced is exactly equal to the opportunity cost incurred by the society in having that last unit.
- When the output level is $0Q_c$, the total benefit to the society is measured by the area $0AE_cQ_c$ while the total cost is area $0XE_cQ_c$. Thus total net benefit to society is area AE_cX .

Price, Revenue, Cost

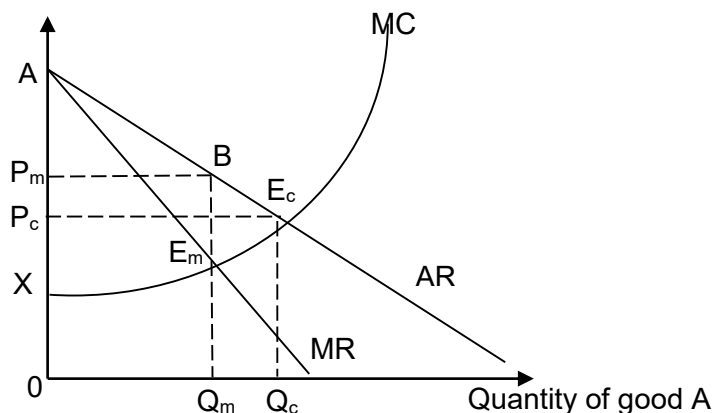
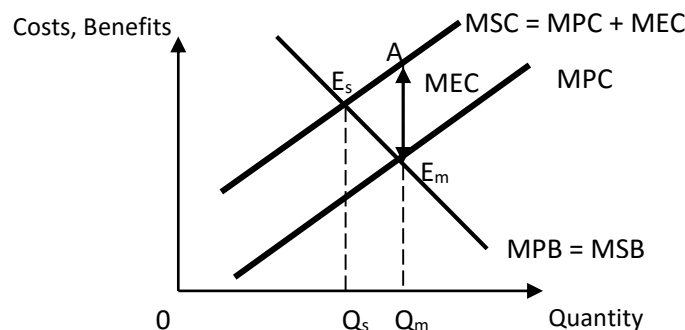


Figure 1:

- However, given the presence of his monopoly power and its profit-maximising motive, British Airways will want to restrict output and produce where $MR = MC$ where MC is rising.
- At output, $0Q_m$, the price charged by the firm is greater than his marginal cost of production ($P > MC$). This means that society values the last unit of this good **more** than the alternative goods forgone (i.e. opportunity cost). Therefore, society would benefit from having more of this good.
- The market power a monopolist possesses allows it to restrict output to $0Q_m$ and charge a higher price of $0P_m$. The total benefit is area $0ABQ_m$ but the total cost is area $0XE_mQ_m$. Hence the total net benefit to society falls to area ABE_mX .
- Hence, when the profit maximizing monopolist charges a price that is greater than MC , there is a deadweight loss to society of area BE_cE_m .

P2: The other source of market failure is the presence of negative externalities in the over-production of air travel

- Negative externalities refer to costs to third parties who are not directly involved in the production or consumption of a good or service and these third parties are not compensated for the damages inflicted on them.
- In a free market without government, a producer pursuing his self-interest of making the highest possible level of total profits takes into account only his own private costs. Private costs are costs that the producer must pay in undertaking production.
- MPB of air travel is the profits that can be earned by British Airways,
- MPC of air travel is the cost of production, such as the cost of the aircraft, the fuel cost, wages of hiring the pilots and aircrew, airport taxes etc.
- However, with “more landing and take-off, local air quality will be degraded”, this gives rise to the third party cost or MEC . The residents staying near the airport will inhale the polluted air and suffer respiratory problems and hence have to incur medical fees.
- The presence of this MEC leads to a divergence between MPC and MSC .
- Because individuals only consider their own private benefits & costs, the market eqm level of output is where $MPB = MPC$ at Q_m .
- However, the social optimum level of output occurs where $MSB = MSC$ at Q_s , where benefit to society from last unit of gd consumed = opportunity cost incurred.
- Since $Q_m > Q_s$, there is overproduction of air travel.
- For every additional unit of air travel consumed between Q_s and Q_m , it adds more to MSC than to MSB . Hence, there is a net loss of society’s welfare = deadweight loss = area AE_mE_s .



Mark Scheme

Knowledge, Application, Understanding and Analysis	
L3	<ul style="list-style-type: none">• Detailed explanation of BOTH sources of market failure with clear links to allocative inefficiency and productive inefficiency• Good examples given with reference to the airline industry
L2	<ul style="list-style-type: none">• Undeveloped explanation of the two sources of market failure OR <ul style="list-style-type: none">• Explanation of only one allocative efficiency with no link to productive inefficiency
L1	<ul style="list-style-type: none">• For an answer that has a weak grasp of the concepts of market failure and allocative and productive efficiency.• Many gaps in analysis

- (b) The potential benefits of removing market failure can never outweigh the costs of government failure. Discuss. [15]

Direction:

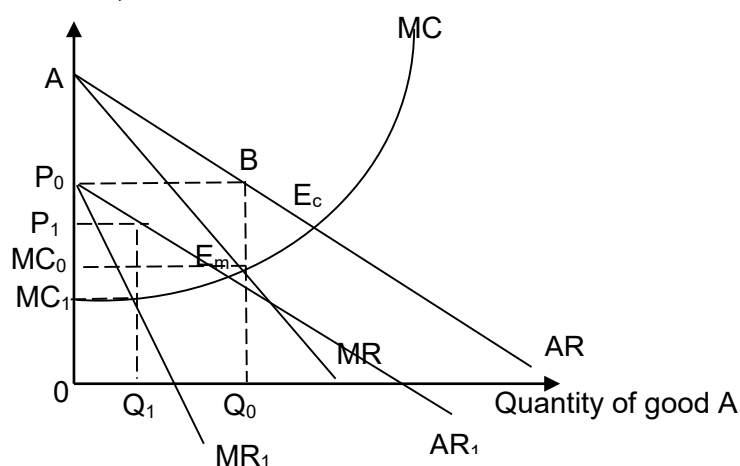
- In the event when there is market failure, government intervention is often deemed necessary to overcome the problem of inefficiency.
- However, in some circumstances, government intervention aimed at solving the problem causes more harm than good. This causes government failure.
- Under such circumstances, the benefits of implementing such policies to overcome the problem of market failure will not be able to outweigh the cost of government failure.

P1: In the presence of monopoly power, the government can reduce allocative inefficiency and improve resource allocation by deregulating.

E/E1:

- In the case of the airline industry, the government can introduce more competition by curbing monopoly power through deregulation and liberalisation of the market.
- For example, in the case of British Airways' monopoly of the UK short haul routes, the government introduced license for Virgin Airways to operate flights along the routes to break the monopoly power that British Airways has.
- With the entrance of a new player into the industry, British Airways will have a lower level of allocative inefficiency.
- With only one firm, at profit-maximising output Q_0 , the degree of allocative inefficiency is greater where $P_0 > MC_0$.
- After the introduction of the license and the entrance of a new firm, Virgin Airways, British Airways will experience a fall in demand of its services. AR and MR falls to AR_1 and MR_1 respectively. At the new lower level of output Q_1 , there is a smaller degree of allocative inefficiency, hence while allocative inefficiency still exist where $P_1 > MC_1$, it is at a lower degree as compared to $P_0 > MC_0$.

Price, Revenue, Cost



Evaluation:

- However, the government need to be mindful of the amount of deregulation and no of licenses to introduce into the market. Over regulation will lead to duplication of resources and wastage which brings more cost than benefits to the industry.
- For example, the introduction of too many licenses can open up the industry to too much competition. This will cause airlines to operative at excess capacity and lead to wastage of resources. This also means that firms enjoy less supernormal profit and enjoy less

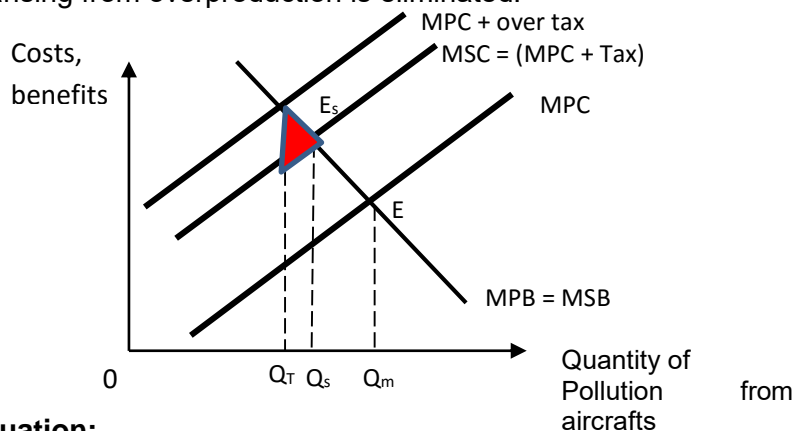
funds for R&D. In the long run, this can stifle dynamic efficiency and society is made worse off because of less innovation

- Hence government need to be mindful of the characteristics of the industry and the market conditions and the amount of information is necessary to ensure that the potential benefits of removing market failure will outweigh the costs of government failure

P2: In the case of negative externalities that arises from the pollution from airlines, the government can also intervenes by imposing carbon taxes.

E/E2:

- Government can impose a tax on production equal to MEC so as to force the airlines to internalise the external costs which would otherwise be ignored. This increases the firm's cost of production and reduces its ability to produce the same amount. The firms' MPC curve is shifted vertically upwards by the full amount of MEC. Hence, the new MPC ($MPC + Tax$) now coincides with the MSC curve.
- As shown in the figure below, where the new MPC ($MPC + Tax$) cuts MPB, production is reduced from Q_m to Q_s , which is the social optimum level of output. Hence, welfare loss arising from overproduction is eliminated.



Evaluation:

- However, the above argument is based on the fact that government has perfect information. In reality, governments suffer from imperfect information. For instance, in the case of negative externalities, the government needs to know what is the value of the marginal external cost in order to accord the right amount of tax. However, it is difficult to measure this value because of the external cost due to the presence of imperfect information. E.g. It is difficult to apportion blame to the respective producers in the same area for the pollution generated.
- If the value of MEC is overestimated, then the amount of tax is more than optimal ($MPC + overtax$). Over-taxing goods with negative externalities will mean higher costs of production for airlines and underproduction at Q_T there is a DWL area = shaded area. Depending on the level of overtaxing, the DWL could be bigger than the DWL due to overproduction, affecting overall welfare loss. This can result in the airlines leaving the industry which could affect output and level of employment in the industry.

P3: In the event of serious cases of market failure, the government can also take over the control of the production of the good completely to protect the interest of consumers.

- Freed from the profit motive, there should be no tendency for the state-owned monopolies to make high supernormal profits leading to inequity in income distribution. If profits are made, these could be passed on to the public in the form of lower future prices or in the form of tax reliefs / rebates.

Evaluation:

- However, governments can also suffer from inefficiencies because of the absence of profit motive. In situations where governments may use state ownership e.g. to prevent market dominance, a greater problem of inefficiency may arise. This is because of the problems associated with bureaucracy and red tape that often plague the running of the state enterprises. Thus, more harm than good may result.
- State enterprises tend to suffer from a higher level of inefficiency in production as there is little incentive for efficiency and innovation as there is no profit motive. As a result, the government may create inefficiencies when it intervenes in the market. Hence, government failure can arise.

Knowledge, Application, Understanding and Analysis	
L3	<ul style="list-style-type: none"> • Thorough explanation of the policies that address BOTH sources of market failure with good economic analysis. • Good examples given with reference to the airline industry. • An explicit discussion on the case of whether the potential benefits outweigh the cost of intervention.
L2	<ul style="list-style-type: none"> • For an attempt to explain the policies to address BOTH sources of market failure but is undeveloped or lacking in detailed analysis. <p>OR</p> <ul style="list-style-type: none"> • For an answer that thoroughly explains the policies pertaining to only ONE source of market failure. – Max 8m
L1	<ul style="list-style-type: none"> • Some explanation of the policies to address the sources of market failure but lacking in rigour. • Smattering of points.

Personal Judgement	
E2	<ul style="list-style-type: none"> • For an evaluative assessment based on economic analysis on whether the potential benefits of removing market failure outweighs the cost of market failure for all the policies highlighted. • Sound judgement made in the conclusion.
E1	For an unexplained judgement, or one that is not supported by analysis.

- 4 Consumer price inflation in Singapore averaged 4.2% during 2010-2012 due to falling labour productivity, rising housing as well as Certificate of Entitlement (COE) prices. Extremely low interest rates coupled with stronger economic conditions globally have also led to private debt-to-GDP ratio in Emerging Asia rising from 97% in 2008 to 122% in 2012.

Adapted from <http://www.mas.gov.sg>, accessed July 2015

- (a) Explain whether internal or external factors are the main cause of inflation in Singapore. [10]
- (b) Discuss whether price stability should be the top priority for an economy. [15]

Introduction

- State possible types of inflation in Singapore: Demand pull inflation due to rising AD and cost-push inflation due to falling AS.
- Direction of essay:** This essay aims to explain both the domestic (internal) and external factors which contribute significantly to the persistent rise in general price level of final goods and services in Singapore and consider which factors are more prevalent in causing the persistent rise in prices.

Body:

P1: One of the external factors causing demand-pull inflation in Singapore is rising affluence of trading partners.

E&E1: Rising affluence of trading partners such as China means there is a rise in real national income of such countries. This will lead to a rise in their purchasing power. Singapore will experience a rise in demand for her exports from these countries. This leads to a rise in Singapore's total export revenue. Assuming total expenditure on imports constant, there is a rise in (X-M). Thus, there is a rise in aggregate demand shown by a rightward shift of AD curve from AD₀ to AD₁. Assuming the country is operating near full employment, there will be a shortage of final goods and services which exerts upward pressure on GPL. GPL continues to rise until shortage is eliminated. The persistent increase in the general price level services from P₀ to P₁ depicts demand-pull inflation.

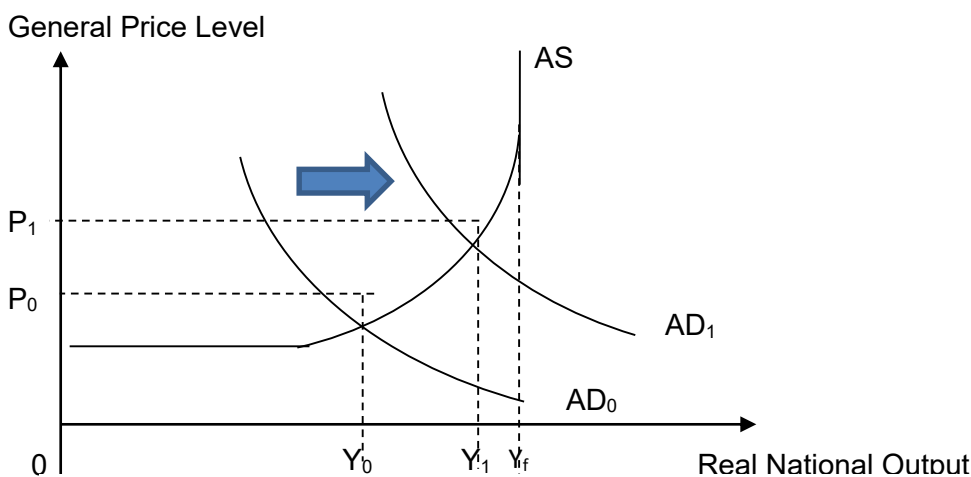


Figure 1: Demand-pull inflation arising from external factor

P2: Singapore's higher inflation could also be due to falling labour productivity which is considered an internal factor.

E&E2: In Singapore, due to influx of low-skilled foreign workers, there is a fall in labour productivity. This leads to a rise in unit cost of production. Profit-maximizing firms will reduce their SRAS, represented by a leftward shift of SRAS curve from $SRAS_0$ to $SRAS_1$. Shortage of Y_0Y_2 at original GPL P_0 will exert upward pressure on GPL as explained earlier. Thus, resulting in persistent rise in general price level of goods and services which means there is cost-push inflation.

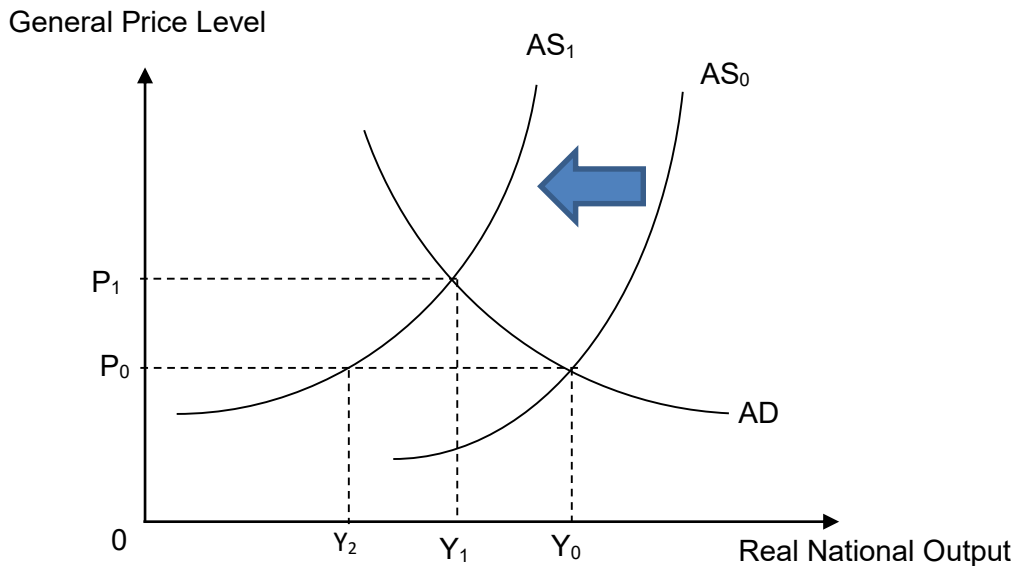


Figure 2: Cost-push inflation arising from domestic factor

P3: Another internal factor that caused cost-push inflation in Singapore is rising COE prices.

E&E3: Rising COE prices whereby private transport users have to pay a higher price for the certificate to allow them to drive their private vehicles on the roads. This applies to firms which use their vehicles as capital goods to transport final goods and services which means it contributes to a rise in transportation costs. A higher cost of production, assuming revenue constant, will lead to lower profits. Producers will reduce SRAS. Thus, the persistent rise in general price level of goods and services causes cost-push inflation.

Main factor:

It is highly likely external factors such as rising affluence of trade partner to be the main cause of demand-pull inflation in Singapore because she is heavily reliant on external demand given her small domestic demand. Thus, net exports take up a relatively large proportion (32%) of Singapore's GDP. Any rise in (X-M) will have a significant impact on Singapore's AD which in turn will have a significant impact on the rise in her GPL.

Marking scheme

Level	Descriptors
3	<ul style="list-style-type: none"> • Thorough explanation of at least one domestic and one external factors causing demand-pull and cost-push inflation in Singapore • Usage of relevant examples to integrate into analysis to explain the main factors causing inflation in Singapore.
2	<ul style="list-style-type: none"> • Adequate explanation of how domestic and/or external factors cause

	<p>demand-pull and cost-push inflation in Singapore</p> <ul style="list-style-type: none"> • May / may not use relevant examples to support analysis. • Some gaps evident in some of the analysis. • Some conceptual error/s may be evident. • Explanation of one type of inflation only
1	<ul style="list-style-type: none"> • Smattering of ideas. • Listing rather than explanation of how demand-pull and cost-push inflation arise. • Substantial conceptual errors. • Generally weak answer. Limited application of economic analysis.

(b) Discuss whether price stability should be the top priority for an economy. [15]

Introduction

- Every government has four macroeconomic objectives that it seeks to achieve, i.e. sustained economic growth, low unemployment, low inflation and a healthy balance of payments.
- Clarify the term price stability: Rising general price level of final goods and services at a moderate rate.
- **Direction of the essay:** This essay aims to explain why price stability is given more importance and to explain other situations whereby other goal/s should be the top priority.

Body

P1: For small and open economies such as Singapore, the government should make achieving price stability as the top priority.

E&E1:

Given the conditions in the Singapore economy such as its **characteristics** as mentioned, it is very dependent on **external demand (net exports and FDI)**. Hence it should focus on price stability in the short run.

- **E/E1(a): External Benefit – Improvement in balance of payments [EITHER]**
 Given Singapore's nature of being a small economy, she is heavily dependent on external demand in terms of net exports and FDI to propel her employment and economic growth.
 Price stability will ensure Singapore's exports remain competitively priced which will generate greater external demand since Singapore's exports are relatively cheaper compared to other countries. At the same time, imports will be relatively more expensive, reducing demand for imports. This leads to a $\uparrow TR_x + \downarrow Te_m$ and in turn a \uparrow net (X-M) which helps to improve current account.
 In addition, price stability means future projections of costs and revenue can be made more accurately. This can help to improve a country's attractiveness as an FDI location. So investors will move their funds into Singapore from other countries. Improvement in capital account.
 Overall, there will be improvement in BOP. As such, price stability is essential to ensure its export price competitiveness as well as its attractiveness as a FDI location.

- **E/E1(b): Internal Benefit – Economic growth and low unemployment [OR]**

During times whereby prices are stable, future projections of costs and revenue can be made more accurately. This can help to improve a country's attractiveness as an FDI location. A rise in investment expenditure results in an initial rise in income which

triggers further rise in induced consumption. There will be more than proportionate rise in AD relative to the rise in investment which **stimulates actual economic growth**. The higher level of production leads to higher derived demand for labour and helps to achieve low unemployment rates.

Since given her nature, she can achieve low unemployment rate by focusing on price stability, Singapore should focus more on price stability as a short-term goal as it can help to achieve other goals.

EV1: Also, price stability, as mentioned above, provides a conducive environment for foreign investments which is key to expanding our productive capacity and thus achieving sustained growth.

P2: However, on some occasions, the government will change its priority to focus more on achieving low unemployment rate goal when high unemployment problem is severe.

E&E2:

For example during recession in Singapore as a result of US sub-prime crisis in 2008, real national output will be contracting and the economy will be operating well below full-capacity. Hence the Singapore government made it a top priority to stimulate economic growth and achieve full unemployment.

- **High unemployment reduces SOL**

High unemployment means that there is a fall in the level of production in the economy. This means that there will be a rise in unemployment because there would be a fall in the demand for labour since labour is a derived demand. There would be a fall in people's incomes, which means that their purchasing power has decreased. Hence, they can buy fewer goods and services to satisfy their wants, leading to a fall in their material standard of living. Assuming non-material SOL remains unchanged, there is a fall in overall standard of living.

For countries such as Singapore whereby the people are the main resource, there is a need to ensure that resources are efficiently allocated as well as the people's welfare is well taken care of in order to incentivize them to continue to reside in the country. Thus, there is a need for Singapore government to focus more of achieving low unemployment rate goal.

P3: There are also situations whereby healthy BOP goal becomes the top priority when the country is experiencing large and persistent BOP deficit.

E&E3: For example, when US experiences large and persistent balance of payment deficit on current account due to China practising predatory dumping of her textile and shoes in US, the US government will make healthy BOP goal as the top priority.

A large and persistent BOP deficit for US is a sign of poor economic performance which will weaken investors' confidence. A fall in investment expenditure results in an initial fall in income which triggers further fall in induced consumption. There will be more than proportionate fall in AD relative to the fall in investment which **reduces actual economic growth**. The lower level of production leads to lower derived demand for labour and compromises low unemployment rate goal.

For countries dependent on trade, a large and persistent BOP deficit for US means there will be insufficient funds to continue to buy imports for economic development purpose. Tapping on the limited reserves of gold and foreign currencies to continue

financing import expenditure will eventually cause a depletion of foreign reserves. This will result in future SOL to be compromised.

Suggested Marking Scheme

Level	Description
L4	For an answer that is able to analyse thoroughly the positive effect/s of achieving price stability and the negative effects of not achieving all 3 other macroeconomic goals
L3	For an answer that is able to analyse clearly the positive effect/s of achieving price stability and the negative effects of not achieving at least 2 other macroeconomic goals
L2	For an answer that is able to analyse adequately the positive effect/s of achieving price stability and the negative effect/s of not achieving at least 1 other macroeconomic goal. Some conceptual errors in explanation.
L1	For an answer that shows awareness of some positive effect/s of achieving price stability or negative effect/s of not achieving at least 1 other macroeconomic goal. Conceptual errors are evident. Smattering of points
E2	For an answer that uses analysis to support an evaluative appraisal of the extent of government concern by considering at least 2 criteria of the severity of the problem, the characteristics of the economy as well as the existing economic conditions prevailing in the economy.
E1	For an answer that uses analysis to support an evaluative appraisal of the extent of government concern by considering one criteria of the severity of the problem, the characteristics of the economy as well as the existing economic conditions prevailing in the economy.

- 5 High unemployment in the euro area today is a consequence of both the economic fallout from the global economic crisis and labour market rigidities. Out of the eighteen million unemployed, three million were between the ages of 15 to 24.

Discuss how a government can best solve the above problem of unemployment. [25]

Introduction

Unemployment of labour occurs when people who are willing and able to work and are actively seeking a job but are unable to find jobs. The preamble states that high unemployment (which is an unemployment level that is above 5%) in the euro area was a result of the global economic crisis and labour market rigidities. This means that unemployment was caused by both cyclical and structural reasons respectively. Furthermore, the problem is more severe for youth.

This essay will examine how both the stated reasons contributed to the high unemployment in the euro area and will examine and evaluate possible policies that can be used to deal with the above problems and conclude by explaining how best a government can solve the problems of unemployment.

P1: One of the causes of high unemployment is the global economic crisis which led to cyclical unemployment.

E/E: Cyclical unemployment occurs during a recession. The US sub-prime crisis and the Eurozone debt crisis both resulted in weaker purchasing power in the US and countries in the European Union (EU). Since the US and neighbouring countries within the EU are major trading partners of countries in the EU such as Spain, demand for her exports will fall, assuming Spain's exports are normal goods to her partners. As a result, export revenue would fall. Ceteris paribus, net exports would decrease and AE would fall, leading to a downward shift of the AE curve from AE_0 to AE_1 as shown in Figure 1.

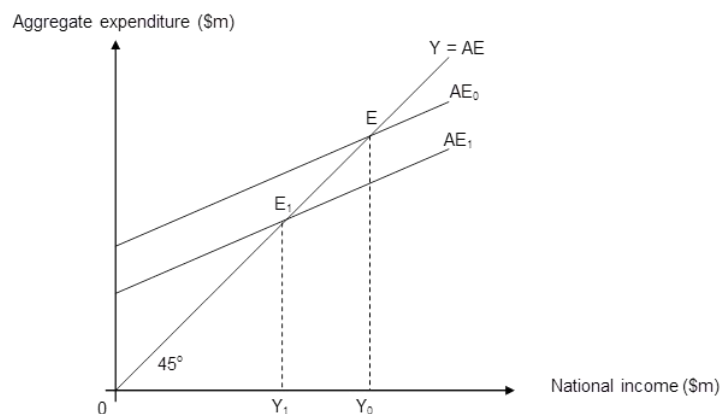


Figure 1: Cyclical Unemployment

The initial equilibrium national income is Y_0 . The fall in the aggregate expenditure results in a surplus of goods and services. This leads to an unplanned investment. Firms will thus reduce output in the next period resulting in lower income level. This will then bring about a fall in induced consumption which results in a further decrease in national income. Again, the multiplier process will continue until the economy reaches a new but lower equilibrium

national income of Y_1 . When firms reduce production, they will also retrench workers and high unemployment rises as labour is a derived demand of production.

P2: Structural unemployment was also another reason for high unemployment, with the problem being more severe for youths.

E: Structural unemployment is caused by changes in the structure of the economy. In order to remain competitive globally, countries in the EU have generally moved to high-skilled industries such as chemical production, aerospace and automotive industries. As a result, workers in the low-skilled industries would become unemployed as the demand for such workers falls and the demand for workers in the high-skilled industries rises. However, the low-skilled workers are unable to find alternative forms of employment as there is a mismatch in their skillset as compared to those required in the high-skilled industries. With these labour market rigidities, structural unemployment would arise.

The problem is more severe for youths since they are more likely to be low-skilled and do not have the necessary job experience to grant them permanent contracts. Thus, their lack of skills combined with the recession in the US and EU has resulted in youths taking up a significant proportion of those who are unemployed in the EU as they are the first to be laid off when a recession takes place.

P3: An expansionary fiscal policy can be used by a government to solve the problem of unemployment.

E: This involves an increase in government expenditure and a reduction in taxes in order to raise AE. An increase in government expenditure on final goods and services such as building infrastructure, spending on education and healthcare would lead to a rise in AE.

A government can also lower taxes. By lowering personal income tax, disposable income would rise, which would lead to an increase in consumption. *Ceteris paribus*, AE would rise. Also, a fall in corporate income tax would lead to a rise in post-tax profits. With more funds available for investment, investment expenditure would rise. Hence, AE would increase, *ceteris paribus*.

The rise in AE would bring about a shortage of goods and services or unplanned disinvestment at the initial equilibrium level of national income. Firms will meet the excess demand by drawing from their stocks or inventory. This means that there is unplanned disinvestment. Thereafter, firms will increase output in the next time period, resulting in a rise in national income, which is equal to the initial rise in injection. Consequently, this rise in incomes will lead to a rise in induced consumption and a rise in withdrawals. The multiplier process continues until the total amount of increase in withdrawals equals to the initial rise in injections. Hence, the economy reaches a new equilibrium national income at a higher level, which is also the full-employment level of national income in this case. Firms also increase their derived demand for labour, thus reducing cyclical unemployment.

Evaluation:

√ The policy is effective as it deals with the root cause of the problem, which is a falling AE. Even though the source of the problem was a fall in external demand, if the rise in domestic demand exceeds the initial fall, AE would still rise and this would encourage greater production in firms which would increase their derived demand for labour. This helps to reduce unemployment. Furthermore, it helps deal with youth unemployment as well since the initial trigger for their loss in jobs is a recession.

× Large tax cuts may not bring about the desired increase in investment if businessmen are not optimistic about future prospects. And such expectations are based on expected profits,

interest rates and the political climate. Since the EU is facing a recession, consumers may not have confidence in the economy and would still save more despite the tax cuts and this means less profits for firms who would in turn not want to increase their investments since they are not confident they can earn a desired amount of profits.

P4: Supply-side policies are necessary to solve the problem of structural unemployment.

E: Since the problem that results in structural unemployment is a mismatch of skills between that of the workers and what the firms want, supply-side policies are needed to bridge this gap.

One measure is to combine the temporary employment contracts with industry-led skill building and to improve vocational training systems. Workers on temporary job contracts do not receive industry-specific skills training in their firms because employers are unwilling to invest in their human capital when there is a great likelihood of these employees only staying with the firm for a few years and thus it would be regarded as a waste of the firm's resources to train these workers. The government can then put in place policies that would lower this opportunity cost for employers. These either include tax reductions that proportionately match the hours of training that these firms give their workers or subsidies to relevant courses that the firm would sign its workers up for. Another measure is to set up vocational schools that not only provides courses for its students but also provide internship or apprenticeship programmes that allow students to apply their theoretical knowledge to real-world situations.

As mentioned above, youths are more likely to be in temporary contracts than workers in other age groups. Thus, this policy is helpful in dealing with the structural unemployment issue that is more prevalent among youth.

Evaluation:

√ This policy is effective and necessary in helping to solve structural unemployment because it addresses the root cause of the problem which is the mismatch of skills between potential workers and what firms require. While it does not deal with the problem of cyclical unemployment, it still aids in alleviating the overall high unemployment, especially among the youth. Furthermore, when a country moves out of a recession, its workers are then better placed to find jobs quickly since they now have the relevant skills that firms require.

× This policy, however, would take some time to put in place and to be effective and it takes time for vocational training schools to be set up and it also takes time to convince firms to be willing to participate in providing apprenticeship programmes. Furthermore, even with more training provided for those on temporary contracts, it takes time for workers to learn higher-end skills. Thus, there is a time lag between the implementation of the policy and being able to enjoy the fruits of the policy. While this takes place, high unemployment may still occur.

P5: The policy of depreciation by the Eurozone can help deal with the problem of cyclical unemployment.

E: To boost reduce cyclical unemployment, the government can depreciate its currency. This means that it lowers the external value of its currency. It can do so by selling its domestic currency in the foreign exchange market. When domestic currency depreciates, the price of the country's exports in foreign currency will fall. Assuming the demand for its exports is price elastic, this will lead to a more than proportionate increase in quantity demanded for exports, *ceteris paribus*, and hence a rise in its export earnings. Currency depreciation will also increase the price of imports in domestic currency. If the demand for

imports is price elastic, a rise in price will result in a more than proportionate fall in quantity demanded for imports, *ceteris paribus*, leading to a fall in import expenditure. Since the country's export earnings rise while its import expenditure falls, there will be a rise in its net exports (X-M).

As long as the Marshall-Lerner condition is met, i.e. the sum of price elasticity of demand for exports and price elasticity of demand for imports is more than one, currency depreciation will lead to a rise in net exports. Since net exports increase, AE also increases, *ceteris paribus*. The rise in AE would result in a shortage of goods and services or unplanned disinvestment. Hence, there is an incentive for firms to increase production, leading to an increase in national output and derived demand for labour, thus reducing cyclical unemployment.

Evaluation:

✓ This policy helps to address the root cause of the problem, which is a fall in AE due to falling external demand.

✗ However, this policy has a limited effect in that trade between Eurozone countries would not be affected by the policy because they share a common currency. Thus, depreciation would not change the value of exports to neighbouring Eurozone countries.

Level Marking Scheme

Level	Descriptors
L3	<ul style="list-style-type: none"> • Rigorous analysis of both causes of unemployment (must be cyclical and structural). • Rigorous explanation (including limitations) of 3 policies to solve the 2 causes of unemployment. • Policies to solve youth unemployment must be included. • Coherent response. • Good application to a given context.
L2	<ul style="list-style-type: none"> • Some to rigorous analysis of only 1 cause of unemployment and the appropriate policy to tackle it (applies to cyclical unemployment as well even if student explains 2 policies well) • Some attempt at evaluation of policies. • Limited application to given context. • OR Thorough explanation of 2 causes of unemployment only • OR only explanation of 2 policies to deal with unexplained causes of unemployment
L1	<ul style="list-style-type: none"> • Smattering of points that show weak understanding of question requirements. • Poor content with several conceptual errors.

Personal Judgement

Level	Descriptors
E2	<ul style="list-style-type: none"> • Makes a recommendation of the best approach to tackling the above problems of unemployment including youth unemployment after consideration of the given context. • Max 3m if recommendation is made without considering youth unemployment.
E1	<ul style="list-style-type: none"> • States that a combination of policies are needed without explanation – 1m • Explains why a combination of policies is needed without application to context.

- 6 Globalisation is increasing substantially and creating new opportunities for both industrialised and developing countries. The largest impact has been on developing countries, which can now attract foreign investments, thereby enabling them to reduce poverty significantly.

Source: Angie Mohr, *Houston Chronicle*, 19 January 2013

- (a) Explain the determinants of a country's pattern of trade. [10]
- (b) Globalisation tends to benefit developing economies more than developed economies. Discuss the extent to which you agree with the above view. [15]

Part A

Introduction

A country's pattern of trade refers to the type and volume of goods or services that the country exports and imports. It also looks at who the country's trading partners are. This is mainly determined by supply factors such as the factor endowment of a country and also demand factors such as expectations of high demand.

P1: The theory of comparative advantage helps to explain a country's pattern of trade of exports and imports.

E: According to the theory of comparative advantage, even if one country has absolute advantage over others in the production of all goods, there is still a basis for mutually beneficial trade as long as there is comparative advantage in the production of these goods. A country is said to have a comparative advantage in the production of a good if it can produce that good at a lower opportunity cost than another country, i.e. less amount of another good has to be given up in order to produce it. This is based on the factor endowment of a country.

Assume that China and Singapore can produce two products (for example, cloth and electronic valve), have a given amount of resources and constant returns to scale. China can either produce 1000 electronic valve when fully used for electronic valve production or produce 1000m of cloth when fully used for cloth production while Singapore can either produce 800 electronic valve or 200m of cloth. The opportunity cost of producing 1 electronic valve in China is 1m of cloth, while the opportunity cost of producing 1 electronic valve in Singapore is 0.25m of cloth. Since Singapore has a lower opportunity cost of producing electronic valve, Singapore should specialise in producing electronic valve and China should specialise in producing cloth. Hence, Singapore exports electronic valve to China and imports cloth from China, and vice versa for China.

Due to Singapore's strength lies in the fact that she has a high level of technological advancement due to the large amount of investments pumped into R&D, there is a large amount of capital equipment, world class infrastructure, as well as an educated and skilled workforce due to her world class education. Hence, her comparative advantage lies in the production of high tech, high value-added manufacturing and tertiary services. Thus, due to differences in comparative advantage, China and Singapore would export goods in which they enjoy comparative advantage in and import other goods and services.

P2: Changes in demand factors can also affect patterns of trade.

With world incomes rising and consumers having an increase in purchasing power especially in Asia, Singapore hopes to tap on this trend by investing in industries such as lifestyle products and services.

Singapore has also ventured into the production of different brands of electronic consumer products such as DVD players through local brands such as Akira and Enzer. This is to cater to the rising middle class in the region, especially the lower income group of consumers. Due to the amount of profits to be made from the rising demand, Singapore will produce these different brands even if she may not have comparative advantage in. Singapore also exports these lower end electronic products to developing countries such as Indonesia and the Philippines, where there is demographic change in the form of rising middle class.

L: Thus, expectations of high demand and profits play a part in determining what type of goods and services a country would export.

P3: Changes of economic conditions of trading partners also determine a country's pattern of trade.

E: Over the past few years, the financial crisis, European sovereign debt crisis and the growth of emerging economies have affected the trade patterns around the world. For example, the profile of Singapore's top 10 trading partners has seen some changes over the past decade. The shares of European Union economies and the USA in Singapore trade pattern has declined over the past decade. This can be explained by the slow growth experienced by the US and the Eurozone countries while the Chinese economy develops at a rapid rate which results in a greater rise in demand for our exports, thus, changing our pattern of trade.

Level	Description
L3	Detailed analysis of both demand and supply factor, supported by theory of comparative advantage. There is awareness of pattern of trades in type of goods and trading partners.
L2	Good analysis of supply factor with reference to theory of comparative advantage and some explanation of demand factors.
L1	Limited analysis and scanty explanation of factors affecting patterns of trade. Smattering of ideas.

(b) Globalisation tends to benefit developing economies more than developed economies.

Discuss the extent to which you agree with the above view.

[15]

Introduction

Globalisation refers to the process of continuing integration of countries in the world where national markets become increasingly interlinked with greater mobility of goods and services, capital, labour and technological know-how amongst countries. Developing countries are characterised by low national income/capita, relatively low level of industrialisation/large agrarian sector, low level of education, and weak infrastructure, while developed countries typically enjoy high national income/capita, educated labour force with high rates of capital accumulation (Investment) and better infrastructure. The characteristics of the developed or developing countries may explain for the differences in the impact of globalisation.

P1: Countries gains from globalization in terms of increasing their employment of resources and propelling their actual economic growth, and increase the current standard of living.

E&E1: As part of the process of globalization, increasingly countries are moving towards free trade whereby exchange of goods and services is done without trade barriers such as tariffs (taxes on imports) → free trade gives rise to *trade creation* whereby there is an increase in the volume of trade for countries such as China → specialized based on her CA → China could produce low-end manufactured goods more efficiently than trading partners which means to produce one more unit of low-end manufactured goods such as textile, she is able to give up less of alternative good → lower opportunity cost incurred → goods and services including those exported able to be produced cheaper in China than trading partners → demand for X rises, c.p → rise in total revenue from exports, it is also worth noting that there is a rise in total expenditure on imports as well because of cheaper M from trading partners → in the context that rise in TR_x is more than rise in TEm, rise in (X-M) since (X-M) is a component of AD and a form of net injection → rise in Y of owners of fops in export sector which triggers further spending on goods and services in domestic sectors due to higher purchasing power, after part of the income leaked out in the form of savings, taxes or imports → ripple effect of rise in demand within the domestic sectors will continue until initial rise in J is equal to amount leaked out → multiple rise in real NY in SR → economic growth in SR. Rise in production of goods and services → increase derived demand for labour → reduce Un+. Rise in real NY → improves material SOL → increase current SOL.

Evaluation:

Globalization tends to benefit developing economies such as China in terms of employment gain more than the developed economies such as Singapore due to the nature of the goods and services exported. For example, developing economies such as Indonesia and China tend to experience greater job gains as they have comparative advantage in labour intensive industries with low capital to labour ratio but the job gains generated for developed economies such as Singapore may be smaller as the comparative advantage lies in the capital intensive product with high capital to labour ratio, thereby, generating less jobs from the rise in market access.

On the other hand, developed economies may experience a greater rise in national income. Capital intensive products tend to be high value added, and that means that the rise in (X-M) tends to be greater for developed economies with comparative advantage in high value add products such as electronic valve as compared to developing economies with comparative advantage in agricultural products such as potatoes. This would lead to a greater rise in AE, leading to greater rise in national income, assuming that the economies are operating near full employment level.

P2: Globalization also benefits developing countries more in terms of increasing their potential growth and future standard of living. (AD/AS) LRAS

E&E2:

Globalization involves removal of barriers to capital flow between economies which will increase the flow between countries as profit maximizing investors look for higher rate of returns to investment. Due to relatively cheaper cost of production in developing countries, developing economies tend to attract capital inflow in the form of foreign direct investment, increasing the capital formation of machinery, factories in the developing countries, leading to a rise in capital stock. Moreover, these foreign direct investments may lead to transfer of technology between the developed and developing countries through sharing of more efficient methods of production and assist in the formation of human capital. These will lead to a rise in productive capacity of the economy and a rise in LRAS which increase the potential growth of the economy and future standard of living.

However, the rise in FDI may also bring about greater pollution and depletion of resources, affecting the productive capacity of the developing countries. Relatively lenient environmental policies in the developing countries may give them a comparative advantage in pollution intensive goods, and FDI might harm the host country's environment, affecting the quality of resources such as land and labour. Moreover, FDI into developing countries may focus on natural resource use and extraction, particularly agriculture, mineral and fuel production. This could lead to rapid depletion of resources which affects quantity of resources thus limiting the potential growth of developing economies and future SOL.

Globalisation can also lead to a rise in capital flows between developed economies, usually into the production of higher value added goods and services. For example, Singapore, Hong Kong, Ireland have been able to attract FDI into the different sectors of the economy such as financial, IT services, and manufacturing of high value added products such as pharmaceutical through good infrastructure, high human capital and attractive corporate tax system. These FDIs also lead to greater capital formation and raise the potential growth of the economy.

Evaluation:

While the hypothesis that FDI tends to benefit developing economies more, the extent to which FDI benefits the host country depends on the type of FDI which the economy is able to attract. Due to differences in the sources of comparative advantage, the type of FDI also differs between developed and developing economies. In this case, it is likely that developed economies may actually benefit more from the increase in FDI as they tend to attract high quality investment flows into the economy rather than those which could lead to environmental degradation and rapid depletion of resources. This could be due to stronger governance in developed economies, preventing the fallout of environmental pollution from FDIs. In fact, the U.S. was the top recipient of FDI in 2013. Thus, it is likely that developed economies benefit more from developing economies.

P3: Developed economies tend to experience a rise in structural unemployment whereas developing economies may not as the latter gains comparative advantage from the process of globalisation.

The process of globalisation reduces barriers to trade of goods and services and this will lead to more competition in the world market from cheaper imports produced by developing countries which have comparative advantage in these goods. This will reduce the demand for domestic exports, leading to a fall in the production. This will result in higher unemployment due to a fall in derived demand for labour. However, as the workers lack the relevant skills to move into the sunrise industries in which the developed economy enjoys comparative advantage in, structural unemployment would arise due to occupational immobility. For example, Singapore used to enjoy a comparative advantage in the production of hard disk drive and was one of the world largest HDD producers accounting for 30% of world production. However, due to the development of Thailand, Singapore's exports of disk drives dropped from a high of S\$18.7 billion in 1998 to S\$13.45 billion in 2005. This has led to a rise in structural unemployment as the unemployed are unable to move into the biomedical industries or the financial sector.

Evaluation: The extent of rise in structural unemployment varies among developed economies due to differences in the ability of the government to intervene.

Some government of the developed economies may have issue in responding to this challenge as they may not have sufficient funds or resources to implement interventionist supply side policies. Governments who have enjoyed budget surplus may be in a better position to cope with this challenge posed by globalisation.

P4: Countries are able to enjoy lower cost of production due to increased mobility of factors of production which helps to lower their inflation rate.

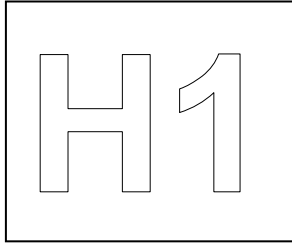
E&E3: With globalization, there is increased mobility of factors of production such as labour → increase in labour supply into countries will create a surplus of labour and exerts downward pressure on price of labour → a lower wage rate means lower cost of production → assuming rev constant → profit higher → profit maximizing producers more willing and more able to produce final goods and services → rise in SRAS → surplus of goods and services at original GPL which exerts downward pressure on GPL → fall in GPL of final goods and services → lowers inflation rate → low inflation rate goal 😊

Evaluation:

In this situation, developed economies may benefit more than developing economies because the former are experiencing a situation whereby there is a higher level cost of production due to higher labour cost → with globalization, they would be able to bring down inflationary pressures by bringing in more resources from developing economies. Hence, developing economies benefit less compared to developed economies in this aspect.

Suggested Marking Scheme

Level	Description
L4	Thorough analysis of both positive and negative impact of globalisation. Good evaluation of the differing impact based on developed and developing economies' characteristics. Conclusion is reasonably supported.
L3	Relatively detailed analysis of both positive and negative impact of globalisation with some evaluation of the differing impact.
L2	Some explanation of either positive or negative impact of globalisation on an economy with some recognition of the differing impact on different countries. Answer is largely one-sided. Conceptual error/s evident.
L1	Limited analysis and scanty explanation of impact of globalisation. Smattering of ideas.



**TAMPINES JUNIOR COLLEGE
JC2 PRELIMINARY EXAMINATION**



CANDIDATE
NAME

CIVICS GROUP

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TUTOR
NAME

ECONOMICS

8819

Tuesday, 15 Sept 2015

Additional Materials: Writing Paper

3 hours

READ THESE INSTRUCTIONS FIRST

Write in dark blue or black pen.
You may use a soft pencil for any diagrams, graphs or rough working.
Do not use paper clips, highlighters, glue or correction fluid.

Section A (Case Study) [70%]
Answer **ALL** questions

Section B (Essay) [30%]
Answer **ONE** essay question

Submit each question separately.

The number of marks is given in brackets [] at the end of each question or part question.

Section A

Begin **each case study** on a **fresh sheet of paper**. Case study question 1 and 2 are to be submitted **separately**.

Answer **all** questions in this section

Question 1 Rare Earths Market

Rare earths are a group of 17 chemical elements that are used widely in high-technology and clean-energy products because they impart special properties of magnetism, luminescence, and strength. Some of these products include magnets, lasers, nuclear reactors, plasma TVs, energy-saving light bulbs, wind turbines, hybrid cars and even guided missiles.

Figure 1: Rare earths production and price index, 2007-2012



Source: *The Economist*, 17 March 2012

Extract 1: China's hand in the rare earths market

China supplies 97% of the world's rare earths and is naturally blessed with deposits. "The Middle East has oil, China has rare earths," Deng Xiaoping said in 1992.

Wind turbines and electric vehicles both rely on rare earths metals like dysprosium and neodymium to make the magnets that are essential to their generators and motors. These two elements, part of a group called the rare-earth metals, have

unusual configurations of electrons orbiting their nuclei, and thus unusually powerful magnetic properties. Finding substitutes would be hard. Motors or generators whose magnets were made of other materials would be heavier, less efficient or both.

China, which supplies about 90 percent of the world's rare earths' needs, imposed export quota restrictions and raised tariffs on exported rare earths in 2010 as it sought higher prices to help cover the huge environmental costs of production and tried to encourage the growth of domestic industries that use rare earths. The export quota meant that there is a restriction imposed by the Chinese government on the amount of rare earths that may be exported within a given period.

Prices shot up as buyers scrambled to secure supplies, leading Japan, Europe and the United States to file a trade complaint. The World Trade Organization ruled last year that China's restrictions were discriminatory and told it to scrap the quotas and export tariffs.

Hitachi Metals Ltd, which uses rare earths to make magnets used in hybrid cars, said that it has become increasingly difficult to procure rare earths. Toshinori Hata, a spokesman for Hitachi Metals, said that the company would have no choice but to pass on some of its costs to the consumers.

Meanwhile, mining companies around the world have been trying to develop new mines. But it would take years for a WTO panel to render a verdict or new mines to open.

Source: Adapted from the *Economist*, 13 March 2012

Extract 2: Rare earths comes at a heavy cost for local villagers

The town of Baotou, in Inner Mongolia, is the largest Chinese source of these strategic rare earths elements, essential to advanced technology. The minerals are mined at Bayan Obo, 120km farther north, then brought to Baotou for processing.

The concentration of rare earths in the ore is very low, so they must be separated and purified, using hydro-metallurgical techniques and acid baths. Two-thirds of rare earths in China is produced in Baotou. Now the soil and groundwater are saturated with toxic substances.

The foul waters of the tailings pond contain all sorts of toxic chemicals, but also radioactive elements such as thorium which, if ingested, cause cancers of the pancreas and lungs, and leukaemia.

A study by the municipal environmental protection agency showed that rare-earth minerals were the source of their problems. The minerals themselves caused pollution, but also the dozens of new factories that had sprung up around the processing facilities and a fossil-fuel power station feeding Baotou's new industrial fabric. Residents of what was now known as the "rare-earth capital of the world" were inhaling solvent vapour, particularly sulphuric acid, as well as coal dust, clearly visible in the air between houses.

Towards the end of the 1980s, crops in nearby villages started to fail: "Plants grew badly. They would flower all right, but sometimes there was no fruit or they were

small or smelt awful." Ten years later the villagers had to accept that vegetables simply would not grow any longer.

Source: Adapted from *The Guardian*, 7 Aug 2012

Extract 3: The Chinese government steps-up regulation on the rare earth industry

The local governments of three regions where most of China's light rare earths metals exist will jointly crack down on the illegal exploration and production of light rare earths, the Ministry of Land and Resources said in a statement on its website. The operation aims to "promote the protection and rational development of the country's rare earths resources and further regulate their production," said the ministry.

The country has stopped issuing new licenses for rare earths mining. It has also imposed production caps, enforced export quotas and announced tougher environmental standards for rare earths production in order to control environmental damage and protect the resources. The taxes and quotas China had in place to restrict rare earths exports caused many companies to move their factories to China from the United States and Europe so that they could secure a reliable and inexpensive source of raw materials.

Earlier this year, the government released a statement announcing that it would impose a tax on rare earths minerals. According to the statement released, the tax rate of mined light rare earths would be 60 yuan (US\$ 9.1) per tonne, while that of medium and heavy rare earths would be set at 30 yuan (US\$ 4.5) per tonne. The government will use the tax to support research on rare earths processing, set up environmental compensation funds and build rare earths reserves.

Source: Adapted from *China Daily*, 27 Sept 2011

Extract 4: China has scrapped its quota system restricting exports of rare earth minerals

Beijing increased the export quota restrictions on rare earth materials in 2009 while it tried to develop its own industry for the 17 minerals, which are crucial to making many hi-tech products, including mobile phones.

Last year, a WTO panel ruled that China had failed to show the export quotas were justified. Under the new guidelines, rare earths will still require an export licence but the amount that can be sold abroad will no longer be covered by a quota.

The complaint, upheld by the WTO, also said the quota was designed to gain market advantage for domestic producers with cheaper access to the raw materials.

Source: Adapted from *BBC*, 5 Jan 2015

Questions:

- (a) (i) With reference to Figure 1, compare the change in China's rare earths production with the rest of the world from 2007 to 2012. [1]
- (ii) Account for the observed changes above. [2]
- (b) (i) What can you conclude from the data about the price elasticity of supply of rare earths? [2]
- (ii) With reference to the data where appropriate, explain why global prices of rare earths "shot up" in 2011. [3]
- (c) Suggest a possible reason for China's competitiveness in the rare earths market. [2]
- (d) (i) With reference to the context given in Extract 2, identify and explain marginal external cost and marginal social cost. [4]
- (ii) Explain how the extraction of rare earths leads to inefficiency in resource allocation and analyse the effectiveness of taxation to correct it. [8]
- (e) Evaluate the impact of the removal of export quota in the rare earths industry on China's economy. [8]

[Total: 30]

Question 2 The Philippines: Before and After Haiyan

Table 1: Top 5 Exports and Imports of the Philippines, 2013

Top 5 Philippine Exports (% of total export receipts)			Top 5 Philippine Imports (% of total import payments)		
1.	Electronic Products	42.2%	1.	Electronic Products	24.9%
2.	Other Manufactures	9.7%	2.	Mineral Fuels, Lubricants & Related Materials	21.1%
3.	Woodcrafts & Furniture	5.9%	3.	Transport Equipment	10.0%
4.	Chemicals	4.6%	4.	Industrial Machinery & Equipment	5.1%
5.	Machinery & Transport Equipment	3.7%	5.	Other Food & Live Animals	2.9%

Table 2: Top 5 Export destinations & Import Origins of the Philippines, 2013

Top 5 export destinations (% of total export receipts)			Top 5 import origins (% of total import payments)		
1.	Japan	21.3%	1.	China	12.9%
2.	US	14.7%	2.	US	11.2%
3.	China	12.4%	3.	Japan	8.4%
4.	Hong Kong	8.0%	4.	Taiwan	7.8%
5.	Singapore	7.3%	5.	South Korea	7.7%

Source: *Foreign Trade Statistics of The Philippines, 2013*

Extract 5 At the front of the back office

The rise of what is known as business-process outsourcing (BPO) in the Philippines has been nothing short of phenomenal. Last year the Philippines even overtook India, long the biggest call-centre operator in the world, in “voice-related services”. The country now employs about 400,000 people at call centres, India only 350,000.

The main reason for the success of the Philippine call centres is that workers speak English with a neutral accent and are familiar with American idioms—which is exactly what their American customers want. As a result, the Indian firms themselves have been helping to move jobs to the Philippines by setting up call centres in Manila and other parts of the country. Infosys and Wipro, as well as scores of other Indian firms, now have substantial operations there. And they aren't drawn to Manila by cheap labour. Wages in the Philippines are slightly higher than in India since the Filipino accent commands a premium.

The big question is whether the Philippine BPO industry, having conquered the call-centre market, can now move up the value chain. To keep growing rapidly—and profitably—it needs to capture some of the more sophisticated back-office jobs, such as those processing insurance claims and conducting due diligence. In these businesses, called knowledge-process outsourcing and legal-process outsourcing, India still rules supreme.

Integreon offers a glimpse of what the future may hold. It employs 300 people in Manila, 40 of them lawyers who help multinational law firms with litigation. Familiarity with America helps. "It makes it very easy for us to do legal research for American firms," says Benjamin Romualdez, the firm's country manager.

Western banks have also discovered the Philippines. JPMorgan Chase now has over 25,000 workers on its own payroll in the country, many of whom do much more than answering phones. The Philippines is set to compete with India across the BPO board.

Source: *Economist*, 23 Jun 2012

Extract 6 From coconut farms to call centres: the struggle to rebuild lives after Haiyan

The coconut palm is known in the Philippines as the "tree of life" because every part of it has a use. Flowering for harvest every three months and living for decades, coconut trees have long allowed millions of Filipinos to make a living.

But it's a harsh way of life. A harvest of 2,000 coconuts sells for 7,000 pesos (£100) and tenant farmers must share that with landowners. Many have sought to leave farming behind. Call centre work and other jobs in the outsourcing industry offer air-conditioned comfort and wages that are higher than average for white-collar work in the Philippines. Those opportunities were multiplying in Leyte as more outsourcing companies moved in. Then Typhoon Haiyan came - levelling both towns and dreams.

The workload of call and data centres has easily been diverted to other Philippine cities. Less simple is the choice faced by thousands of workers: uproot and separate from family or stay in Leyte province and wait perhaps a year for the jobs to return.

At call and data centres Accudata and its affiliate, CoreData, about 200 out of 1,000 employees have put their names down for transfer to Manila. As with other companies, those with families are reluctant to relocate despite having no job in Leyte.

Edgardo Sablay also fears tough times but he is not relocating. The 48-year-old has spent most of his life climbing coconut trees to collect sap from the palms' flowers for Tuba, a coconut sap wine. He can earn 700 pesos for collecting 36 litres a day.

"I have not gone to school, I only know how to make Tuba," he said. "I am not losing hope that there will still be trees that can survive and which I can climb to feed my family."

Some, on the other hand, are less hopeful.

"If we get coconut seedlings, we can plant again next year," said Duma, shirtless under the midday sun. "We will really go into hard times if the government will not support us."

Source: *The Guardian*, 29 Nov 2013

Questions:

- (a) (i) With reference to Table 1, explain the meaning of intra-industry trade. [2]
- (ii) With reference to Tables 1 and 2, use the concept of opportunity cost to explain the basis for trade between the Philippines and a developed country such as Japan. [4]
- (b) Using a demand-supply diagram as applied to the labour market, explain why 'wages in the Philippines are slightly higher than in India' (Extract 5, Para 2). [3]
- (c) With the use of the production possibilities curve, explain how the Philippines was affected by Typhoon Haiyan. [3]
- (d) Explain any one cause of unemployment evident in Extract 6 and comment on whether 'government support' would resolve such unemployment. [5]
- (e) Extract 5 suggests that a 'move up the value chain' is the reason why the Philippines is 'set to compete with India across the business-process outsourcing (BPO) board'.
- (i) Analyse the macroeconomic benefits to the Philippine economy of a 'move up the value chain'. [5]
- (ii) Consider what factors might prevent such a move, and evaluate their implications for government policy. [8]

[Total: 30]

Section B

Answer **one** question from this section.

Begin this section on a **fresh sheet of paper**. Section A and B are to be submitted **separately**.

3. In the UK, tickets to see the opera are heavily subsidized. It's also been a decade since most of UK's national museums and art galleries abandoned entrance fees as a matter of government policy. Since then, only a few other nations around the world have followed suit. Many countries remain wedded to taking money at the door.

Source: Adapted from *BBC News*, 1 Dec 2011

- (a) Explain how the price-elasticities of demand and supply for goods and services limit the effectiveness of government policy to correct market failure. [10]
- (b) Discuss the view that differences in entry fees to the opera, national museums and art galleries between countries is solely due to perceived differences in the external benefit they generate in each country. [15]

4. Record unemployment has led to a rise in the number of young entrepreneurs leaving southern Europe to seek their fortunes. Growth is also likely to remain elusive because southern Europe is suffering from fiscal austerity and a shortfall of credit.

Sources: *BBC News*, 27 June 2013 and *Economist*, 9 March 2014

- (a) Explain how the rise in the number of entrepreneurs leaving should be a cause of concern for southern Europe. [10]
- (b) Discuss the extent to which low unemployment should be the most important goal to a government. [15]

END OF PAPER

JC 2 H1 Economics
Preliminary Examination
Suggested Answers

Section A

Question 1

Rare Earths Market

Rare earths are a group of 17 chemical elements that are used widely in high-technology and clean-energy products because they impart special properties of magnetism, luminescence, and strength. Some of these products include magnets, lasers, nuclear reactors, plasma TVs, energy-saving light bulbs, wind turbines, hybrid cars and even guided missiles.

Figure 1: Rare earths production and price index, 2007-2012



Source: *The Economist*, 17 March 2012

Extract 1: China's hand in the rare earths market

China supplies 97% of the world's rare earths and is naturally blessed with deposits. "The Middle East has oil, China has rare earths," Deng Xiaoping said in 1992.

Wind turbines and electric vehicles both rely on rare earths metals like dysprosium and neodymium to make the magnets that are essential to their generators and motors. These two elements, part of a group called the rare-earth metals, have unusual configurations of electrons orbiting their nuclei, and thus unusually powerful

magnetic properties. Finding substitutes would be hard. Motors or generators whose magnets were made of other materials would be heavier, less efficient or both. China, which supplies about 90 percent of the world's rare earths' needs, imposed export quota restrictions and raised tariffs on exported rare earths in 2010 as it sought higher prices to help cover the huge environmental costs of production and tried to encourage the growth of domestic industries that use rare earths. The export quota meant that there is a restriction imposed by the Chinese government on the amount of rare earths that may be exported within a given period.

Prices shot up as buyers scrambled to secure supplies, leading Japan, Europe and the United States to file a trade complaint. The World Trade Organization ruled last year that China's restrictions were discriminatory and told it to scrap the quotas and export tariffs.

Hitachi Metals Ltd, which uses rare earths to make magnets used in hybrid cars, said that it has become increasingly difficult to procure rare earths. Toshinori Hata, a spokesman for Hitachi Metals, said that the company would have no choice but to pass on some of its costs to the consumers.

Meanwhile, mining companies around the world have been trying to develop new mines. But it would take years for a WTO panel to render a verdict or new mines to open.

Source: Adapted from the *Economist*, 13 March 2012

Extract 2: Rare earths comes at a heavy cost for local villagers

The town of Baotou, in Inner Mongolia, is the largest Chinese source of these strategic rare earths elements, essential to advanced technology. The minerals are mined at Bayan Obo, 120km farther north, then brought to Baotou for processing.

The concentration of rare earths in the ore is very low, so they must be separated and purified, using hydro-metallurgical techniques and acid baths. Two-thirds of rare earths in China is produced in Baotou. Now the soil and groundwater are saturated with toxic substances.

The foul waters of the tailings pond contain all sorts of toxic chemicals, but also radioactive elements such as thorium which, if ingested, cause cancers of the pancreas and lungs, and leukaemia.

A study by the municipal environmental protection agency showed that rare-earth minerals were the source of their problems. The minerals themselves caused pollution, but also the dozens of new factories that had sprung up around the processing facilities and a fossil-fuel power station feeding Baotou's new industrial fabric. Residents of what was now known as the "rare-earth capital of the world" were inhaling solvent vapour, particularly sulphuric acid, as well as coal dust, clearly visible in the air between houses.

Towards the end of the 1980s, crops in nearby villages started to fail: "Plants grew badly. They would flower all right, but sometimes there was no fruit or they were small or smelt awful." Ten years later the villagers had to accept that vegetables simply would not grow any longer.

Source: Adapted from *The Guardian*, 7 Aug 2012

Extract 3: The Chinese government steps-up regulation on the rare earth industry

The local governments of three regions where most of China's light rare earths metals exist will jointly crack down on the illegal exploration and production of light rare earths, the Ministry of Land and Resources said in a statement on its website. The operation aims to "promote the protection and rational development of the country's rare earths resources and further regulate their production," said the ministry.

The country has stopped issuing new licenses for rare earths mining. It has also imposed production caps, enforced export quotas and announced tougher environmental standards for rare earths production in order to control environmental damage and protect the resources. The taxes and quotas China had in place to restrict rare earths exports caused many companies to move their factories to China from the United States and Europe so that they could secure a reliable and inexpensive source of raw materials.

Earlier this year, the government released a statement announcing that it would impose a tax on rare earths minerals. According to the statement released, the tax rate of mined light rare earths would be 60 yuan (US\$ 9.1) per tonne, while that of medium and heavy rare earths would be set at 30 yuan (US\$ 4.5) per tonne. The government will use the tax to support research on rare earths processing, set up environmental compensation funds and build rare earths reserves.

Source: Adapted from *China Daily*, 27 Sept 2011

Extract 4: China has scrapped its quota system restricting exports of rare earth minerals

Beijing increased the export quota restrictions on rare earth materials in 2009 while it tried to develop its own industry for the 17 minerals, which are crucial to making many hi-tech products, including mobile phones.

Last year, a WTO panel ruled that China had failed to show the export quotas were justified. Under the new guidelines, rare earths will still require an export licence but the amount that can be sold abroad will no longer be covered by a quota.

The complaint, upheld by the WTO, also said the quota was designed to gain market advantage for domestic producers with cheaper access to the raw materials.

Source: Adapted from *BBC*, 5 Jan 2015

Suggested Answers:

(a) (i) With reference to figure 1:

Compare China's rare earths production with the rest of the world from 2007- 2012. [1]

Difference 1: China's rare earth production declines while the rest of the world's increases. [1m]

(ii) Account for the observed changes above. [2]

China's rare earths production has declined over the years due to the implementation of export quotas. The export quotas has reduced the amount of China's rare earths exported to the rest of the world and hence lesser rare earths needs to be produced. [1m]

The rare earths production for the rest of the world increases due to increase in world prices of rare earths observed in Figure 1. It is more profitable to enter the industry and attracted more countries into the production of rare earths. [1m]

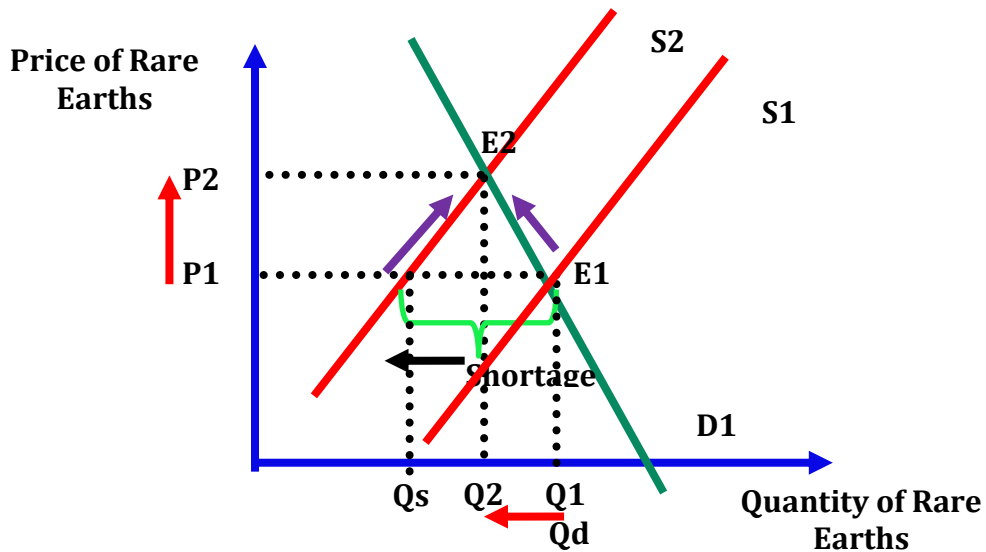
(b) (i) What can you conclude from the data about the price elasticity of supply of rare earths? [2]

Identify the price elasticity of supply: It is likely that the price elasticity of supply is price-inelastic. [1m]

Justify the PES: It can be inferred from Extract 1 that it has been "increasingly difficult to procure rare earths" due to the implementation of exports quota. In addition, "Meanwhile, mining companies around the world have been trying to develop new mines. But it would take years for a WTO panel to render a verdict or new mines to open." Hence, an increase in price will lead to a less than proportionate increase in quantity supplied and hence the price elasticity of supply for rare earths is likely to be price-inelastic. [1m]

(ii) With reference to the data where appropriate, analyse why global prices of rare earths "shot up". [3]

The global prices of rare earths "shot up" due to the fall in supply of rare earths caused by the implementation of export quotas mentioned in Extract 1.



In the above diagram, there is an original supply curve at S1 and demand curve at D1. At the equilibrium point E1, there is a market price at P1 and market quantity of Q1. With the implementation of export quotas, rare earth production will fall as lesser needs to be produced for the rest of the world, causing a leftward shift of the supply curve from S1 to S2, ceteris paribus.

This causes a shortage of $Q_s Q_d$ at the original price P1. There will be an upward pressure on price, and quantity supplied increases and quantity demanded decreases, eliminating the shortage. This market adjustment process will continue until a new equilibrium is achieved at E2. At E2, the price of rare earth increases from P1 to P2.

Refinement to why prices of rare earths “shot up”

In Extract 1, it was mentioned that rare earths are important inputs to produce wind turbines and electric cars. It is also difficult to find substitutes which can be as efficient as rare earths and hence it can be deduced that the demand for rare earths is price inelastic.

Given that the demand for rare earths is price inelastic, the shift of the supply curve over a price inelastic demand curve will lead to a more than proportionate increase in price of rare earths, explaining why the prices of rare earths “shot up”.

Marks allocation:

Identifying the correct supply factor and its shift – 1m

MAP + Diagram – 1m

Price elasticity / Extent of shift evaluation – 1m}

- (c) **Suggest possible reasons for China's competitiveness in the rare earths market.** [2]

China was able to remain competitive in the rare earths market due to the comparative advantage that it possesses. [1m]

As seen in Extract 1, "China supplies 97% of the world's rare earths and is naturally blessed with deposits.", which means that China is able to produce rare earths at a lower opportunity costs compared to the rest of the world and hence this translates to lower prices which makes China competitive in the rare earths market. [1m]

or

The Chinese government could also have provided subsidies to encourage more production of rare earths which lowers the cost of production and hence lower prices of rare earths in China to remain competitive in the rare earths market. [1m]

[Note to markers: Any other logical reasons provided can also be accepted.]

- di) **With reference to the context given in Extract 2, identify and explain marginal external cost and marginal social cost.** [4]

1. Marginal external cost:

Definition [1m]:

The costs of production/consumption for one additional unit of the good consumed/produced which falls on people other than the producers or consumers of the good for which no compensation is being made.

Evidence from Extract 2 [1m]:

With reference to extract 2, the extraction of rare earths has led to the soil and groundwater saturated with toxic substances. The waters of the tailings pond not only contained all sorts of toxic chemicals, but also radioactive elements such as thorium which, if ingested, cause cancers of the pancreas and lungs, and leukaemia. The third parties are these villagers who consume the water will face health issues and require medical attention. Furthermore, the environment has been severely affected such that the crops and vegetables are not growing properly. The vegetables are smaller and tasted bad. These problems have affected the villagers' livelihoods for which no compensation was made.

2. Marginal Social Cost

Definition [1m]:

MSC refers to the costs to society (both the producers/consumers and third parties) for the production or consumption of 1 extra unit of the good where $MSC = MPC + MEC$ in the presence of negative externalities.

Explanation with reference to the extract [1m]:

Hence in this context, the marginal social costs includes both the additional external costs imposed on third parties (as mentioned earlier) and the costs of extracting the rare earths minerals by the factories (Labour costs, rental of factories, machines to refine and extract the minerals etc.)

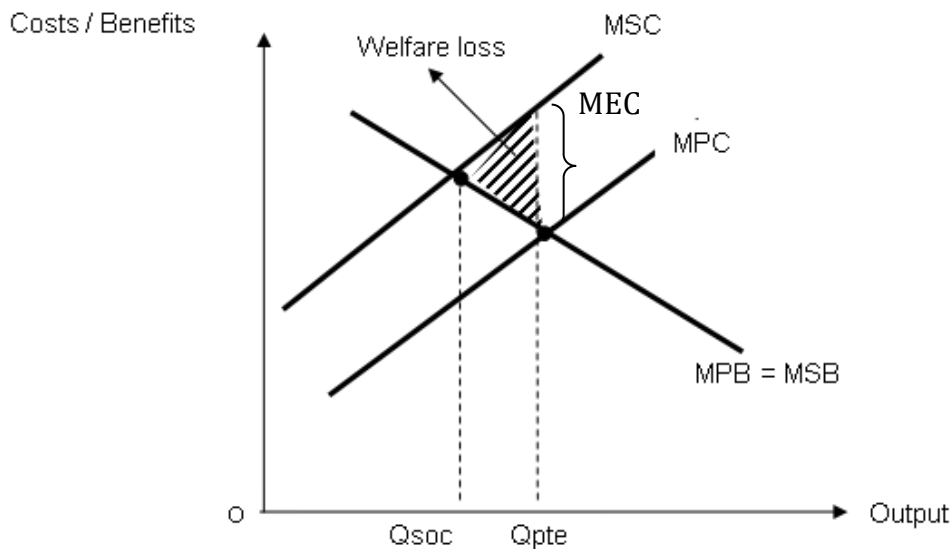
dii Explain how the extraction of rare earths leads to inefficiency in resource allocation and analyse the effectiveness of taxation to correct it. [8]

The extraction of rare earths leads to inefficiency in the resource allocation due to the existence of market failure and in this case, negative externalities.

Market failure describes the circumstances where distortions prevent the price mechanism from allocating resources efficiently, resulting in a welfare loss. The extraction of rare earths leads to market failure due to the negative externalities.

Negative externality is the costs of production or consumption which falls on people other than the producers or consumers, for which no compensation is made.

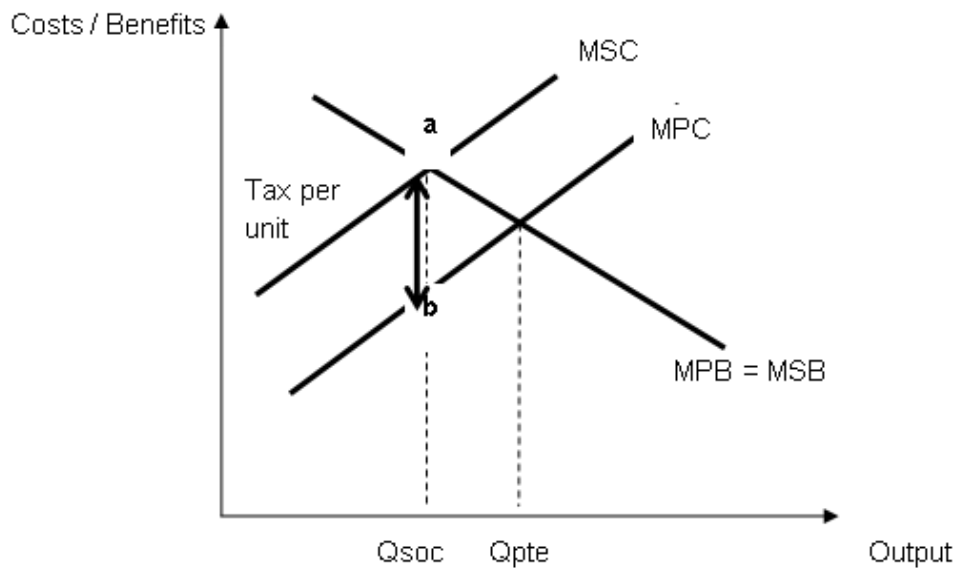
Market has failed as social efficiency is not achieved. With the presence of negative externalities (as explained in d(i)), the marginal social cost is greater than the marginal private cost, as $MSC = MPC + \text{Marginal External Cost (MEC)}$.



In a free enterprise economy, private producers and consumers ignore external costs and produce at output level where $MPC = MPB$, achieving private efficiency. However, the socially optimal level of output is at Q_{soc} where $MSC = \text{Marginal Social Benefit (MSB)}$.

At Q_{pte} , MSC is greater than MSB . An additional unit of output adds more to social cost than to social benefit. As a result, price mechanism overallocates resources to the production of rare earths. Hence, there will be a welfare loss as shown by the shaded area. Therefore, market fails as social efficiency is not achieved at Q_{pte} .

A possible policy to correct the market failure which exists in the rare earth market will be the use of a pigouvian tax. A pigouvian tax of the amount of the marginal external cost ab at the socially optimal level of production and consumption Q_{soc} will force producers to internalize the external cost of pollution as MPC is raised to MSC , as cost of production is increased. The tax revenue collected by the government can be used to subsidise the cleaning of the river, the environment and to subsidise the medical fees for the affected villagers.



However, the use of the pigouvian may not necessarily be able to achieve Q_{soc} in reality as it depends on the ability of the miners to afford the taxes. If the mining companies are financially able to pay for the taxes, there is in fact no certainty to the limits to how much these companies will continue to mine and hence the negative externalities may not be sufficiently reduced. Furthermore, if the world demand for rare earths continues to remain high, it will encourage the miners to continue to mine for more rare earths.

Thus, the use of a pigouvian tax may only be sufficient to reduce the mining of rare earths to some extent and will need to be coupled with the government's help to collaborate with the mining companies to research and devise new technologies to efficiently extract rare earths to minimize the harm caused to the society.

Mark Scheme:

L2	Clear and well developed explanation of how the extraction of rare earths leads to inefficiency in resource allocation <u>and</u> analysis of the effectiveness of taxes There is sufficient reference to case materials	4-6
L1	Undeveloped explanation of how the extraction of rare earths leads to inefficiency in resource allocation <u>and/or</u> weak analysis of the effectiveness of taxes. Limited/No reference to case materials	1-3
E1	Mainly unexplained / vague judgements. Analysis is largely unconvincing. [1m] Judgement based on analysis – able to analyse the short comings of taxes and recognize the need to bring in other policies to resolve the market failure.	1-2

- (e) Evaluate the impact of the removal of export quota in the rare earths industry on China's economy. [8]

What is the export quota?

The export quota meant that there is a restriction imposed by the Chinese government on the amount of rare earth elements that may be **exported** within a given period.

What is the removal of export quota?

The removal of export quota will affect 2 groups of Chinese producers. Firstly it will be the Chinese domestic manufacturers who need to procure the rare earths elements as raw materials in their production/manufacturing processes. (e.g. Mobile phone manufacturers) The second group of Chinese producers will be those who extract and sell the rare earths elements as primary raw materials to the manufacturers.

According to extract 4, the export quota was designed to gain market advantage for domestic producers with cheaper access to the raw materials. Hence, the removal of the export quota would mean that the Chinese domestic manufacturers may not be able to gain market advantage as other foreign producers that require rare earths elements as raw materials in their production process (e.g. manufacturing phones, electronic equipment) can also have access to cheaper rare earths elements with the removal of export quota.

In addition, the Chinese producers of rare earths elements may see a fall in global rare earths prices with the removal of export quota as these producers could now export more out of China without any restrictions (increase in supply drives prices down).

Impact on economy?

Analyse how the 4 macro goals of sustained EG, low unemployment rate, low inflation rate and healthy BOP will be affected.

1. Negative impact on current account and BOP

The increase in the amount of exported rare earths can lead to lower world price of rare earths since China produced 95% of world supply (extract 1). Given that the demand for rare earths is price inelastic (due to nature of the good being raw materials essential for production of many consumers goods or unavailability of rare earths from other countries), the fall in price could result in a less than proportionate increase in quantity demanded, hence export revenue falls. This worsens the current account of China's BOP.

In addition, the Chinese manufacturers may not enjoy the same cost advantages as before (since the other foreign producers can now gain access to cheaper rare earths elements), hence this might affect the demand for their exports and undermine their export competitiveness which may potentially cause a fall in export revenue.

2. Negative impact on EG, unemployment

As export revenue falls, $(X-M)$ falls, ceteris paribus, and this causes a fall in AD.

Explain the impact on IPONY (illustrate using an AD/AS diagram)

With AD fall, firms will experience an increase in inventories. (i) This will signal to the firms to **reduce** production. (P). Firms will **hire less** workers leading to **falling** output (O). This results in **falling** unemployment (N) and **falling** income (Y) from Y_0 to Y_1 . GPL will also fall from P_0 to P_1 in the short run.

Explain the multiplier process

As income falls, spending by the households will fall

As one's spending becomes another income, this fall in spending will lead to a fall in income of another group of people because of the decreasing demand for the goods and services they produce.

The multiplier effect is triggered off leading to a multiple decrease in production, output and national income.

3. Positive impact on inflation

As mentioned above, the fall in AD can lead to the easing of demand-pull inflation if China faces supply bottlenecks and overheating. (operating near full employment)

4. Limited impact

However, if China's exports (e.g. mobile phones and electronic products which require rare earth elements) can maintain her export competitiveness in terms of its quality and innovation, the removal of export quota may not be able to hurt the Chinese export industry significantly as her trading partners would still import from China. For instance, the recent popularity of mobile phone brand, Xiao mi, causes it to be the world's fifth largest smartphone producer. It has been able to garner support with its proliferation of affordable high tech products like the UHD

TV and Redmi Note. The Chinese government could give more subsidies to technology companies to encourage them to engage in more cost-efficient and hi-tech production methods so as to keep their exports more price competitive instead of relying on cheaper rare earths elements to keep costs lower than their competitors.

5. Conclusion

Eventually, the Chinese economy will be affected significantly by the removal of the export quota as according to extract 4, “The United States, the European Union and Japan had complained that China was limiting exports in a bid to drive up prices.” Hence, it seems that the implementation of export quota was very important to the Chinese manufacturers in attaining a foothold over its competitors over the rare earths’ production and if it’s not for the pressure from WTO and her trading partners, there will not be an economic justification for China to remove the export quota since there are more benefits than costs to China.

Thus, to reverse the negative effects of the removal of the export quota, China needs to rely on enhancing its export competitiveness through other means via research and development to improve the quality and lower the costs of producing its exports. But since China still remain as a dominant producer in the rare earths market, they still possess a degree of control over the world’s production of rare earths and could employ other methods like increasing the export tariffs or requiring a costly license for Chinese producers to export outside of China. And if the rest of the world does not find newer methods of extracting these rare earths deposit, China could still dominate the industry in the long run.

Mark Scheme:

L2	Clear and well developed explanation of the various impacts (negative, positive, limited, SR vs LR) of export quota on China’s economy by analysing its impact on the 4 macroeconomic objectives. There is sufficient reference to case materials	4-6
L1	Undeveloped explanation of how an export quota can affect China’s economy in terms of the 4 macroeconomic objectives Limited/No reference to case materials	1-3
E1	Mainly unexplained / vague judgements. Analysis is largely unconvincing. [1m] Judgement based on analysis – able to state and explain the judging criteria in explaining the impact of the removal of export quota on China’s economy [2m]	1-2

Question 2 The Philippines: Before and After Haiyan

Table 1: Top 5 Exports and Imports of the Philippines, 2013

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Table 2: Top 5 Export destinations & Import Origins of the Philippines, 2013

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3.	China	12.4%	3.	Japan	8.4%
4.	Hong Kong	8.0%	4.	Taiwan	7.8%
5.	Singapore	7.3%	5.	South Korea	7.7%

Source: *Foreign Trade Statistics of The Philippines, 2013*

Extract 5 At the front of the back office

The rise of what is known as business-process outsourcing (BPO) in the Philippines has been nothing short of phenomenal. Last year the Philippines even overtook India, long the biggest call-centre operator in the world, in “voice-related services”. The country now employs about 400,000 people at call centres, India only 350,000.

The main reason for the success of the Philippine call centres is that workers speak English with a neutral accent and are familiar with American idioms—which is exactly what their American customers want. As a result, the Indian firms themselves have been helping to move jobs to the Philippines by setting up call centres in Manila and other parts of the country. Infosys and Wipro, as well as scores of other Indian firms, now have substantial operations there. And they aren't drawn to Manila by cheap labour. Wages in the Philippines are slightly higher than in India since the Filipino accent commands a premium.

The big question is whether the Philippine BPO industry, having conquered the call-centre market, can now move up the value chain. To keep growing rapidly—and profitably—it needs to capture some of the more sophisticated back-office jobs, such as those processing insurance claims and conducting due diligence. In these businesses, called knowledge-process outsourcing and legal-process outsourcing, India still rules supreme.

Integreon offers a glimpse of what the future may hold. It employs 300 people in Manila, 40 of them lawyers who help multinational law firms with litigation. Familiarity with America helps. "It makes it very easy for us to do legal research for American firms," says Benjamin Romualdez, the firm's country manager.

Western banks have also discovered the Philippines. JPMorgan Chase now has over 25,000 workers on its own payroll in the country, many of whom do much more than answering phones. The Philippines is set to compete with India across the BPO board.

Source: *Economist*, 23 Jun 2012

Extract 6 From coconut farms to call centres: the struggle to rebuild lives after Haiyan

The coconut palm is known in the Philippines as the "tree of life" because every part of it has a use. Flowering for harvest every three months and living for decades, coconut trees have long allowed millions of Filipinos to make a living.

But it's a harsh way of life. A harvest of 2,000 coconuts sells for 7,000 pesos (£100) and tenant farmers must share that with landowners. Many have sought to leave farming behind. Call centre work and other jobs in the outsourcing industry offer air-conditioned comfort and wages that are higher than average for white-collar work in the Philippines. Those opportunities were multiplying in Leyte as more outsourcing companies moved in. Then Typhoon Haiyan came - levelling both towns and dreams.

The workload of call and data centres has easily been diverted to other Philippine cities. Less simple is the choice faced by thousands of workers: uproot and separate from family or stay in Leyte province and wait perhaps a year for the jobs to return.

At call and data centres Accudata and its affiliate, CoreData, about 200 out of 1,000 employees have put their names down for transfer to Manila. As with other companies, those with families are reluctant to relocate despite having no job in Leyte.

Edgardo Sablay also fears tough times but he is not relocating. The 48-year-old has spent most of his life climbing coconut trees to collect sap from the palms' flowers for Tuba, a coconut sap wine. He can earn 700 pesos for collecting 36 litres a day.

"I have not gone to school, I only know how to make Tuba," he said. "I am not losing hope that there will still be trees that can survive and which I can climb to feed my family."

Some, on the other hand, are less hopeful.

"If we get coconut seedlings, we can plant again next year," said Duma, shirtless under the midday sun. "We will really go into hard times if the government will not support us."

Source: *The Guardian*, 29 Nov 2013

Suggested Answers:

(a) (i) With reference to Table 1, explain the meaning of intra-industry trade. [2]

- Exchange of similar products belonging to the same industry
- In this case as applied to international trade where the same types of goods or services are both imported and exported → electronic products and transport equipment

(ii) With reference to Tables 1 and 2, use the concept of opportunity cost to analyse the basis for trade between the Philippines and a developed country such as Japan. [4]

- DD/SS analysis → SS differences between Jap and Phil due to differing opp cost.
- E.g. Phil has CA in woodcraft and equipment due to abundance of cheap labour while Jap has CA in industrial machinery and equipment because of more sophisticated technology, better-skilled/educated labour → Pair of DD/SS diagrams to explain why Phil exports woodcraft and Jap imports woodcraft (or why Jap exports industrial mach and Phil imports it)
- May use PPC approach instead of DD/SS

(b) Using a demand-supply diagram as applied to the labour market, explain why 'wages in the Philippines are slightly higher than in India' (Ext 5 Para 2). [3]

- Higher DD for Filipino workers especially in call-centre industry → 'neutral' 'Filipino accent' + 'familiar with American idioms'
- Rightward shift in DD for Filipino labour → increase in price of Filipino labour → increase in wage in Philippines since price of labour = wage

(c) With the use of the production possibilities curve, explain how the Philippines was affected by Typhoon Haiyan. [3]

- Destruction of FOPs + fall in productivity of existing resources (distracted workers) → ↓ Quality & Quantity of resources + technology → parallel inward shift of PPC
- Non-optimal factor combinations → existing resources not gainfully employed → production point on the inside of PPC (instead of on the PPC)

- (d) Explain any one cause of unemployment evident in Extract 5 and comment on whether 'government support' would resolve such unemployment. [5]

Unemployment causes: Any 1

- Lack of necessary skills/expertise → 'only know how to make tuba' → not gainfully employed bec coconut plantations destroyed but can't find work in call centres in unaffected areas → structural unemployment
- Geographical immobility → need to rebuild calamity-torn families and can't relocate to unaffected areas to find work

Comments on whether government support would resolve the above unemployment→

Yes:

- Structural Unemployment: Increase in G (directly or through subsidies) to close skills gap with training and education especially in rural areas
- Geographical immobility: Increase in G to rebuild resources and key business/industrial centres so that breadwinners need not relocate to find jobs OR increase in government effort to relocate whole families to unaffected areas

No:

- Structural unemployment: Ex-ante a high G would have mitigated the current structural unemployment problem. But to increase G now as a response to such a problem may be difficult because (i) most resources are devoted to rebuilding the country rather than increasing the skills of the workforce and (ii) even if such resources can be devoted now to education it will take time before skills learnt can be translated to productive work and hence warrant employment
- Geographical immobility: The government may not have the resources to rebuild the calamity torn areas fast enough to resume economy activity → such unemployment will persist for a while

Synthesis & Conclusion:

- Yes, government support, if available can resolve such unemployment. However such support might not be available because government resources have taken a blow as well due to the calamity. Hence it will take time for government efforts to bear fruit and meaningfully reduce the unemployment problem. How fast the government can solve these problems will also depend on its ability to reallocate resources from unaffected areas.

(e) Extract 5 suggests that a 'move up the value chain' is the reason why the Philippines is 'set to compete with India across the BPO board'.

(i) Analyse the macroeconomic benefits to the Philippine economy of a 'move up the value chain'. [5]

Benefits

- Move up the value chain from call centres to knowledge-process outsourcing and legal-process outsourcing → More competitive in terms of high-skilled workforce and range of services in BPO → Attract FDI → ↑AD (SR) & AS (LR) → Actual growth & higher employment & Potential Growth → PG helps lower prices in long-run → Higher SOL
- FDI → improves K account → BOP improves
- Attract outsourcing to the Philippines → job creation and higher employment

Costs

- As Philippines moves up value-added chain → lose CA in lower value-added aspects of BPO such as call management and handling → TNCs relocate their outsourcing to other countries in which call centres are thriving → structural unemployment of call centre workers who lack skills required in higher value-added businesses of BPO
- Greater income inequality between the low and high skilled

(ii) Consider what factors might prevent such a move, and evaluate their implications for government policy. [8]

Endogenous factors:

- Lack of skills/expertise to support move up the value-added chain
- Lack of government support in terms of devoting resources to education and training, as well as a favourable tax structure to attract FDI which facilitate skills and expertise spillovers and speed up the move

Exogenous factors:

- Competition from India → Ext 5 Para 3: "In these businesses, called knowledge-process outsourcing and legal-process outsourcing, India still rules supreme"
- Natural disasters → destroy physical, human and social capital (Ext 6 Para 2 & 3: "Then Typhoon Haiyan came - levelling both towns" and "those with families are reluctant to relocate despite having no job in Leyte" due to insecurity)

Implications for government policy & corresponding evaluation:

- SS-side policy such as training and education as well as subsidies to grow the industry
[Evaluation: long gestation period, cushion inefficiencies, budget constraints]
- Tax reforms (reduce corporate taxes) to increase competitiveness and attract FDI
[Evaluation: cutting taxes when funds are needed to rebuild the country exerts increasing pressure on the budget → budget deficit]
- Protectionism against competition from India (infant industry)
[Evaluation: cushion inefficiencies, higher prices/costs for local firms which have to make use of the more expensive BPO services provided within Phil as protectionism has artificially made BPO services from India relatively more expensive]
- Selective development in areas less susceptible to calamity
[Evaluation: Very difficult as physical capital is necessary even in the most knowledge-based, tertiary and wireless of industries → still susceptible to calamity]

Synthesis & Conclusion:

- Caution against giving artificial CA via protectionism i.e. that it must be temporary otherwise it leads to inefficiency
- While pressing problems i.e. rebuilding of the country, families and lives after the calamity may take priority over moving up the value-added chain, it is necessary to not solely view both as competitors for scarce resources, but perhaps also consider that the move up the value-added chain may generate much needed income and employment that help accelerate the recovery process

Mark Scheme:

Level	Descriptor	Marks
2	Explains at least 1 factor preventing move & Explains + Evaluates at least 1 policy to facilitate move	4-6
1	Explains only 1 factor preventing move OR 1 policy to facilitate move.	1-3
Evaluation		
E	Overall evaluation that weighs the policies OR any other insightful comments	1-2

Section B

3. In the UK, tickets to see the opera are heavily subsidized. It's also been a decade since most of UK's national museums and art galleries abandoned entrance fees as a matter of government policy. Since then, only a few other nations around the world have followed suit. Many countries remain wedded to taking money at the door.

Source: Adapted from *BBC News*, 1 Dec 2011

- (a) Explain how the price-elasticities of demand and supply for goods and services limit the effectiveness of government policy to correct market failure. [10]
- (b) Discuss the view that differences in entry fees to the opera, national museums and art galleries between countries is solely due to perceived differences in the external benefit they generate in each country. [15]

Suggested Answer:

Part (a)

Intro

Define Market Failure: Circumstances in which distortions prevent the price mechanism from allocating resources efficiently, resulting in welfare loss.

Body (I)

(i) Explain why market fails in the case of negative externality that arises from, for example, smoking

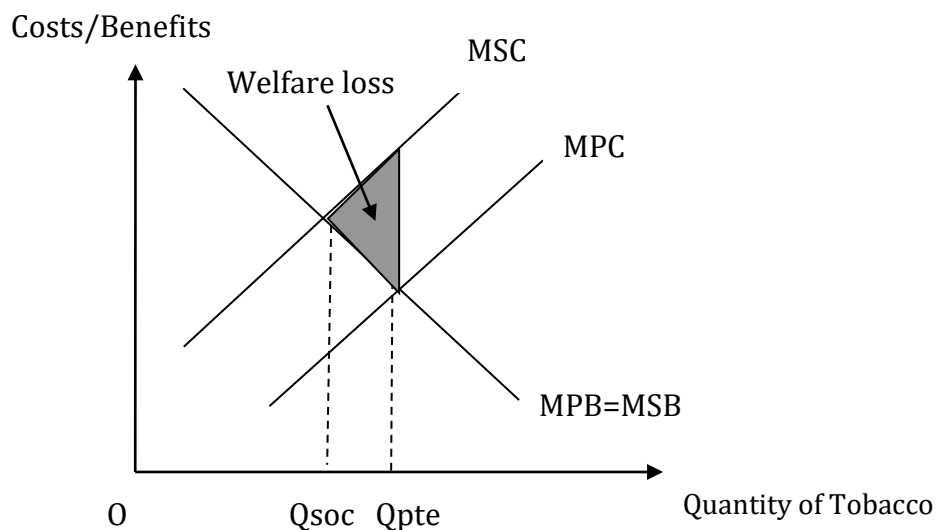
Define negative externality:

Negative externality is the cost of consumption or production which falls on people other than the consumers or producers of the product, for which no compensation is made.

Justification:

Smoking generates harmful effects on non-smokers such as family members & colleagues. They may experience respiratory difficulty as a result of passive smoking leading to smoking-related illnesses and medical cost. These 3rd parties suffer although they were not the direct consumers of cigarette.

The existence of negative externality causes marginal social cost (MSC) to be higher than marginal private cost (MPC), since $MSC = MPC + \text{Marginal External Cost (MEC)}$.



Smokers only consider their own private cost and benefit, and ignores externalities. As such, they will consume up to Marginal Private Benefit (MPB) = MPC at Q_{pte} .

However, the socially optimal level of output is at Q_{soc} , where $MSC = \text{Marginal Social Benefit (MSB)}$

At Q_{pte} , $MSC > MSB$. This means that one extra unit of output adds more to society's costs than to society's benefits. Therefore there is over - consumption of cigarettes. Hence, a welfare loss to society occurs as shown by the shaded area, resulting in market failure.

Government intervention is thus necessary to correct this market failure and reduce the welfare loss.

(ii) Explain how indirect taxes work to address market failure in negative ext

Indirect taxes → levied on producers → therefore internalizing external cost
 A tax equal to MEC @ Q_{soc} will increase costs to the producer, forcing the producer to fully internalize the external costs. This will raise MPC to the same level as MSC. The result is a fall in output from Q_{pte} to Q_{soc} and the socially optimal output will be attained and welfare loss is eliminated.

(iii) Explain how E_p limits effectiveness of indirect taxes to reduce output levels

- The more price-inelastic the demand for cigarettes is, the less effective a given indirect tax is in reducing output levels.
- The demand for cigarettes by smokers in general is price inelastic, as there is a high degree of necessity due to nicotine addiction. A rise in price as a result of an indirect tax will reduce the quantity demanded of cigarettes by less than proportionate. Therefore, the reduction in the externalities like health problems to non-smokers will not be very significant.
- Comparing smokers of different age groups, the demand for cigarettes by older smokers is more price inelastic relative to younger smokers, as there is a higher degree of necessity since their longer years of exposure imply that they are more addicted compared to younger smokers. Hence a given indirect tax is likely to cause a less significant fall in quantity demanded by older smokers compared to younger smokers and hence will be less effective in reducing smoking amongst the older smokers and the costs they impose on 3rd parties.
- Comparing smokers of different income groups, the demand for cigarettes by higher-income smokers is more price inelastic relative to lower-income smokers, as the proportion of their incomes spent on cigarettes is smaller. Hence a given indirect tax is likely to cause a less significant fall in quantity demanded by higher-income smokers compared to lower-income and hence will be less effective in reducing smoking amongst the higher-income smokers and the costs they impose on 3rd parties.

Body (II)

(i) Briefly explain why market fails in the case of positive externality that arises from, for example, healthcare

Positive externality is the benefit of consumption or production which falls on people other than the consumers or producers of the product, and which occurs without compensation.

Healthcare generates beneficial effects on 3rd parties such as family members & colleagues who may experience a reduction in risk of contracting contagious illnesses such as flu and chicken-pox. These 3rd parties benefit although they were not the direct consumers of healthcare.

The existence of positive externality MSB to be higher than MPB , since $MSB = MPB + MEB$.

As private consumers only consider their own private cost and benefit, and ignore externalities, they do not take into account the external benefits of healthcare such as vaccination which they confer on 3rd parties. As such, they will under-consume healthcare such as vaccination and health checks, resulting in welfare loss.

(ii) Briefly explain how subsidies work to address market failure in positive externalities

To encourage consumers to take better care of their health and consume more healthcare products such as vaccination and health checks, subsidies are provided

to make healthcare more affordable. These subsidies have the effect of internalising these 3rd party benefits as they compensate the consumers for the benefits they confer on 3rd parties and hence internalise these 3rd party benefits. Consumption levels thus increase to the socially optimal level, eliminating the welfare losses.

(iii) Explain how Es limits effectiveness of subsidies to increase output levels

- The more price-inelastic the supply of healthcare products such as vaccination is, the more ineffective a given subsidy is in increasing the output level.
- The longer the time period which a producer has to respond to a change in the price of the product, the more elastic the supply. In the short run, the presence of fixed factors such as the stock of vaccines limit the extent to which the quantity supplied of vaccination can be increased in response to the higher price that healthcare suppliers receive as a result of a subsidy. Hence in the short-run, a rise in price received by the producer as a result of the subsidy is likely to cause a less than proportionate increase in quantity supplied of healthcare and hence will be less effective in increasing output and consumption levels and the benefits they confer on 3rd parties.

Body (III)

Limitations of the use of Ep/Es → inaccurate or outdated values

- Elasticities, being numerical figures, are calculated based on collected data subject to error and change, and so may be unreliable
- Hence the amount of tax and subsidy implemented to bring about a given change in output is based on estimates of Ep and Es respectively rather than actual levels. This implies that the tax or subsidy may end up being too high (or too low), resulting in over-correction (or under-correction) of market failure.
- Furthermore, there may be implementation lag whereby elasticity figures may have changed by the time taxes or subsidies have been formulated and implemented

Mark Scheme:

Level	Descriptor	Marks
L3	Fully developed explanation of 2 reason why Ep/Es limit effectiveness of government policy to correct market failure which demonstrates strong economic reasoning.	7 - 10
L2	Fully developed explanation of 1 reason why Ep/Es limit effectiveness of government policy to correct market failure supported by strong economic theory OR Underdeveloped explanation of 2 reasons why Ep/Es limit effectiveness of government policy to correct market failure but which demonstrates strong economic reasoning	4 - 6
L1	Vague explanation of 1 reason why Ep/Es limit	1 - 3

	effectiveness of government policy to correct market failure which demonstrates little economic reasoning	
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Part (b)

Discuss the view that differences in entry fees to the opera, national museums and art galleries between countries is solely due to perceived differences in the external benefit they generate in each country. [15]

Introduction

- The 2 main arguments for the subsidizing museums, art galleries and operas:
 - (i) they are merit goods where the consumption of which is deemed to be intrinsically desirable. They are viewed by the government as imposing substantial private benefit to the individuals themselves. In addition, their consumption usually generates positive externalities for other members of society.
 - (ii) equity
- They generate substantial private benefits for consumers because they educate about country's culture and heritage and lead them to appreciate it better. They provide and enhance self-understanding, self-identity and acceptance as well as pleasure. In relation to society and relationships with other people, they help consumers bond among people of similar interests and backgrounds and bridging across lines of difference – a fostering of social capital
- They generate positive externalities to the society:
 - (i) They leave important legacies for the next generation.
 - (ii) Artistic innovation benefits other artists. Unlike in many other fields, it is not generally protected by intellectual property laws.
 - (iii) They encourage tourism from abroad, and so benefit the wider economy.

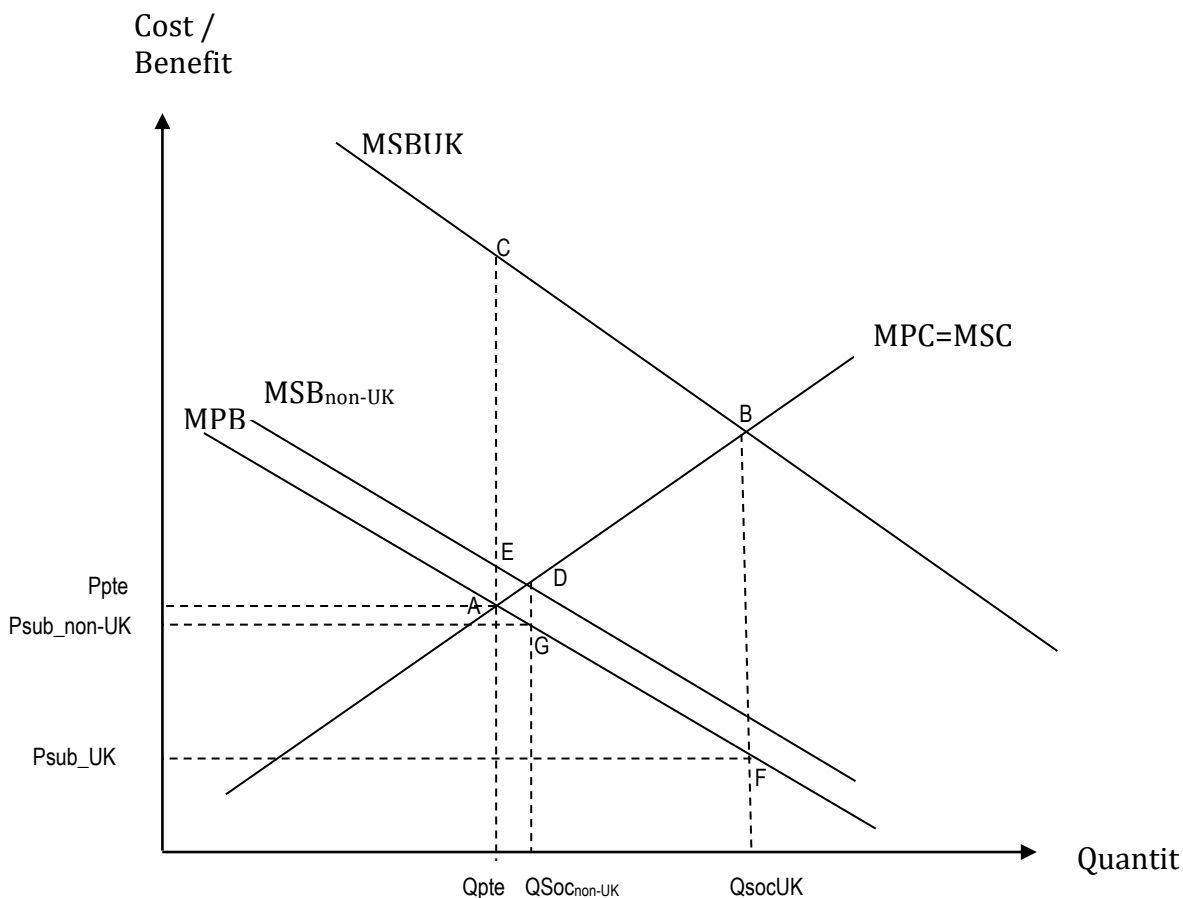
Body

Thesis: Differences in entry fees to the opera, national museums and art galleries between countries is due to perceived differences in the external benefit they generate in each country

- Non-UK government was willing to leave both museums, operas and art galleries to private markets as the externalities were considered to be zero or negligible, whilst in the UK the government considered them to be high
- With reference to the diagram below assuming that the private benefits derived in UK and other countries are the same, both economies' marginal private benefit in

the market is shown by the MPB curve. As people are self-interested, they ignore externalities and consume/produce where their $MPB = MPC$ at Q_{pte} . We assume in this case that there are no external costs and the costs incurred in UK and other countries are the same. Hence $MPC = MSC$ for both economies.

- In the case of UK, as the government deems that there are huge external benefits to the consumption of the museum and arts, the $MSBUK$ is very much higher than the MPB . This is because arts investment plays a vital role in the British economy where arts and culture are central to tourism in the UK
- As such the socially optimal level of museum and arts consumption is very much higher where $MSBUK = MSC$ at Q_{socUK} . The welfare loss from consuming at Q_{pte} is triangle ABC .
- In the case of non-UK countries, because the government does not view the consumption of the museum and the arts as a good with extensive external benefits. As such, MSB_{non-UK} is not very much higher than MPB . Hence $Q_{socnon-UK}$ is not very much higher than Q_{pte} . The welfare loss from consuming at Q_{pte} instead of $Q_{socnon-UK}$ is much smaller at triangle ADE .



- The ideal amount of per unit subsidy to effect the Q_{soc} level of output for UK and non-UK is BF and DG respectively. As these per unit subsidies are actually equivalent to the MEB at Q_{soc} level of output, the subsidy in UK is much higher than the subsidy in Non-UK since the perceived MEB is much higher in UK than in

non-UK. It follows that the subsidised price enjoyed in UK (P_{sub_UK}) will be much lower compared to the subsidised price (P_{sub_non-UK}) in Non-UK, if any in non-UK are to be provided in the first place, since the external benefits are so negligible. Given that external benefits are negligible and the subsidised price therefore not much lower than the free-market price, the government is likely to let the free market determine the price of museums and the arts.

Antithesis: differences in entry fees to the opera, national museums and art galleries between countries is due to other reasons

(i) Budget constraints of non-UK governments

- No perceived differences in the benefit the museums and the arts generate in each country, but there could be other more pressing areas of development that demand government spending in other countries compared to the UK, and hence other countries devote less funds to subsidising museums and the arts.
- Establish the nature of the goods: They are excludable as it would be possible to allow entry by ticket only. Museums and art galleries are likely to be non-rival as the enjoyment of the museum and art gallery by one person does not diminish the quantity available for consumption by another person. Operas on the other hand are likely to be rival as the tighter space constraints and acoustic effects imply that one person's enjoyment of the opera will reduce the number of seats available for other consumers. Museums, art galleries and operas are therefore not public goods but the non-rival nature of museums and art galleries meant that the MC of supplying a museum and art gallery to one extra visitor would be zero. Setting $P=MC=0$ to maximise welfare led to free entry to museums and galleries

(ii) Consumption of museums and the arts is not equitable (for H2 only)

- At market prices, those on low incomes could not afford the ticket prices. Subsidies are therefore needed so that the poor are not excluded from enjoyment of the arts. In UK, people may view museums and the arts as a necessity – something which may not be true of all countries. The above diagrammatic analysis assumes that people in UK and non-UK derive equal private benefits from museum and the arts. However, in reality, as the arts may be more a part of the lives of the UK people compared to the non-UK, demand is likely to be more price-inelastic in UK as more benefits are derived from the arts and the museums. This would make the free-market price in UK much higher and all the more warrant a subsidy by the government to make it affordable.

(iii) No need for subsidies in non-UK as demand is high and consumption levels close to Q_{soc}

- Museums and the arts are viewed as merit goods in both UK and non-UK, but demand is higher in non-UK and hence consumption level is close to Q_{soc} already. Hence little need for subsidies in non-UK to encourage consumption. Demand on the other hand in UK may be low and consumption levels

significantly fall short of Q_{soc} . Hence government needs to provide subsidies to encourage consumption to Q_{soc} .

Conclusion

Stand & Justification on why the approach is different: UK and non-UK countries adopted two different approaches in funding of museums and the arts. One reason is due to the different amount of positive externalities gained by the whole economy, with the UK economy gaining more as compared to the non-UK economy. Hence government funding is more significant in UK. But there are other reasons as well, as explained above.

Evaluative comments: Tax incentives also influenced the final price paid by consumers to museums, art galleries and operas. In UK, more art organisations are tax-exempt organisation and private donors to these organisations received tax benefits by having to pay lower amount of taxes to the government. On the other hand, there are less such organisations in non-UK countries. Without much private funding to complement public funding, consumers must rely on their personal income to pay for admission. This therefore further explains the scenario presented in the preamble with consumers in UK countries paying much less as compared to their counterparts in non-UK.

Mark Scheme:

Level	Descriptors	Marks
L3	Fully developed explanation of 3 reasons spanning thesis and anti-thesis	9-11
L2	Fully developed explanation of 2 reasons spanning thesis and anti-thesis OR Full development of one side i.e. thesis or antithesis	6-8
L1	Explanation of 1 reason	1-5

Evaluation

E2	For an evaluative discussion that is based on economic analysis.	3- 4
E1	For an unexplained judgment, or one that is not supported by economic analysis.	1 -2

4. Record unemployment has led to a rise in the number of young entrepreneurs leaving southern Europe to seek their fortunes. Growth is also likely to remain elusive because southern Europe is suffering from fiscal austerity and a shortfall of credit.

Sources: *BBC News*, 27 June 2013 and *Economist*, 9 March 2014

- (a) Explain how the rise in the number of entrepreneurs leaving should be a cause of concern for southern Europe. [10]
- (b) Discuss the extent to which low unemployment should be the most important goal to a government. [15]

Suggested Answer

(a)

Introduction

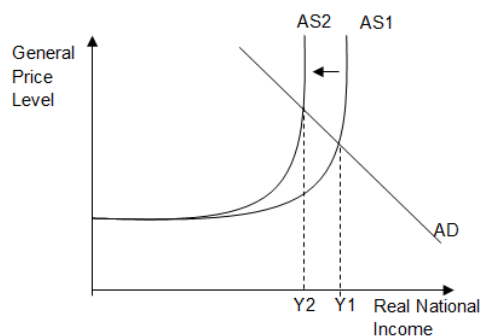
Entrepreneurship is one of the 4 factors of production.

Main Development

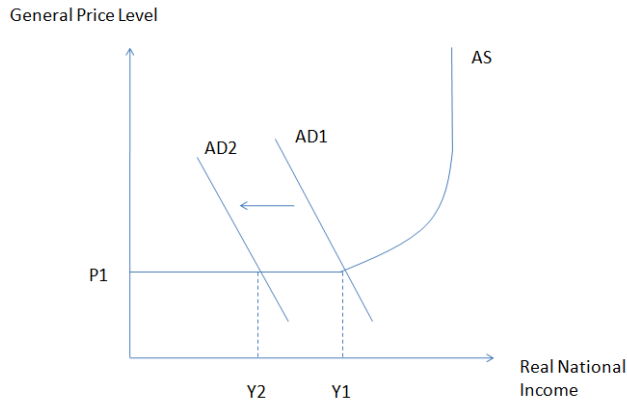
Rise in number of entrepreneurs leaving Europe

- fall in quantity of FOP in terms of Entrepreneurship → leftward shift of AS from AS1 to AS2 → fall in potential EG

→ fall in real GDP from Y1 to Y2, assuming economy is at intermediate/classical range → fall in actual EG



- fall in entrepreneurs starting production activities → less opportunity for government to collect corporate taxes → fall in tax revenue → govt has less funds available to carry out policies to get their economy out of a recession (eg expansionary fiscal policy) → unemployment persists
- Negative investment climate in Southern Europe → fall in Invt → fall in AD → IPONY



4. → unemployment which is already at record levels according to the preamble, worsens to a greater extent

Mark Scheme:

L3	Range of negative impacts on Southern Europe is covered Points are well developed Low L3 for 2 well developed points (max 8m)	7-10
L2	Limited development of points	5-6
L1	Brief listing of points	1-4

(b) Discuss the extent to which low unemployment should be the most important goal to a government. [15]

Introduction

There are 4 main macroeconomic objectives. However, there are also other objectives such as reducing public debt through austerity measures.

Thesis

Yes, low unemployment is the most important goal of a govt

1. Pursuing low unemployment will enable other goals to be achieved, therefore low unemployment can be considered the most important goal.

Explain how government spending in areas such as education and training to reduce structural unemployment can also lead to an increase in AD due to the increase in G. This will lead to an increase in actual economic growth given that economies in Southern Europe are likely to be in the Keynesian range due to the high unemployment levels.

2. There are significant costs that come with high unemployment, therefore low unemployment can be considered the most important goal.

Economic Costs:

Unemployment represents a loss of output, i.e. the GDP of an economy is less than its potential (of full employment) GDP. This difference is the GDP (or output, or contractionary) gap.

Loss of income to the factors of production

Unemployment normally results in a loss of income. The majority of the unemployed experience a decline in their material well-being and living standards.

Loss of national output to the economy

Unemployment represents an inefficient use of scarce resources.

If there are unemployed resources within the economy, this means that the economy is operating within the production possibility curve (PPC). This leads to national output being produced below potential (i.e. loss of **potential national output**).

In addition, there is also a strong link between unemployment and consumer spending. As consumer's confidence falls, so the willingness of households to spend declines and households build up their precautionary savings. This could lead to a further fall in AD and economic growth. This aggravates the extent of the loss of national output.

Loss of tax revenue to the government

The government also loses tax revenues since the unemployed pay no income tax and spend less. In addition, the government has to incur higher administrative costs in the running of welfare programs particularly in countries which give out unemployment benefits. It has to spend extra on health care, social services and the police.

Therefore it is important to focus on achieving low unemployment as austerity measures are currently in place to reduce the public debt, and being able to collect higher tax revenue will help to achieve the goal of reducing the public debt.

Social Costs:

Personal hardships and increasing poverty

Lacking a job means inability to pay bills and to purchase both necessities and luxuries.

Lack of self esteem, decay of unused skills and mental depression

Unemployed workers lack social contact with fellow employees and may suffer from fall in self-esteem, mental stress and illness. The longer each individual's period of time out of work, the greater the loss of skill and motivation. An unmotivated, deskilled pool of long-term unemployed is a serious economic and social problem

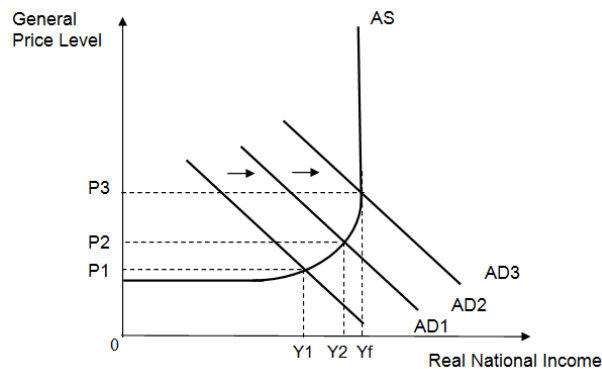
Prolonged unemployment of the worker could degenerate into domestic violence and crime.

Anti-thesis

No, low unemployment may not be the most important goal of a govt

1. Pursuing low unemployment may lead to other macro goals being at risk.

If the economy reaches the intermediate range, and AD continues to increase (from AD1 to AD2 to AD3) due to any expansionary demand management policy, this would lead to the risk of demand pull inflation occurring.



2. No, low unemployment may not be the most important goal of a govt as it may lead to a further worsening of the public debt. The policies would require funding, of which the government may need to borrow.

Conclusion:

Whether low unemployment is the most important goal of a government depends on the severity of the level of unemployment that the economy faces. According to the preamble, there is record unemployment which indicates that unemployment is an urgent issue that needs to be dealt with in Southern Europe and therefore it should be the most important goal during this period of time.

However, the government first needs to secure funds to carry out their policies to reduce unemployment. As stated in the preamble, they have difficulty securing credit and this would delay the implementation of the needed policies. In the short run, the borrowing may lead to an increase in public debt, but in the long run the government can start to reduce the debt when personal income taxes rise due to greater employment levels.

Mark Scheme:

L3	Points are well developed Range of points on both thesis and antithesis are explained	9-11
L2	Limited development of points	6-8
L1	Brief listing of points	1-5

E2	Well justified stand	3-4
E1	Stand without justification	1-2

Alternative Approach for 4(b):

Introduction:

- State the 4 major objectives of government policy:
 - sustained economic growth
 - full employment
 - low inflation
 - healthy balance of payments
- Full employment is often considered to be achieved when unemployment rate is at 2 – 3%.

Main Development

Thesis:
Low unemployment is an important goal for the government due to the costs of high unemployment.

Anti-thesis:
However, there are also other just as important macroeconomic goals.

Note:
 For the anti-thesis, you can either provide a detailed and rigorous analysis on the importance of one other objective (e.g. low inflation).
OR you can explain why each of the other 3 objectives are important (analysis of each objective will be less detailed but should contain sufficient rigour).
 The first approach is used below.

Reasons to avoid high unemployment (high costs of high unemployment on economic agents)

Economy:

- Loss of output and income (GDP is less than its potential GDP). High level of unemployment represents a waste of scarce resources that are not maximised for the achievement of growth
- Social costs (e.g. increasing poverty & higher crime rate)

Government:

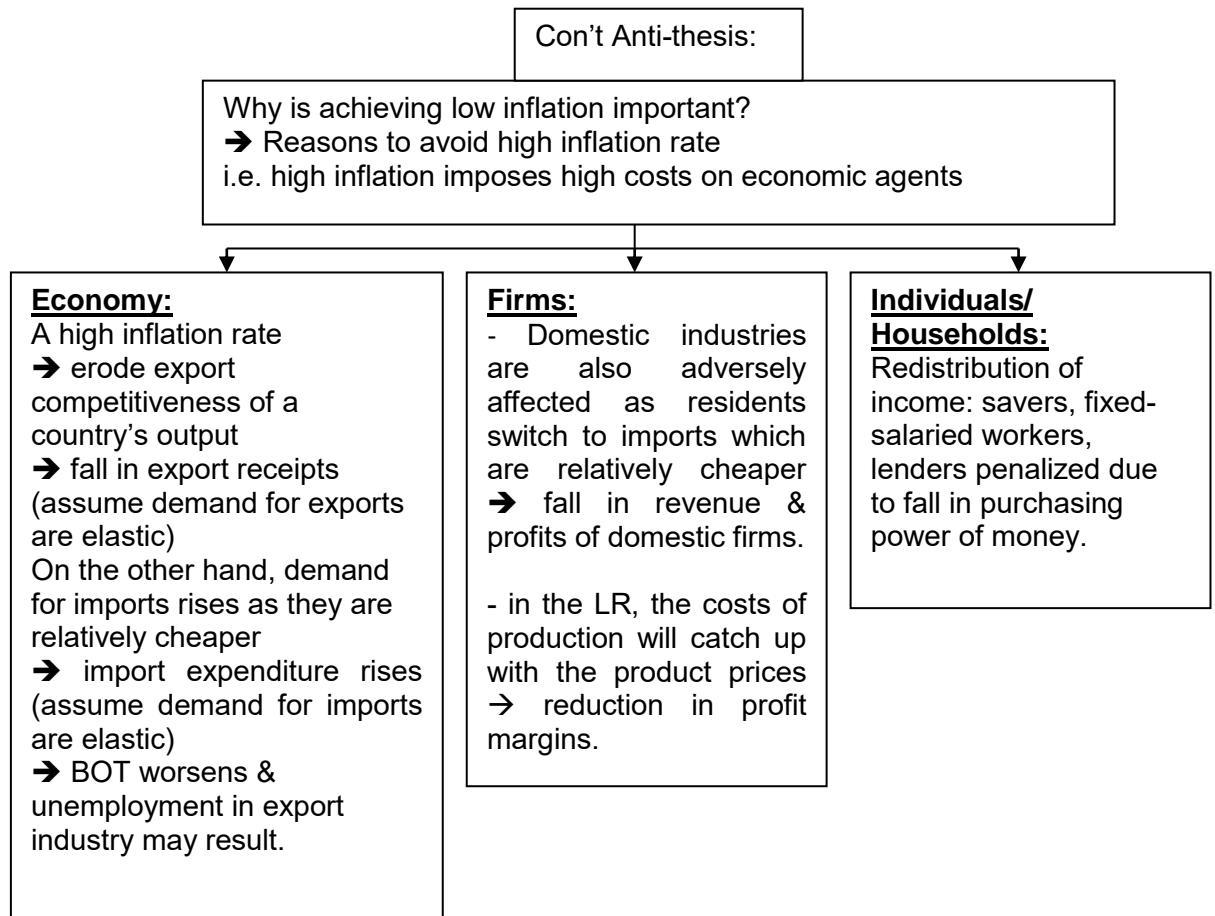
- loss of tax revenue since the unemployed pay no income tax and spend less.
- higher expenditure on unemployment benefits & related welfare payment
- increase expenditure on crime control & social services

Unemployed:

- suffer hardship due to loss of earning
- lower standard of living
- decay of unused skills.
- loss of self-esteem
- increased risks of stress-related illness (e.g. depression)

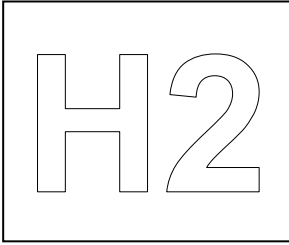
For example, the pursuit of full employment may bring about an increase in inflation rate according to the SR Phillips curve.

For some economies, → reducing inflation rate may be their top priority instead.



Conclusion :

- Solving unemployment may conflict with other macro-economic objectives as the policies used may have negative effects. For example, an expansionary monetary or fiscal policy may resolve unemployment problem but may lead to inflation (SR Phillips curve) and hence balance of payments difficulties. Thus the government will have to strike a good balance between the various macroeconomic objectives.
- Whether low unemployment should be the most important goal of govt policy also depends on the situation that the economy is facing. If an economy is currently experiencing hyperinflation, then low inflation may be a more urgent objective. However, if an economy is currently experiencing a recession and large scale unemployment, then full employment may be a more urgent objective.



**TAMPINES JUNIOR COLLEGE
JC2 PRELIMINARY EXAMINATION**



CANDIDATE
NAME

CIVICS GROUP

1	4			
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TUTOR
NAME

ECONOMICS

9732/01

Paper 1

Monday, 31 Aug 2015

2 hours 15 minutes

Additional Materials: Writing Paper

READ THESE INSTRUCTIONS FIRST

Write in dark blue or black pen.

You may use a soft pencil for any diagrams, graphs or rough working.

Do not use paper clips, highlighters, glue or correction fluid.

Paper 1 (Case Study) [40%]

Answer **ALL** questions

Submit each Case Study separately.

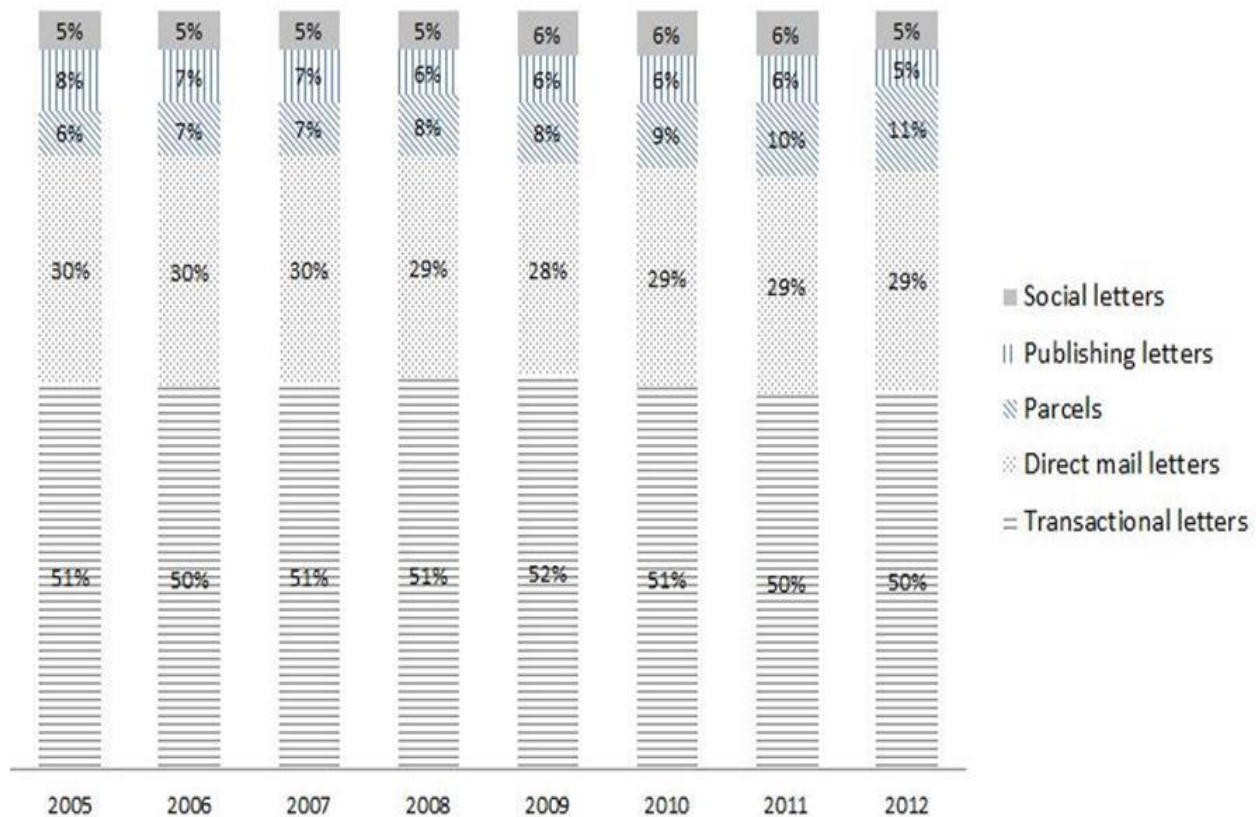
The number of marks is given in brackets [] at the end of each question or part question.

Begin **each case study** on a **fresh sheet of paper**. Case study question 1 and 2 are to be submitted **separately**.

Question 1

The Future of Mail in the UK

Figure 1: UK Mail Split by Segments, 2005-2012



Source: www.royalmailgroup.com

Extract 1: Government Divestment of Royal Mail

The UK government announced plans to divest up to 70% of Royal Mail and demand from institutions and private investors was said to be extremely high. By divesting of Royal Mail, the government is selling off most of its business interests in the state-owned firm. Vince Cable, Business Secretary, said: "Today is an important day in the life of Royal Mail: people can now apply to buy shares in this iconic British brand. "This will give Royal Mail access to the private capital it needs to modernize, as envisaged under successive governments, and enshrined in law by Parliament two years ago. While the Royal Mail is now highly profitable, it is a recent turnaround and a tumultuous five years leading up to 2011, during which some 50,000 staff were laid off as rising staff costs contributed to lowering profits.

Source: Adapted from *The Guardian*, 27 Sept 2013

Table 1: Price Elasticities of Demand for Inland Mail (both parcels and letters) in Different Countries

United States	0.4
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Note 2: First-class mail refers to parcels and letters which would be delivered by the next day whereas second-class mail would be delivered by the third working day.

Source: www.royalmailgroup.com

Extract 2: Why the government is privatising Royal Mail

Privatisation is the transfer of ownership of a company, previously owned by the state, to private investors. The British government claims privatisation will give the company access to private capital and improve its cost efficiency, therefore increasing its competitiveness.

The need for more investment is urgent. Changing demand for postal services has transformed its business model. Parcel volumes are increasing because of the boom in internet shopping, but the numbers of letters sent daily fell from 82 million in 2004 to just 58 million in 2013. The government says it cannot afford to invest itself to help Royal Mail cope with this shift. Last month George Osborne, the chancellor, said that public-sector spending cuts may last until 2020. Therefore, tapping the stock market for funds is seen as the only way of ensuring sufficient investment over the next few years.

*Source: Adapted from the *Economist*, 10 Oct 2013*

Extract 3: Royal Mail says postal deliveries to remote areas under threat

Universal Service Obligation is Royal Mail's statutory duty to deliver to every address in the country, six days a week, at the same price. This statutory duty started when Royal Mail was still a state-owned entity and even though now it has been privatized, it has a contract with government to continue undertaking this duty until the year 2021, after which it can decide for itself if it would want to continue doing so.

Royal Mail has warned that this obligation is now under threat: it might no longer be able to deliver to rural areas because rivals like TNT Post are being allowed to cherry pick easy and profitable deliveries in towns and cities without having to run services to isolated homes such as on Scottish islands. The company issued its warning on Thursday over the universal service obligation as it reported a 12% rise in operating profits to £671m. Moya Greene, Royal Mail's chief executive, said Royal Mail subsidised expensive deliveries to rural areas from the profits it made from services in big cities, and any increased threat from rivals could cost it £200m in revenues by 2017. Greene called for "timely regulatory action" from the regulator Ofcom to prevent undercutting from rivals threatening the universal service.

Royal Mail hopes to counter intense competition by making the company more customer-friendly. For example, it is making it easier for customers to track the delivery of their parcels. However, there are also fears that privatization would be bad for customers, bad for staff and bad for the postal industry. Firms may be increasing its profits at the expense of service standards and affordability of services for consumers.

Sources: Adapted from *The Guardian*, 12 Sept 2013 and 22 May 2014

Extract 4: Royal Mail says Amazon delivery service will hit its UK parcels business

Moya Greene, Royal Mail's chief executive, said: "When an online retailer of the size and scale of Amazon decides to build its own delivery network, that changes the market for everybody." Amazon launched its first same-day delivery service in the UK last month. The new service, called Pass my Parcel, promises to deliver parcels on the same day ordered to hundreds of newsagents across the country. Orders placed by 11.45am will be available to pick up from 4pm that day. Orders made before 7.45pm can be collected from 9am the next day. The service is free for Amazon Prime customers. Amazon plans to expand the service, which is run using the infrastructure of newspaper delivery company Connect Group, to thousands more retailers. It also plans to deliver small items by drones (unmanned flying aircrafts). Greene said drones were "one of those disruptive things" that Amazon "a very big company with a lot of money to invest in technology" could do. Royal Mail's profits are already being squeezed.

Source: Adapted from *The Guardian*, 19 Nov 2014

Questions:

- (a) With reference to Figure 1, describe and account for the change in distribution between Royal Mail's total letter items and parcel items from 2005 to 2012. [3]
- (b) Deduce the value of the cross elasticity of demand between the delivery services of Royal Mail and Amazon, and consider how this value may change given that Amazon is starting to offer same day delivery. [3]
- (c) (i) With the use of Table 1 and demand-supply theory, analyze how the rise in labour cost in the UK can affect the total sales revenue of mail operators in the country. [4]
- (ii) With reference to Table 1, provide a possible reason to explain why the price elasticity of demand for conventional inland mail delivery differs in different countries. [2]
- (d) Analyze the possible benefits of the UK government's decision to privatise Royal Mail to the UK economy. [8]
- (e) Assess whether the privatization of Royal Mail will be hurtful to the industry and result in firms increasing profits at the expense of service standards and affordability of services for consumers. [10]

[Total: 30]

Question 2

Crisis in Cyprus

Figure 2: Cyprus vs the rest of the Eurozone, 2007 -2012

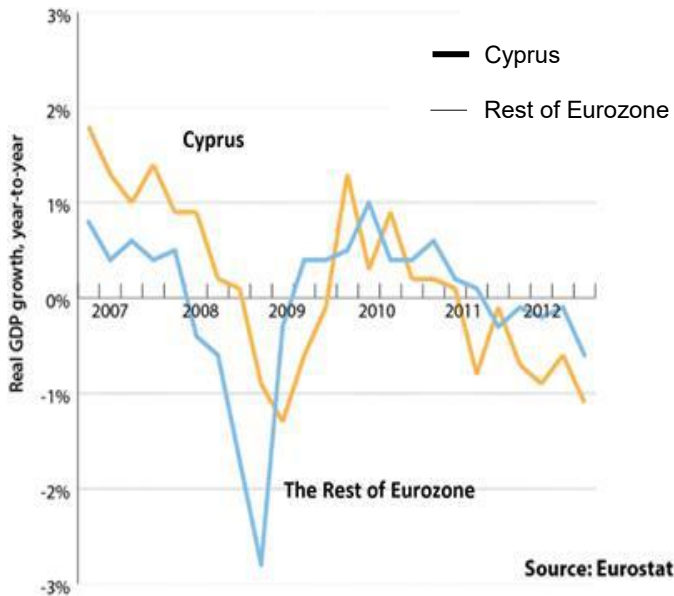
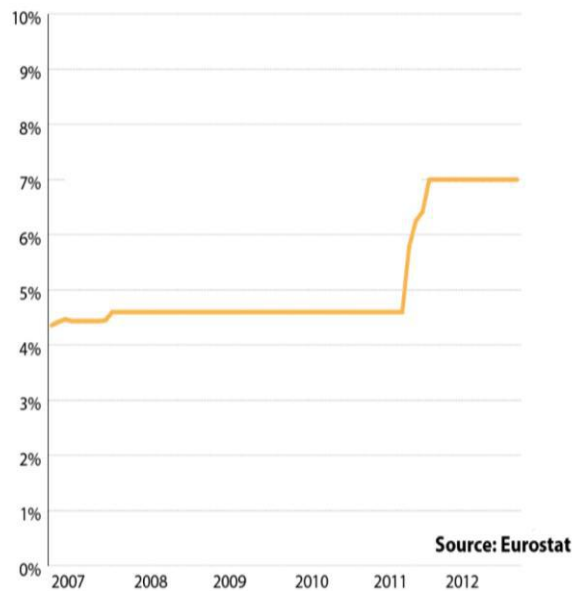


Figure 3: 10-year Cypriot government bond yields*



*Bond Yields: Rate of return on government bonds

Extract 5: Singapore banks benefit from turmoil in Cyprus

It is no fun being a saver any more – just look at Cyprus. Choose the wrong bank to look after your savings and you could find yourself wiped out virtually overnight if you are not careful.

That is why, without much fanfare, Singapore’s banks – among the world’s strongest banks – have become big beneficiaries of the Cypriot banking crisis. What triggered the surge in share prices of Singapore banks is the perception that wealthy depositors may be eager to switch their money from debt-ridden Europe to Singapore in their search for a safe haven. Furthermore, the situation is worsened by the rising public debt levels in Cyprus which have further lowered investor confidence toward the country.

Singapore bolstered investors’ confidence five years ago, after Lehman Brothers collapsed, by guaranteeing all bank deposits until the end of 2010. To ensure confidence in the guarantee, Singapore set aside \$150 billion from its reserves to insure deposits. That guarantee has since been withdrawn without being called upon, but deposits of up to \$50,000 continue to be insured under a bank deposit guarantee scheme.

By contrast, the Cyprus bank crisis strikes fear into investors’ hearts. Two weeks ago, the country shocked the world by threatening to impose a levy (tax) on all

deposits – even those under €100,000 (S\$160,000), which were insured – to save its financial sector.

When the Cypriot Parliament did not approve the measure, it pressed ahead with a plan to help its two largest ailing private banks, saddled with huge losses betting on government bonds issued by heavily indebted Greece next door. That would involve depositors with more than €100,000 losing some of their savings as part of a €10 billion bailout agreement inked with the European Union. The bailout inflicted huge losses on big depositors, with some analysts saying they could lose as much as 60 per cent of their savings. Even the University of Cyprus, which had all its research grants, gifts and donations deposited in the two private banks, was hit.

Worse still, Cyprus killed its dream of becoming a financial centre by imposing capital controls – restricting residents from withdrawing more than €300 in cash a day – when banks reopened last Thursday after a 10-day closure.

No wonder Singapore banks are enjoying a run-up, given prudent management and efforts over the years to develop wealth management businesses. Research houses such as CIMB are nonchalant about Singapore lenders' prospects, arguing that the latest property cooling measures will dampen demand for mortgages – one of banks' biggest businesses. But as Cyprus attests, it is not just profit that depositors and investors look at.

Source: *Straits Times*, 4th April 2013

Extract 6: Rebounding Japan beckons investors

Japan is poised to return to Singapore investors' radar following fresh signs of firmer economic recovery, as its massive consumer market presents opportunities for business expansion.

Japan's economy saw a strong 3.9 per cent year-on-year growth in the first quarter of this year – much higher than the 2.4 per cent advance estimate – is lending credibility to the notion that recovery in the world's third largest economy is gradually picking up pace on the back of Abenomics.

As a result of Japanese Prime Minister Shinzo Abe's stimulus measures in 2013, the weak yen that has been enticing capital investments in Japan is also attracting some Singapore companies to increase their footprint there due to the lower start-up cost.

One of them is Singapore plastic recycler Winrigo. Its operations director Teri Teo said: "Because of the softening yen, I now procure more plastic materials from Japan to be manufactured and sold to regional markets, including back to Japan where demand for green products is always very strong. It's not an easy market to enter, but there are certainly niches for opportunities. Besides green technology, I also see hospitality and food and beverage sectors being attractive to Singapore companies due to the vast number of tourists there." As of last year, Singapore was the third largest source of foreign investments for Japan, with the amount reaching around \$1.8 billion, said Mr Masaya Hasebe, managing director of Japan External Trade Organisation in Singapore.

"Abenomics has so far been successful, but to sustain Japan's recovery, the government is entering the next phase of *structural* reforms to encourage business investments. For instance, we are reducing the effective corporate tax rate, and liberating electricity retail market and approval processes," he said.

To encourage companies to invest and raise wages, the Abe administration is cutting Japan's effective corporate tax rate by 3.29 percentage points over two years from its current level of around 35 per cent.

A key test of Japan's structural reforms will depend on whether the government can successfully push on with bold labour market reforms. Labour productivity is surprisingly low - 25% below the average of the top half of OECD countries - considering that Japan has very high levels of secondary and tertiary education and R&D spending. This will require better corporate governance, reduced product market regulation and more labour market flexibility.

One reason for stagnant wages is that companies with too many workers cannot easily fire them, even with generous compensation. Japan badly needs to shift from a system in which graduates join a single company for life to one in which people can easily switch firms. In spring, the government will propose ways of allowing permanent workers to be fired in return for severance pay. It is the most critical--and delicate--of Mr Abe's proposed reforms. Implementing it will take time.

Japan has already introduced a new Pharmaceuticals and Medical Devices Act in November last year, which loosens the certification requirements for medical device products.

Mr Hasebe said Japan is "no longer the expensive market that foreigners think it is. The office rental rate in Tokyo, for example, is now comparable if not lower than that in Shanghai and Singapore... This is indeed a great time to invest in Japan".

Sources: Economist, 28 Feb 2015 and Straits Times, 15 June 2015

Table 2: GDP growth (annual %)

	2009	2010	2011	2012	2013
Singapore	-0.6	15.2	6.2	3.4	4.4
Japan	-5.5	4.7	-0.5	1.8	1.6
Cyprus	-2.0	1.4	0.3	-2.4	-5.4

Table 3: Current Account Balance (% of GDP)

	2009	2010	2011	2012	2013
Singapore	16.8	23.7	22.0	17.2	17.9
Japan	2.9	4.0	2.1	1.0	0.7
Cyprus	-9.7	-9.1	-3.0	-6.3	-3.1

Table 4: Gross Capital Formation (annual % growth)

	2009	2010	2011	2012	2013
Singapore	-11.3	24.4	5.0	14.0	-0.7
Japan	-17.5	4.5	0.1	4.5	1.2
Cyprus	-18.9	8.9	-14.8	-15.6	-30.0

Source: World Bank

Questions:

- (a) With reference to Figure 2, compare the trend in real GDP growth between Cyprus and the rest of the Eurozone from 2007 to 2012. [2]
- (b) With reference to Figures 2 and 3, account for the change in the Cypriot government bond yields in 2011. [2]
- (c) Explain how an increasing public debt can hurt the standard of living in Cyprus in the long run. [4]
- (d) Explain the impact of the “levy (tax) on all saving deposits” (Extract 5) on the circular flow of income of the Cyprus economy. [4]
- (e) Evaluate the effectiveness of the structural reforms used by the Japanese government to sustain Japan’s recovery. [8]
- (f) Discuss the extent to which Singapore will benefit from the economic conditions in Cyprus and Japan. [10]

[Total: 30]

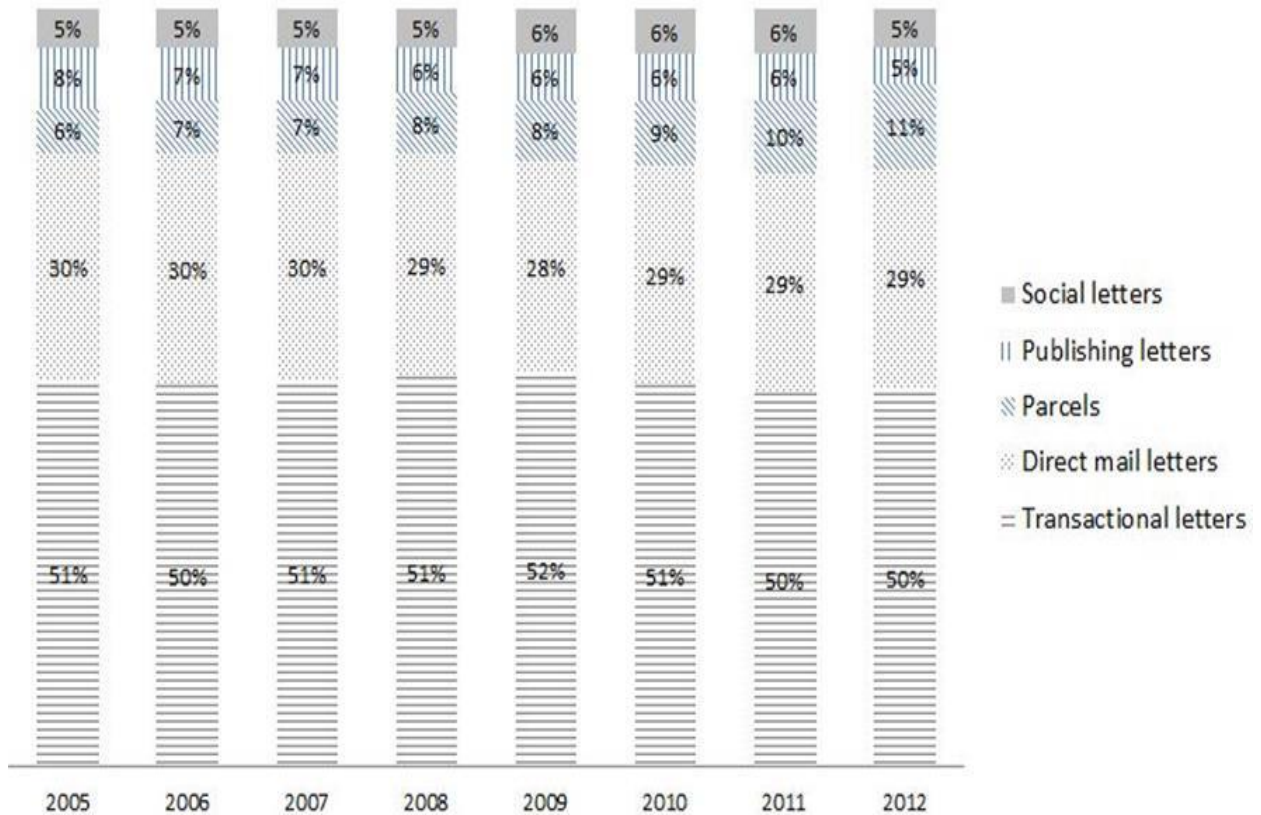
END OF PAPER

JC 2 H2 Economics
Preliminary Examination
Suggested Answers
Paper 1

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Source: Adapted from *The Guardian*, 19 Nov 2014

a) With reference to Figure 1, describe and account for the change in distribution between Royal Mail's total letter items and parcel items from 2005 to 2012. (3m)

- The proportion of parcel items has increased whilst the proportion of total letter items has fallen. (1m)
- Increase in online shopping → explains why proportion of parcel items has increased (1m)
- E-substitution → explains why proportion of letter items has fallen (1m)

b) Deduce the value of the cross elasticity of demand between the delivery services of Royal Mail and Amazon, and consider how this value may change given that Amazon is starting to offer same day delivery. (3m)

- Close substitutes (1m)
- Value of E_{ab} is positive and its magnitude is greater than one (1m)
- With the introduction of same day delivery service → better quality service provided for consumers → real product differentiation
- Amazon would have reduced substitutability between Amazon delivery services
- Become less close substitutes
- E_{ab} still positive but magnitude would be reduce (1m)

ci) With the use of Table 1 and demand-supply theory, analyze how the rise in labour cost in the UK can affect the total sales revenue of mail operators in the country. (4m)

- From table 1, the demand for mail in the UK is generally price inelastic. Deemed to be a necessity. Hard copies still required for a lot of business mails. Many elderly in UK still not adept at using email. (1m)
- Draw graph combining a demand that is price inelastic with a fall in supply. Show increase in TR.
- When price of labour increases, it is more expensive to hire postmen, cost of production for mail delivery increases. Profit margins for firms in the industry falls. Supply of mail delivery services falls and shifts left. (1m) P_e increases. Q_e which represents the volume of mail increases by less than proportionately (1m). TR increases. (1m)

cii) With reference to Table 1, provide a possible reason to explain why the price elasticity of demand for conventional inland mail delivery differs in different countries. (2m)

The extent of e-substitution in different countries which is then dependent on the level of technology in the country. If the internet access in the country is widely available, the extent of e-substitution is high. This would mean that email becomes a more available substitute for conventional mail. Demand for conventional mail would tend to be more price elastic as compared to other countries. When price of conventional mail delivery increases, quantity demanded falls by a greater % as compared to a situation when the extent of e-substitution is lower. (2m for any reasonable explanation)

d) Analyze the possible benefits of the UK government's decision to privatise Royal Mail to the UK economy. (8m)

- Privatization means that the government does not have to invest to overhaul it → allows it to continue with fiscal austerity since "public sector spending cuts are to last until 2020" (extract 2) → G allowed to remain low → reduces budget deficit → improves/maintains budget balance → reduce public debt. Furthermore, government gains funds in the sale → revenue to the government → reduces budget deficit → reduce public debt.
- A more efficient and profitable Royal Mail can pay increased corporate tax → helps to increase tax revenue to govt → reduces budget deficit.
- Privatisation → royal mail becomes more competitive → able to charge lower mail and postage prices, similar to the electricity and telecoms industries which were also privatised in the past (extract 2) → reduces COP for firms in the economy as many of them require mail and postage services → profit margins increases → SRAS increases → Y increases + GPL falls → EG + curbs cost-push inflation

- Privatization → able to fund new investments, e.g improve technology used to make it easier for consumers to track parcel (extract 3) → I increase → AD increase → Y increase → EG increases, Unemployment falls

- However, the reduction in public debt from this privatization is limited by the fact that the UK government has been accused of selling off Royal Mail shares too cheaply thus limited revenue was gained (extract 4)

- Furthermore, with privatization, it could mean that there might be some labour redundancies as the firm tries to become more cost-efficient. This could have been hinted upon in extract 3 which mentioned that privatization might be “bad for staff”. This can increase the level of unemployment in the country. Since Royal Mail is a large company which hires a significant amount of labour, the impact on overall unemployment in the country might be significant.

Overall, the benefits are quite significant because almost all firms in the economy will be able to benefit from a more competitive royal mail. This is because Royal Mail is involved in the service of both letter and parcel delivery which almost all firms need to be engaged in. It might be argued that email substitution has caused the quantity of letter deliveries to fall, but many firms may still require the delivery of parcels for delivery purposes.

Mark Scheme:

Level	Descriptor	Marks
L2	Well-elaborated response which considers both benefits and why overall benefits may not be that significant.	4-6
L1	One-sided response Brief explanation without economic analysis.	1-3
Evaluation		
E	Reasoned judgment with evidence from case material to point that the cons outweigh the pros.	1-2

e) Assess whether the privatization of Royal Mail will be hurtful to the industry and result in firms increasing profits at the expense of service standards and affordability of services for consumers.

[10]

Intro

Maximization of profits now the objective of Royal Mail because it is now a private firm. Profits is the difference between TR and TC.

Body

Addressing Part 1 of the Question: "Privatization of Royal Mail will be hurtful to the industry"

Thesis: Privatization of Royal Mail will be hurtful to the industry

Privatization of Royal Mail → Royal Mail becomes more cost efficient → Other firms in the Mail industry may have to reduce profit margins to compete with Royal Mail → Profits of many firms in the industry falls

Anti-thesis: Privatization of Royal Mail may not be hurtful to the industry

Privatization of Royal Mail → Royal Mail becomes more cost efficient → industry becomes more competitive → firms try to differentiate themselves by improving services eg. same day delivery → overall market DD for mail services increases → firms in the mail industry experience an increase in TR

Addressing Part 2 of the Question: " Firms increase profits at the expense of service standards and affordability of services for consumers".

Thesis Statement 1: Privatization of Royal Mail will cause the firm to increase profits at the expense of service standards and affordability for consumers.

- 1) Royal Mail may no longer keep to the USO
- If Royal Mail finds that its competitors are continued to be allowed to cherrypick profitable routes, it may no longer keep to the universal service obligation (extract 4)
- It will then choose to segment its market and charge consumers living in rural areas a higher price than those living in urban ones
- Less affordable for those living in rural areas → profitability at the expense of affordability
- It may even choose not to serve consumers in very isolated areas because they are simply not profitable → profitability at the expense of service standards.

Anti-thesis Statement 1: Privatization does not mean that the firm will increase profits at the expense of service standards and affordability. Profits and service standards may not be in conflict. They can be improved at the same time.

- 1) Increased investment in technology for parcel delivery services reduces costs which help to reduce prices
- Private capital is required to "improve its competitiveness" (Extract 3)
- Firm more cost-efficient
- AC falls, MC falls, (both curves shift down)
- Draw costs and revenues graph
- Profits increases, prices are lower at the same time
- Profits not increased at the expense of affordability for consumers.

- 2) Better technology means better service standards.
 - Royal mail is “making it easier for customers to track the delivery of parcels” (extract 3)
 - Increase in firm’s demand
 - TR increase
 - Draw costs and revenues graph
 - Profits increases, service standards are better
 - Profits not increased at the expense of service standards for consumers.

Anti-Thesis Statement 2: Privatization may not even cause the Royal Mail to increase its profits and therefore higher profits are not achieved at the expense of lower prices

- 1) Other objectives of firms
 - Growth maximization, sales maximization in the light of other strong competitors
 - Reduce prices to achieve sales maximization, especially in the area of parcel delivery services, a new growth area. As a result, there will be lower profits as well
- 2) Privatization means that Royal Mail tries to be more competitive by keeping up with its competitors but investing more does not mean that the returns on its investments are high
 - This might happen if Royal Mail does not choose the right technologies to invest on which would increase consumer satisfaction
 - This arises due to imperfect information of the firm. Even if it tries to conduct market research via surveys, the information gained might still not be completely accurate.

Overall Evaluation

- Overall, it is likely that Royal Mail eventually increases profits at the expense of certain consumers. In the short run, it is unlikely to break away from its Universal Service Obligation because it is obligated to do so until 2021. Breaking away from it might mean an expensive fine. However, in the long-run, it has the right to do so and this would mean higher prices or even no service from those living in the remote areas. Still, breaking away from the Universal Service Obligation would mean that it would lower prices for those living in highly populated areas, of which a large majority of consumers in the UK would be living in. This would mean that overall, most consumers would still benefit at the expense of a minority. However, this raises issues of inequality because postal delivery services can be deemed to be a necessity that all, regardless of their geographical location and level of income should be able to enjoy.

Mark Scheme:

Level	Descriptor	Marks
2	Addressed both the privatization of Royal Mail being hurtful to the industry AND firms increasing profits at the expense of consumers	4-6
1	Addressed either the privatization of Royal Mail being hurtful to the industry OR firms increasing profits at the expense of consumers	1-3
Evaluation		
1	General Evaluation	1-2
2	Reasoned judgment with evidence from case material or own knowledge	3-4

Question 2

Crisis in Cyprus

Figure 2: Cyprus vs the rest of the Eurozone, 2007 -2012

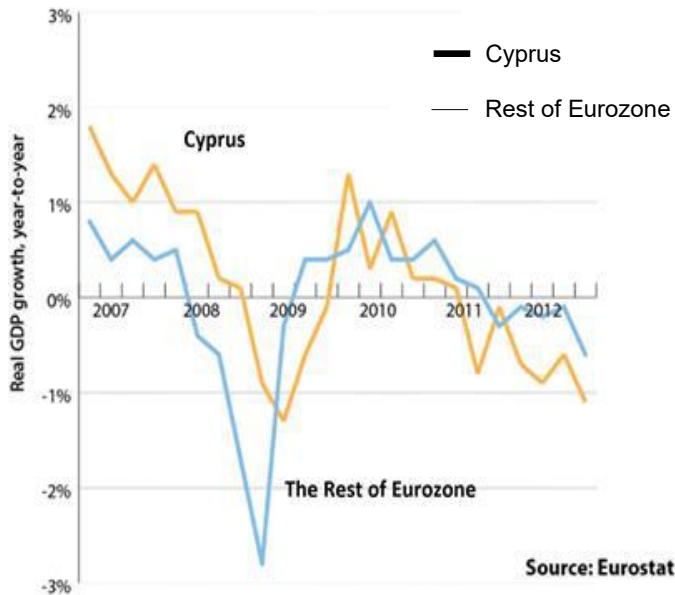
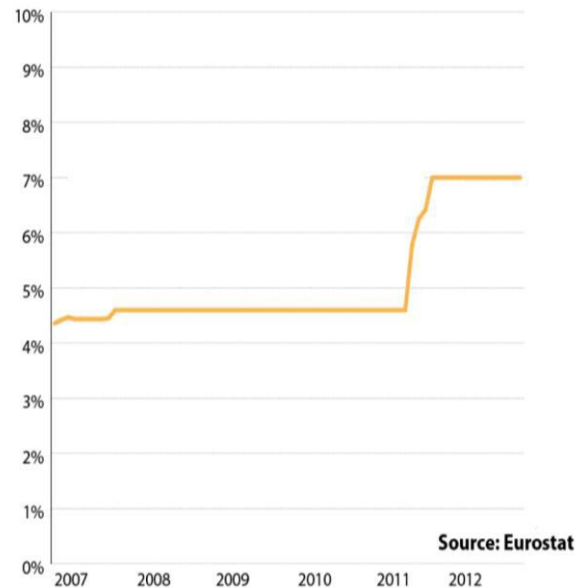


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Extract 5: Singapore banks benefit from turmoil in Cyprus

It is no fun being a saver any more – just look at Cyprus. Choose the wrong bank to look after your savings and you could find yourself wiped out virtually overnight if you are not careful.

That is why, without much fanfare, Singapore's banks – among the world's strongest banks – have become big beneficiaries of the Cypriot banking crisis. What triggered the surge in share prices of Singapore banks is the perception that wealthy depositors may be eager to switch their money from debt-ridden Europe to Singapore in their search for a safe haven. Furthermore, the situation is worsened by the rising public debt levels in Cyprus which have further lowered investor confidence toward the country.

Singapore bolstered investors' confidence five years ago, after Lehman Brothers collapsed, by guaranteeing all bank deposits until the end of 2010. To ensure confidence in the guarantee, Singapore set aside \$150 billion from its reserves to insure deposits. That guarantee has since been withdrawn without being called upon, but deposits of up to \$50,000 continue to be insured under a bank deposit guarantee scheme.

By contrast, the Cyprus bank crisis strikes fear into investors' hearts. Two weeks ago, the country shocked the world by threatening to impose a levy (tax) on all deposits – even those under €100,000 (\$160,000), which were insured – to save its financial sector.

When the Cypriot Parliament did not approve the measure, it pressed ahead with a plan to help its two largest ailing private banks, saddled with huge losses betting on government bonds issued by heavily indebted Greece next door. That would involve depositors with more than €100,000 losing some of their savings as part of a €10 billion bailout agreement inked with the European Union. The bailout inflicted huge losses on big depositors, with some analysts saying they could lose as much as 60 per cent of their savings. Even the University of Cyprus, which had all its research grants, gifts and donations deposited in the two private banks, was hit.

Worse still, Cyprus killed its dream of becoming a financial centre by imposing capital controls – restricting residents from withdrawing more than €300 in cash a day – when banks reopened last Thursday after a 10-day closure.

No wonder Singapore banks are enjoying a run-up, given prudent management and efforts over the years to develop wealth management businesses. Research houses such as CIMB are nonchalant about Singapore lenders' prospects, arguing that the latest property cooling measures will dampen demand for mortgages – one of banks' biggest businesses. But as Cyprus attests, it is not just profit that depositors and investors look at.

Source: *Straits Times*, 4th April 2013

Extract 6: Rebounding Japan beckons investors

Japan is poised to return to Singapore investors' radar following fresh signs of firmer economic recovery, as its massive consumer market presents opportunities for business expansion.

Japan's economy saw a strong 3.9 per cent year-on-year growth in the first quarter of this year – much higher than the 2.4 per cent advance estimate – is lending credibility to the notion that recovery in the world's third largest economy is gradually picking up pace on the back of Abenomics.

As a result of Japanese Prime Minister Shinzo Abe's stimulus measures in 2013, the weak yen that has been enticing capital investments in Japan is also attracting some Singapore companies to increase their footprint there due to the lower start-up cost.

One of them is Singapore plastic recycler Winrigo. Its operations director Teri Teo said: "Because of the softening yen, I now procure more plastic materials from Japan to be manufactured and sold to regional markets, including back to Japan where demand for green products is always very strong. It's not an easy market to enter, but there are certainly niches for opportunities. Besides green technology, I also see hospitality and food and beverage sectors being attractive to Singapore companies due to the vast number of tourists there." As of last year, Singapore was the third largest source of foreign investments for Japan, with the amount reaching around \$1.8 billion, said Mr Masaya Hasebe, managing director of Japan External Trade Organisation in Singapore.

"Abenomics has so far been successful, but to sustain Japan's recovery, the government is entering the next phase of *structural* reforms to encourage business investments. For instance, we are reducing the effective corporate tax rate, and liberating electricity retail market and approval processes," he said.

To encourage companies to invest and raise wages, the Abe administration is cutting Japan's effective corporate tax rate by 3.29 percentage points over two years from its current level of around 35 per cent.

A key test of Japan's structural reforms will depend on whether the government can successfully push on with bold labour market reforms. Labour productivity is surprisingly low - 25% below the average of the top half of OECD countries - considering that Japan has very high levels of secondary and tertiary education and R&D spending. This will require better corporate governance, reduced product market regulation and more labour market flexibility.

One reason for stagnant wages is that companies with too many workers cannot easily fire them, even with generous compensation. Japan badly needs to shift from a system in which graduates join a single company for life to one in which people can easily switch firms. In spring, the government will propose ways of allowing permanent workers to be fired in return for severance pay. It is the most critical--and delicate--of Mr Abe's proposed reforms. Implementing it will take time.

Japan has already introduced a new Pharmaceuticals and Medical Devices Act in November last year, which loosens the certification requirements for medical device products.

Mr Hasebe said Japan is "no longer the expensive market that foreigners think it is. The office rental rate in Tokyo, for example, is now comparable if not lower than that in Shanghai and Singapore... This is indeed a great time to invest in Japan".

Sources: *Economist*, 28 Feb 2015 and *Straits Times*, 15 June 2015

Table 2: GDP growth (annual %)

	2009	2010	2011	2012	2013
Singapore	-0.6	15.2	6.2	3.4	4.4
Japan	-5.5	4.7	-0.5	1.8	1.6
Cyprus	-2.0	1.4	0.3	-2.4	-5.4

Table 3: Current Account Balance (% of GDP)

	2009	2010	2011	2012	2013
Singapore	16.8	23.7	22.0	17.2	17.9
Japan	2.9	4.0	2.1	1.0	0.7
Cyprus	-9.7	-9.1	-3.0	-6.3	-3.1

Table 4: Gross Capital Formation (annual % growth)

	2009	2010	2011	2012	2013
Singapore	-11.3	24.4	5.0	14.0	-0.7
Japan	-17.5	4.5	0.1	4.5	1.2
Cyprus	-18.9	8.9	-14.8	-15.6	-30.0

Source: *World Bank*

Suggested Answers:

(a) Compare the trend in Real GDP growth between Cyprus and the rest of the Eurozone from 2007 to 2012. [2]

Similarity: Both Cyprus and the rest of the Eurozone experienced a fall in their real GDP growth rates from 2007 to 2012. [1]

Difference: Overall, the fall in real GDP growth rates was sharper for Cyprus than for the rest of the Eurozone. [1]

(b) Account for the change in the Cypriot government bond yields in 2011. [2]

According to Figure 2, Cyprus went into a recession in 2011. This would have led to a greater need for government funds to spur the economy out of the recession.

The rise in the government bond yields in 2011 would have attracted more investors to buy Cypriot government bonds as it would have a higher rate of return. This would then give the Cypriot government access to the funds that they needed.

(c) Explain how an increasing public debt can hurt the standard of living in Cyprus in the long run. [4]

Increasing public debt → government may need to increase taxes in the long run in order to repay the debts → with an increase in personal income tax there will be a fall in disposable income and a fall in purchasing power → less goods and services can be enjoyed → fall in material standard of living in the long run

(d) Explain the impact of the “levy (tax) on all saving deposits” (Extract 5) on the circular flow of income of the Cyprus economy. [4]

Levy on deposits → this creates the preference to reduce their savings for fear of a further levy
Savings fall → Withdrawals fall
Withdrawals < Injections → Income rises (leading to induced consumption, which then allows firms to have a greater revenue to pay higher wages, which would lead to further induced consumption. This causes a multiplied rise in income and employment)
→ Savings rise, Tax revenue collected rises, Import expenditure rises → leading to Withdrawals increasing until new equilibrium is reached → $W=J$
→ There is an increase in the size of the circular flow of income

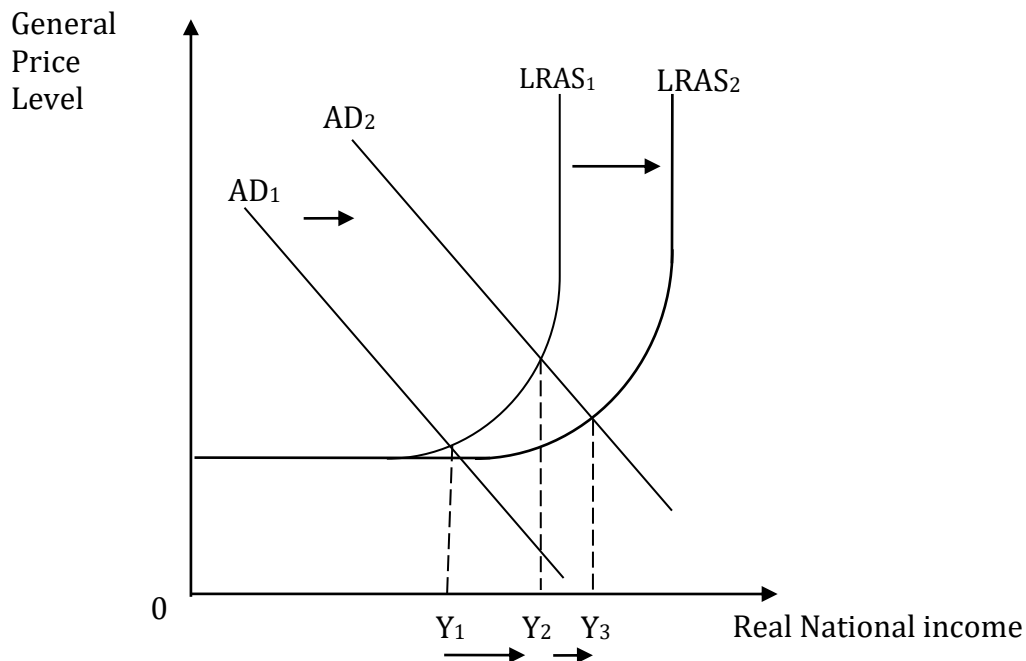
(e) Evaluate the effectiveness of the structural reforms used by the Japanese government to sustain Japan’s recovery. [8]

Note: Structural Reforms → Market-oriented Supply-side Policies. Key aim of such policies is raise business investments (I) → ↑AD in SR & ↑LRAS in LR (main target)
→ sustained ↑ in real NY → actual & potential EG.

1. Reducing corporate tax rate (Ext 6)

Explain policy:

Japan becomes a more attractive investment destination due to the lower corporate tax rates bringing about higher post-tax profits for the firms → ↑I → ↑AD in SR & ↑LRAS in LR → sustained ↑ in real NY (SR: Y_1 to Y_2 & LR: Y_2 to Y_3) → actual & potential EG.



Evaluate policy:

There are other factors that affect investment other than corporate tax rates. For example, investors will also look at the state of Japan's economy or the state of the global economy as well. If investors are pessimistic about economic outlook, they may not invest even if corporate tax is lowered. Moreover, labour productivity in Japan is very low as stated in Ext 6. Japan's labour productivity is 25% below the average of the top half of OECD countries. This may discourage investors from investing in Japan.

Japanese government may face falling tax revenue collections. Although there would be a rise in investments due to the lower corporate taxes, the overall effect on AD may be offset by a fall in G due to the government having less funds to spend on expansionary fiscal policy.

The government may have to borrow more in order to make up for the shortfall of funds. Public debt levels may rise.

In this case, the lowering of the corporate tax rate could be seen as effective as it is accompanied by positive economic growth in Japan (Ext 6: strong 3.9% year-on-year growth in the first quarter of this year).

2. Liberalizing the electricity retail market (Ext 6)

Explain policy:

Liberalisation of the electricity retail market → opening up the electricity retail market will lower the barriers to entry into the electricity market and allow more firms to enter → ↑I → ↑AD in SR & ↑LRAS in LR → sustained ↑ in real NY → actual & potential EG.

Evaluate policy:

This policy may have limited effects as it only affects one particular industry (electricity retail market). Thus the rise in investments within the industry would only have a limited effect on Japan's overall recovery.

Thus the liberalisation of the electricity market alone is insufficient. Overall, the Japanese government needs to implement policies that can have a wider effect on the economy. Liberalisation needs to take place across many other industries in order for the Japanese economy to have a greater recovery.

Conclusion:

The impact of the structural reforms will take time. In the short run, the Japanese government can also implement expansionary demand management policies in order to aid the economy's recovery.

Overall, the increase in investments will lead to both an increase in AD and LRAS and will thus help in Japan's long term economic recovery.

{Alternative acceptable policies: relaxing the approval processes for medical devices, labour market reforms}

Mark Scheme:

L1	For an underdeveloped explanation & evaluation of policies. Max high L1 when only 1 policy is referred to.	1-3 marks
L2	For well-developed explanation & evaluation of at least 2 structural reform policies implemented by the Japanese govt. Explanation is backed by economic analysis. Consistent application to case material.	4-6 marks
E1	Conclusion with weak substantiation.	1 mark
E2	Well-reasoned conclusion	2 marks

(f) Discuss the extent to which Singapore will benefit from the economic conditions in Cyprus and Japan. [10]

Thesis:

Singapore will benefit

Cyprus:

Cyprus imposes levy on deposit in Cyprus banks + Cyprus imposes capital controls:

Inflow of hot money into S'pore's banks which would otherwise have entered Cyprus
→ improvement in Singapore's financial account

Japan:

Weak Yen, lower corporate tax in Japan:

“lower start-up cost” for Singapore firms to set up operations in Japan.
Profits earned from S’pore firm’s investments in Japan will be transferred back to S’pore → Invisible balance of S’pore’s current account will improve in LR.

Japan’s EG 2012/2013 was 1.8% and 1.6% in Table 1 respectively + strong EG in Ext 6:

Japan had positive EG in 2012/2013 → rise in Japan’s income levels → rise in purchasing power → rise in demand for S’pore’s exports → $\uparrow X$ → S’pore’s AD increases → national income increases → actual EG for S’pore. [illustrate with diagram]

Anti thesis

Singapore may not benefit

Cyprus:

Cyprus’ EG was negative at -2.4% and -5.4% in 2012/2013:

S’pore’s exports to Cyprus may fall → S’pore’s X-M falls → AD falls → fall in S’pore’s actual EG

Hot Money flows:

The flow of hot money may cause instability in Singapore’s exchange rates if a sudden large inflow of hot money occurs → the Monetary Authority of Singapore would need to intervene more closely in the foreign exchange markets in order to maintain S’pore’s gradual modest appreciation of the SGD to ensure that our exports do not lose competitiveness.

Japan:

Japan’s weakening Yen → S’pore’s exports will face higher level of competition from Japan’s exports due to the weakening Yen which will make Japan’s exports more price competitive. DD for S’pore’s exports may fall → fall in X-M → fall in AD → fall in S’pore’s actual EG

Japan’s policies:

FDI that would have entered S’pore may now go to Japan instead. For example, due to the “Pharmaceuticals and Medical Devices Act which loosens the certification requirements for medical device products”, this may result in a fall in pharmaceutical-related FDI into S’pore.

Conclusion

Singapore is a small & open economy, highly dependent on trade. Hence, it is vulnerable to the economic conditions in foreign countries, especially those of our major trading partners.

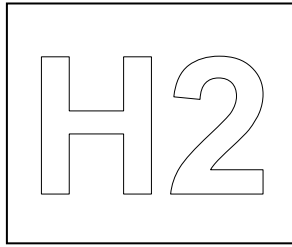
The negative effect on S’pore due to a fall in exports to Cyprus is likely to be minimal as Cyprus is not a major trading partner of Singapore. On the other hand, the economic situation in Japan is likely to affect S’pore more as Japan is 1 of our top trading partners and S’pore was Japan’s 3rd largest source of foreign investments for Japan.

Moreover, when our domestic companies set up operations in Japan, this will benefit Singapore firms as they can have greater access to the larger consumer market in Japan.

The extent to which the economic conditions in Cyprus and Japan will benefit Sg depends on how the various components of S’pore’s AD is affected. [elaborate]

Mark Scheme:

L1	One sided response / undeveloped explanations	1-3 marks
L2	Benefits and disadvantages are both addressed / linkage to both Japan and Cyprus are made	4-6 marks
E1	Unsubstantiated conclusion	1-2 marks
E2	Reasoned conclusion	3-4 marks



**TAMPINES JUNIOR COLLEGE
JC2 PRELIMINARY EXAMINATION**



CANDIDATE
NAME

CIVICS GROUP

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TUTOR
NAME

ECONOMICS

9732/02

Paper 2

Tuesday, 15 Sept 2015

2 hours 15 minutes

Additional Materials: Writing Paper

READ THESE INSTRUCTIONS FIRST

Write in dark blue or black pen.

You may use a soft pencil for any diagrams, graphs or rough working.

Do not use paper clips, highlighters, glue or correction fluid.

Paper 2 (Essay) [60%]

Answer **THREE** questions in total, of which **one** must be from Section A, **one** from Section B and **one** from **either** Section A or Section B.

Submit each section separately.

The number of marks is given in brackets [] at the end of each question or part question.

Answer **three** questions in total.

Begin **each question** on a **fresh sheet of paper**. Section A and B are to be submitted **separately**.

Section A

One or two of your three chosen questions must be from this section.

1. In the UK, tickets to see the opera are heavily subsidized. It's also been a decade since most of UK's national museums and art galleries abandoned entrance fees as a matter of government policy. Since then, only a few other nations around the world have followed suit. Many countries remain wedded to taking money at the door.

Source: Adapted from *BBC News*, 1 Dec 2011

 - (a) Explain how the price-elasticities of demand and supply for goods and services limit the effectiveness of government policy to correct market failure. [10]
 - (b) Discuss the view that differences in entry fees to the opera, national museums and art galleries between countries is solely due to perceived differences in the external benefit they generate in each country. [15]

2. Explain why choices are inevitable at the consumer, firm and government levels and discuss whether these economic agents always make such decisions according to the marginalist principle. [25]

3. In May 2014, DirecTV announced that it will be acquired by American Telephone and Telegraph (AT&T). If regulators approve the deal, it will enable the DirecTV-AT&T combo to become a leader in content distribution across various platforms including mobile, broadband and TV. However, certain unanswered questions still surround the merger.

Source: *AP Online*, 18 May 2014

 - (a) Explain how the size of a firm affects its pricing behaviour and profits earned. [12]
 - (b) With the aid of diagrams, discuss whether the merger of DirecTV and AT&T would benefit the consumers and society more than producers. [13]

Section B

One or two of your three chosen questions must be from this section.

4. Record unemployment has led to a rise in the number of young entrepreneurs leaving southern Europe to seek their fortunes. Growth is also likely to remain elusive because southern Europe is suffering from fiscal austerity and a shortfall of credit.
- Sources: *BBC News*, 27 June 2013 and *Economist*, 9 March 2014
- (a) Explain how the rise in the number of entrepreneurs leaving should be a cause of concern for southern Europe. [10]
- (b) Discuss the extent to which low unemployment should be the most important goal to a government. [15]
5. (a) Explain how injections affect the circular flow of income of an economy. [10]
- (b) Discuss the significance of the multiplier size, Marshall-Lerner condition and factor endowment in influencing macroeconomic policy decisions to raise international competitiveness in Singapore. [15]
6. Globalisation is desirable, so long as the global economy is not in recession and prices are kept low.
- Discuss the validity of the above statement to economies, workers, firms, consumers and the government. [25]

END OF PAPER

**JC 2 H2 Economics
Preliminary Examination
Suggested Answers
Paper 2
Section A**

1. In the UK, tickets to see the opera are heavily subsidized. It's also been a decade since most of UK's national museums and art galleries abandoned entrance fees as a matter of government policy. Since then, only a few other nations around the world have followed suit. Many countries remain wedded to taking money at the door.

Source: Adapted from *BBC News*, 1 Dec 2011

- (a) Explain how the price-elasticities of demand and supply for goods and services limit the effectiveness of government policy to correct market failure. [10]
- (b) Discuss the view that differences in entry fees to the opera, national museums and art galleries between countries is solely due to perceived differences in the external benefit they generate in each country. [15]

Suggested Answer:

Part (a)

Intro

Define Market Failure: Circumstances in which distortions prevent the price mechanism from allocating resources efficiently, resulting in welfare loss.

Body (I)

- (i) Explain why market fails in the case of negative externality that arises from, for example, smoking**

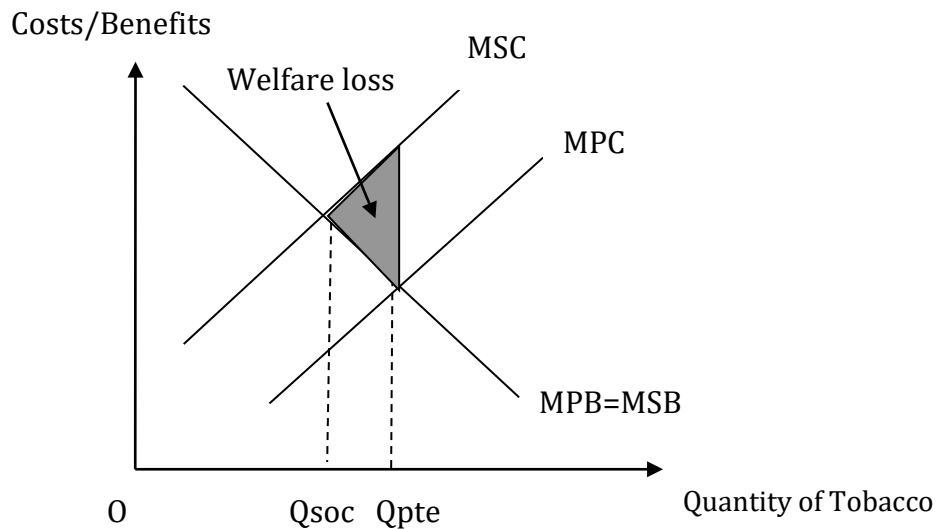
Define negative externality:

Negative externality is the cost of consumption or production which falls on people other than the consumers or producers of the product, for which no compensation is made.

Justification:

Smoking generates harmful effects on non-smokers such as family members & colleagues. They may experience respiratory difficulty as a result of passive smoking leading to smoking-related illnesses and medical cost. These 3rd parties suffer although they were not the direct consumers of cigarette.

The existence of negative externality causes marginal social cost (MSC) to be higher than marginal private cost (MPC), since $MSC = MPC + \text{Marginal External Cost (MEC)}$.



Smokers only consider their own private cost and benefit, and ignores externalities. As such, they will consume up to Marginal Private Benefit (MPB) = MPC at Q_{pte} .

However, the socially optimal level of output is at Q_{soc} , where $MSC = \text{Marginal Social Benefit (MSB)}$

At Q_{pte} , $MSC > MSB$. This means that one extra unit of output adds more to society's costs than to society's benefits. Therefore there is over - consumption of cigarettes. Hence, a welfare loss to society occurs as shown by the shaded area, resulting in market failure.

Government intervention is thus necessary to correct this market failure and reduce the welfare loss.

(ii) Explain how indirect taxes work to address market failure in negative ext

Indirect taxes \rightarrow levied on producers \rightarrow therefore internalizing external cost

A tax equal to MEC @ Q_{soc} will increase costs to the producer, forcing the producer to fully internalize the external costs. This will raise MPC to the same level as MSC. The result is a fall in output from Q_{pte} to Q_{soc} and the socially optimal output will be attained and welfare loss is eliminated.

(iii) Explain how Ep limits effectiveness of indirect taxes to reduce output levels

- The more price-inelastic the demand for cigarettes is, the less effective a given indirect tax is in reducing output levels.
- The demand for cigarettes by smokers in general is price inelastic, as there is a high degree of necessity due to nicotine addiction. A rise in price as a result of an indirect tax will reduce the quantity demanded of cigarettes by less than proportionate. Therefore, the reduction in the externalities like health problems to non-smokers will not be very significant.

- Comparing smokers of different age groups, the demand for cigarettes by older smokers is more price inelastic relative to younger smokers, as there is a higher degree of necessity since their longer years of exposure imply that they are more addicted compared to younger smokers. Hence a given indirect tax is likely to cause a less significant fall in quantity demanded by older smokers compared to younger smokers and hence will be less effective in reducing smoking amongst the older smokers and the costs they impose on 3rd parties.
- Comparing smokers of different income groups, the demand for cigarettes by higher-income smokers is more price inelastic relative to lower-income smokers, as the proportion of their incomes spent on cigarettes is smaller. Hence a given indirect tax is likely to cause a less significant fall in quantity demanded by higher-income smokers compared to lower-income and hence will be less effective in reducing smoking amongst the higher-income smokers and the costs they impose on 3rd parties.

Body (II)

(i) **Briefly explain why market fails in the case of positive externality that arises from, for example, healthcare**

Positive externality is the benefit of consumption or production which falls on people other than the consumers or producers of the product, and which occurs without compensation.

Healthcare generates beneficial effects on 3rd parties such as family members & colleagues who may experience a reduction in risk of contracting contagious illnesses such as flu and chicken-pox. These 3rd parties benefit although they were not the direct consumers of healthcare.

The existence of positive externality MSB to be higher than MPB, since $MSB = MPB + MEB$.

As private consumers only consider their own private cost and benefit, and ignore externalities, they do not take into account the external benefits of healthcare such as vaccination which they confer on 3rd parties. As such, they will under-consume healthcare such as vaccination and health checks, resulting in welfare loss.

(ii) **Briefly explain how subsidies work to address market failure in positive externalities**

To encourage consumers to take better care of their health and consume more healthcare products such as vaccination and health checks, subsidies are provided to make healthcare more affordable. These subsidies have the effect of internalising these 3rd party benefits as they compensate the consumers for the benefits they confer on 3rd parties and hence internalise these 3rd party benefits. Consumption levels thus increase to the socially optimal level, eliminating the welfare losses.

(iii) **Explain how Es limits effectiveness of subsidies to increase output levels**

- The more price-inelastic the supply of healthcare products such as vaccination is, the more ineffective a given subsidy is in increasing the output level.

- The longer the time period which a producer has to respond to a change in the price of the product, the more elastic the supply. In the short run, the presence of fixed factors such as the stock of vaccines limit the extent to which the quantity supplied of vaccination can be increased in response to the higher price that healthcare suppliers receive as a result of a subsidy. Hence in the short-run, a rise in price received by the producer as a result of the subsidy is likely to cause a less than proportionate increase in quantity supplied of healthcare and hence will be less effective in increasing output and consumption levels and the benefits they confer on 3rd parties.

Body (III)

Limitations of the use of Ep/Es → inaccurate or outdated values

- Elasticities, being numerical figures, are calculated based on collected data subject to error and change, and so may be unreliable
- Hence the amount of tax and subsidy implemented to bring about a given change in output is based on estimates of Ep and Es respectively rather than actual levels. This implies that the tax or subsidy may end up being too high (or too low), resulting in over-correction (or under-correction) of market failure.
- Furthermore, there may be implementation lag whereby elasticity figures may have changed by the time taxes or subsidies have been formulated and implemented

Mark Scheme:

Level	Descriptor	Marks
L3	Fully developed explanation of 2 reason why Ep/Es limit effectiveness of government policy to correct market failure which demonstrates strong economic reasoning.	7 - 10
L2	Fully developed explanation of 1 reason why Ep/Es limit effectiveness of government policy to correct market failure supported by strong economic theory OR Underdeveloped explanation of 2 reasons why Ep/Es limit effectiveness of government policy to correct market failure but which demonstrates strong economic reasoning	4 - 6
L1	Vague explanation of 1 reason why Ep/Es limit effectiveness of government policy to correct market failure which demonstrates little economic reasoning	1 - 3

Part (b)

Discuss the view that differences in entry fees to the opera, national museums and art galleries between countries is solely due to perceived differences in the external benefit they generate in each country. [15]

Introduction

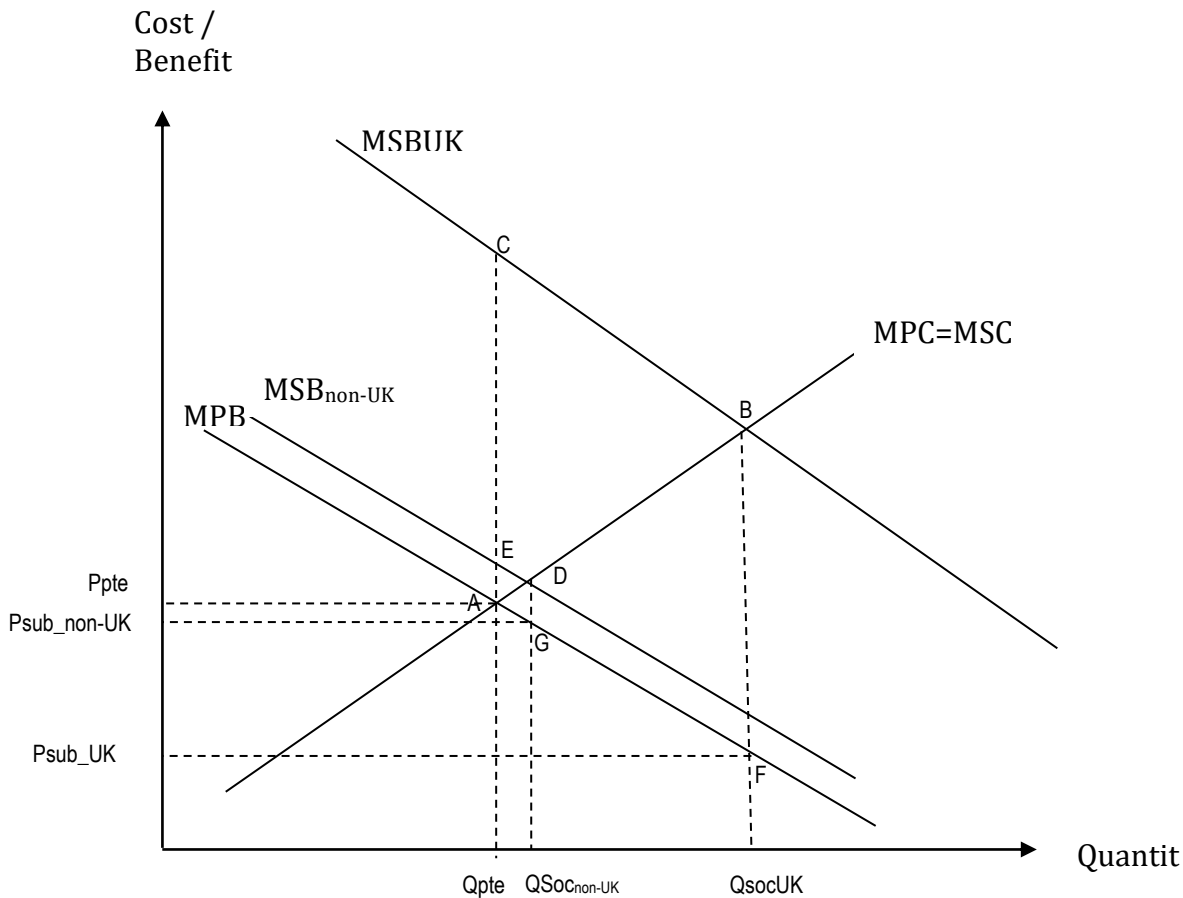
- The 2 main arguments for the subsidizing museums, art galleries and operas:
 - (i) they are merit goods where the consumption of which is deemed to be intrinsically desirable. They are viewed by the government as imposing substantial private benefit to the individuals themselves. In addition, their consumption usually generates positive externalities for other members of society.
 - (ii) equity
- They generate substantial private benefits for consumers because they educate about country's culture and heritage and lead them to appreciate it better. They provide and enhance self-understanding, self-identity and acceptance as well as pleasure. In relation to society and relationships with other people, they help consumers bond among people of similar interests and backgrounds and bridging across lines of difference – a fostering of social capital
- They generate positive externalities to the society:
 - (i) They leave important legacies for the next generation.
 - (ii) Artistic innovation benefits other artists. Unlike in many other fields, it is not generally protected by intellectual property laws.
 - (iii) They encourage tourism from abroad, and so benefit the wider economy.

Body

Thesis: Differences in entry fees to the opera, national museums and art galleries between countries is due to perceived differences in the external benefit they generate in each country

- Non-UK government was willing to leave both museums, operas and art galleries to private markets as the externalities were considered to be zero or negligible, whilst in the UK the government considered them to be high
- With reference to the diagram below assuming that the private benefits derived in UK and other countries are the same, both economies' marginal private benefit in the market is shown by the MPB curve. As people are self-interested, they ignore externalities and consume/produce where their $MPB = MPC$ at Q_{pte} . We assume in this case that there are no external costs and the costs incurred in UK and other countries are the same. Hence $MPC = MSC$ for both economies.

- In the case of UK, as the government deems that there are huge external benefits to the consumption of the museum and arts, the MSBUK is very much higher than the MPB. This is because arts investment plays a vital role in the British economy where arts and culture are central to tourism in the UK
- As such the socially optimal level of museum and arts consumption is very much higher where $MSBUK = MSC$ at Q_{socUK} . The welfare loss from consuming at Q_{pte} is triangle ABC.
- In the case of non-UK countries, because the government does not view the consumption of the museum and the arts as a good with extensive external benefits. As such, MSB_{non-UK} is not very much higher than MPB. Hence $Q_{socnon-UK}$ is not very much higher than Q_{pte} . The welfare loss from consuming at Q_{pte} instead of $Q_{socnon-UK}$ is much smaller at triangle ADE.



- The ideal amount of per unit subsidy to effect the Q_{soc} level of output for UK and non-UK is BF and DG respectively. As these per unit subsidies are actually equivalent to the MEB at Q_{soc} level of output, the subsidy in UK is much higher than the subsidy in Non-UK since the perceived MEB is much higher in UK than in non-UK. It follows that the subsidised price enjoyed in UK (P_{sub_UK}) will be much lower compared to the subsidised price (P_{sub_non-UK}) in Non-UK, if any in non-UK are to be provided in the first place, since the external benefits are so negligible. Given that external benefits are negligible and the subsidised price

therefore not much lower than the free-market price, the government is likely to let the free market determine the price of museums and the arts.

Antithesis: differences in entry fees to the opera, national museums and art galleries between countries is due to other reasons

- (i) Budget constraints of non-UK governments
 - No perceived differences in the benefit the museums and the arts generate in each country, but there could be other more pressing areas of development that demand government spending in other countries compared to the UK, and hence other countries devote less funds to subsidising museums and the arts.
 - Establish the nature of the goods: They are excludable as it would be possible to allow entry by ticket only. Museums and art galleries are likely to be non-rival as the enjoyment of the museum and art gallery by one person does not diminish the quantity available for consumption by another person. Operas on the other hand are likely to be rival as the tighter space constraints and acoustic effects imply that one person's enjoyment of the opera will reduce the number of seats available for other consumers. Museums, art galleries and operas are therefore not public goods but the non-rival nature of museums and art galleries meant that the MC of supplying a museum and art gallery to one extra visitor would be zero. Setting $P=MC=0$ to maximise welfare led to free entry to museums and galleries

- (ii) Consumption of museums and the arts is not equitable (for H2 only)
 - At market prices, those on low incomes could not afford the ticket prices. Subsidies are therefore needed so that the poor are not excluded from enjoyment of the arts. In UK, people may view museums and the arts as a necessity – something which may not be true of all countries. The above diagrammatic analysis assumes that people in UK and non-UK derive equal private benefits from museum and the arts. However, in reality, as the arts may be more a part of the lives of the UK people compared to the non-UK, demand is likely to be more price-inelastic in UK as more benefits are derived from the arts and the museums. This would make the free-market price in UK much higher and all the more warrant a subsidy by the government to make it affordable.

- (iii) No need for subsidies in non-UK as demand is high and consumption levels close to Q_{soc}
 - Museums and the arts are viewed as merit goods in both UK and non-UK, but demand is higher in non-UK and hence consumption level is close to Q_{soc} already. Hence little need for subsidies in non-UK to encourage consumption. Demand on the other hand in UK may be low and consumption levels significantly fall short of Q_{soc} . Hence government needs to provide subsidies to encourage consumption to Q_{soc} .

Conclusion

Stand & Justification on why the approach is different: UK and non-UK countries adopted two different approaches in funding of museums and the arts. One reason is due to the different amount of positive externalities gained by the whole economy, with the UK economy gaining more as compared to the non-UK economy. Hence government funding is more significant in UK. But there are other reasons as well, as explained above.

Evaluative comments: Tax incentives also influenced the final price paid by consumers to museums, art galleries and operas. In UK, more art organisations are tax-exempt organisation and private donors to these organisations received tax benefits by having to pay lower amount of taxes to the government. On the other hand, there are less such organisations in non-UK countries. Without much private funding to complement public funding, consumers must rely on their personal income to pay for admission. This therefore further explains the scenario presented in the preamble with consumers in UK countries paying much less as compared to their counterparts in non-UK.

Mark Scheme:

Level	Descriptors	Marks
L3	Fully developed explanation of 3 reasons spanning thesis and anti-thesis	9-11
L2	Fully developed explanation of 2 reasons spanning thesis and anti-thesis OR Full development of one side i.e. thesis or antithesis	6-8
L1	Explanation of 1 reason	1-5

Evaluation

E2	For an evaluative discussion that is based on economic analysis.	3- 4
E1	For an unexplained judgment, or one that is not supported by economic analysis.	1 -2

2. Explain why choices are inevitable at the consumer, firm and government levels and discuss whether these economic agents always make such decisions according to the marginalist principle. [25]

Intro

- All 3 economic agents are rational decision makers. They all have different goals which will affect the choices that they make.
- However, the over-arching principle used by all 3 economic agents to decide how much to consume or to produce is that of the marginalist principle where $MB=MC$.

Body

PART 1: WHY ARE CHOICES INEVITABLE AT THE CONSUMER, FIRM AND GOVERNMENT LEVEL

- Inevitable because problem of scarcity happens in all society- limited resources, unlimited wants
- Cannot satisfy everyone's wants so choices have to be made
- Explain Opportunity Costs and illustrate with examples
- Therefore, society needs to make choices on what to produce, how to produce and for whom to produce.
- Provide examples on the choices that consumers, firms and government needs to make.

PART 2: HOW ECONOMIC AGENTS MAKE CHOICES

1. How firms make choices

- Firm: $MC=MR$
- Explain how firms maximize profits. Draw and explain graph.

2. How consumers make choices

- Consumer: $MPB=MPC$ to maximize satisfaction
- Use example to explain.

3. How governments make choices

(i) At the microeconomic level

- Government: $MSC=MSB$ to achieve microeconomic goal of allocative efficiency in individual markets
- Draw graph and explain.
- Affects government's choice on whether or not to intervene. If $MSC > MSB$ at current level of output, government might consider imposing taxes to reduce output.

(ii) At the macroeconomic level

- Because things are scarce, societies are concerned that their resources should be used as fully as possible, and that over time their national output should grow.
- Therefore, although the government has 4 macroeconomic goals (sustained economic growth, low unemployment, low inflation and healthy balance of payments), ultimately the achievement of these goals should lead to long-run economic growth. Government may then have to make choices involving tradeoffs between these 4 macroeconomic goals so that long-run growth can be achieved.

PART 3: ECONOMIC AGENTS MAY NOT MAKE CHOICES IN ACCORDANCE WITH THE MB=MC CONCEPT . GOVERNMENTS MAY NOT AIM FOR LONG-RUN ECONOMIC GROWTH

Firms

1. Firms may have difficulty making choices in accordance with the MB=MC ie. They may be unable to do so.
 - Lack of information. May not know their demand curve and therefore their MR curves. Estimates of E_p to estimate the demand curve and therefore the MR might be inaccurate.
2. Firms may have other objectives, and thus may not use the MC=MR rule to choose how much to produce.
 - Instead of profit-maximization as the goal where the firm decides how much to produce by using the MC=MR rule, the firm might have other objectives. Eg. Sales revenue maximization. Choice on how much to produce will be made where TR is at its maximum and not where profit is at its maximum.

Government

(i) Microeconomic level

3. Government may have other objective of equity. This objective would then affect its choices on how much of a good should be produced in an industry. Even if allocative efficiency is achieved where $MSB=MSC$, government may try to ensure that more of a particular output is being produced eg. education. This is because education is a necessity which even the poor should be able to enjoy.
4. There may be the problem of government failure. Difficult to estimate of MEC in order to estimate the correct level of tax to impose to correct market failure so as to achieve $SB=SC$.

(ii) Macroeconomic level

5. Government may face political pressures to provide short-run economic growth via the use of expansionary fiscal policy. However, this is likely to widen the budget deficit and increase the public debt which may reduce long-run growth

prospects of the economy due to the loss of confidence of investors and consumers.

Consumers

6. Assymmetric information

- Unable to consume where $MPB=MPC$ because they it is difficult for them to estimate the true level of MPB to themselves. Eg. Patients may not have the full knowledge of their medical condition and therefore may be unsure as to whether to undergo an operation or medication recommended by the doctor.

Overall Evaluation

Overall, it is clear that choices are inevitable at all levels. Although, in general, economic agents due to their goals, would aim to use the $MB=MC$ principle to guide the making of their choices, many times, they are unable to do so due to the lack of information. More importantly, even if they are able to do so, the government will have to decide if the choices made by these rational decision makers are beneficial to society in the form of equity and efficiency. The government may have to intervene to ensure that this is achieved. However, such heavy intervention by the government may run up heavy costs to society. For example, subsidies for healthcare which is a merit good that is underconsumed may cause the government to run a budget deficit. In the US, healthcare costs is one of the leading contributors to the government's high budget deficit.

Mark Scheme:

Level	Description	Marks
L3	A developed response that addresses both the inevitability of choices and how economic agents make decisions. Able to develop argument that that economic agents may not always use the marginalist principle.	15-21
L2	A response that addresses either the inevitability of choices or how economic agents make decisions. Response that addresses only the inevitability of choices – Max 8 marks Response that addresses only how economic agents make decisions – Max 13 marks OR A response that addresses both the inevitability of choices and how economic agents make decisions but is undeveloped.	6-14
L1	An response that lists some relevant points on the inevitability of choices and how economic agents make decisions.	1-5

Level	Description	Marks
E2	For a well thought-out judgement on whether economic agents always make decisions according to the marginalist principle.	3-4
E1	General Evaluation	1-2

3. In May 2014, DirecTV announced that it will be acquired by American Telephone and Telegraph (AT&T). If regulators approve the deal, it will enable the DirecTV-AT&T combo to become a leader in content distribution across various platforms including mobile, broadband and TV. However, certain unanswered questions still surround the merger.

Source: *AP Online*, 18 May 2014

- (a) Explain how the size of a firm affects its pricing behaviour and profits earned. [12]
- (b) With the aid of diagrams, discuss whether the merger of DirecTV and AT&T would benefit the consumers and society more than producers. [13]

Part a) answers

Explain how the size of a firm affects its pricing behaviour and profits earned.
[12]

Introduction

The size of a firm is affected by the existence of barriers to entry (BTE) and exit. High BTE may lead to a few large firms operating within the market while low BTE may result in numerous, small firms operating within the market. This will eventually affect the pricing behaviour and profits earned.

Development

Consider market structure with no/weak BTE vs market structure with high/strong BTE

(a) Market structure with no barriers to entry – Perfect Competition

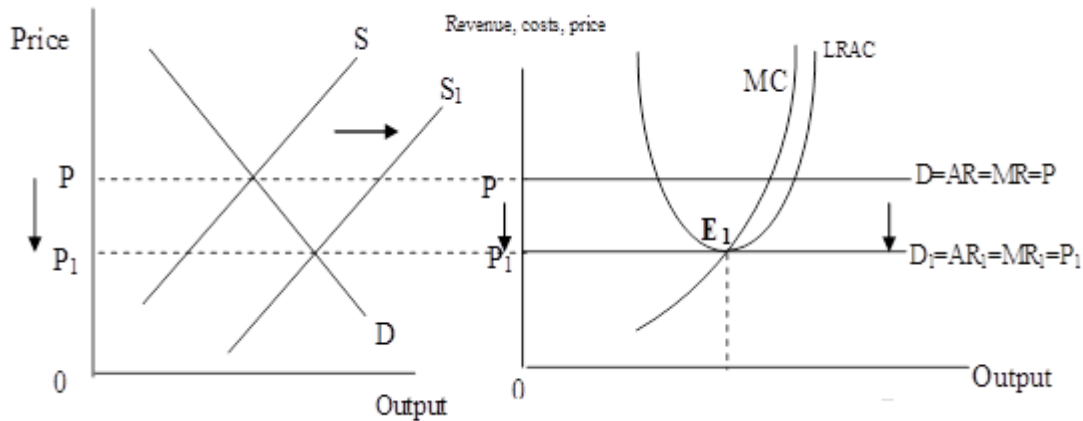
Under perfect competition and monopolistic competition, with no barriers to entry, firms can enter and leave the industry easily. This gives rise to many small firms in the industries.

In the extreme conditions under perfect competition, where product is homogenous and with the existence of perfect knowledge together with no BTE, there will be numerous small firms and they will be price takers in the market.

With many buyers and sellers trading a homogeneous product, each buyer and seller is a price taker. The firm is unable to affect market price by changing its output. It has no control over the market price because many other firms are offering the product that is essentially identical. If the firm charges more than the market price, buyers will go elsewhere. The firm may sell any quantity it likes but only at the market price.

Assume the PC firms are making supernormal profits in the short run

Figure 1: Adjustment process from supernormal profits to normal profits



The PC firms take the initial market price P determined by the market forces of DD and SS . Assuming that these existing PC firms are making supernormal profits, new firms will be attracted to the supernormal profits and enter the industry. This is made possible as there are no barriers to entry for the industry. Market supply thus increases resulting in a shift of the market supply curve to the right from S to S_1 . Consequently, market price will fall from P to P_1 and there will be a downward shift of the individual firm's demand curve from D to D_1 since they are price-takers.

The gradual fall in an individual firm's price will continue until price exactly equals AC at P_1 and all supernormal profits are wiped out. Normal profits are now achieved. At this point, there is no more entry of new firms and long run equilibrium is attained.

Thus, perfectly competitive firms will take the price set by the market demand and supply of the industry and sell at the prevailing market price and due to no BTE, PC firms can only make normal profits in the long run.

(b) Market structure with strong barriers to entry – Monopoly

With strong barriers to entry, the monopoly being the sole firm is large and has the market power to set prices.

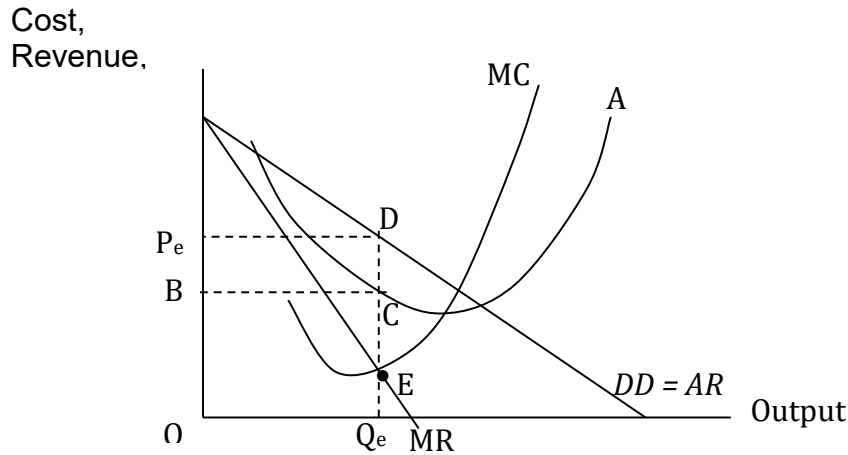
Examples of barriers to entry are large economies of scale in production, network effects and government policies.

Consider Monopoly

With high BTE, in the extreme, a single firm (pure monopoly) or a dominant firm exist in the market. With only a single or single dominant firm in the market => the product is unique or with no close substitutes. The demand for the product is price-inelastic.

Monopoly will be able charge high prices to earn more and even possible to earn supernormal profits in the long run as rival firms can be prevented from entering the market to erode away the profits.

Figure 2: A monopolist is a price setter and given substantial BTE it can earn supernormal profits even in the long run



The profit-maximising condition, where $MR = MC$ and MC cut MR from below, occurs at point E. The monopolist restricts output at OQ_e and charges an equilibrium price at OP_e . With high barriers to entry, it can keep its rivals out and thus able to earn supernormal profits of $PeBCD$ even in the long run.

Conclusion:

Thus, the size of a firm which is affected by the barriers to entry will influence a firm's pricing decision and in particular to the type of profits it can possibly earn in the long run.

Mark Scheme:

Level	Descriptors	Marks
L3	A <u>well-developed</u> and <u>rigorous</u> explanation on how the size of a firm can affect a firm's pricing behaviour and profits earned.	9-12
L2	An <u>underdeveloped</u> explanation of both (i) small firm and (ii) large firm affecting a firm's pricing behaviour and profits earned; lacking in rigour.	5-8
L1	For an answer which shows <u>some knowledge</u> on how the size of a firm can affect its pricing behaviour and profits earned. Answer contains <u>errors</u> and <u>inaccuracies</u> .	1-4

Part b) answers

With the aid of diagrams, discuss whether the merger of DirecTV and AT&T would benefit the consumers and society more than producers. [13]

Introduction

This essay will seek to discuss whether the merger is beneficial to the

- Consumers through the domains of price and output, consumers' surplus, choice and innovation
- Society through efficiencies and equity and
- Producers through the domains of costs, revenue and profits.

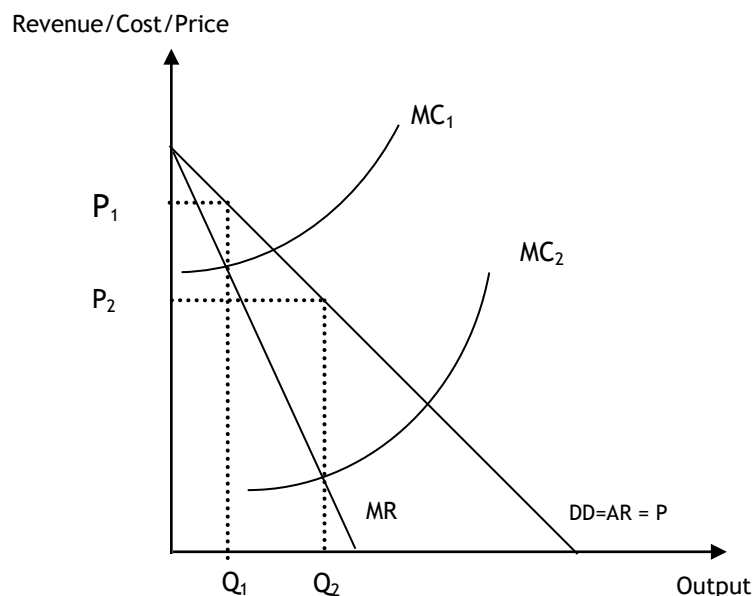
DirecTV is a broadcast satellite service provider and AT&T is a multinational telecommunications corporation. Hence the merger takes place between firms from different industries, also known as a conglomerate.

The essay will first seek to understand the benefits and disadvantages of the merger to the consumers, producers and society before weighing whether the merger benefits the consumers and society more than the producers.

Benefits of the merger between DirecTV & AT&T to consumers and society

Consumers: Enjoy lower prices of services and higher consumers' surplus

The merger between DirecTV and AT&T will allow both firms to expand their market share as they are now able to gain access to each other's customers base. With a wider market share and outreach to more customers, DirecTV-AT&T is able to reap marketing economies of scale (EOS) and lower their marginal cost from MC_1 to MC_2 as shown in the diagram below. The conglomerate can now pass the cost savings to consumers which will translate into lower prices of services provided from P_1 to P_2 .



Consumers: Enjoy new and better quality services

The merger between DirecTV and AT&T will open the possibility of greater innovation. As both firms merge and combine their profits, they will now be able to engage in more extensive research and development to innovate and improve their services or acquire the rights to broadcast more popular television programmes.

Also, with the existing resources of DirecTV and AT&T pooled together, the merged firms will now be able to synergize their Internet services together with television programmes to enjoy new possibilities of bundling. For example, the DirecTV-AT&T will now be able to meet consumers' future entertainment preferences, whether they want traditional TV service with premier programming, their favourite content on a mobile device, or on-demand video streamed over the Internet to any screen.

Consumers: Enjoy greater convenience of a one stop service

Previously, when consumers sign up for the services of mobile and TV programmes, they will have to go to the 2 different firms separately to acquire their services. With the integration of all services under one large firm, consumers get to enjoy greater convenience by just going to the firm and sign up for all the services which means more time is being saved. Furthermore, instead of paying multiple bills to various companies, consumers will now only need to pay a single consolidated bill to the firm DirecTV-AT&T.

Society: Better allocative efficiency due to lesser duplication of resources

The merger between DirecTV and AT&T will result in greater monopoly power and result in stiffer competition for the other smaller firms which did not undergo a merger. Eventually, the less efficient firms will be phased out from the industry. Hence, there will be lesser duplication and competition over the society's resources which are channelled and used in advertising to differentiate themselves.

Society: Greater equity where more consumers can gain access to the services

The merger between DirecTV and AT&T provides them with greater market power and ability to practice price discrimination. DirecTV-AT&T will be able segment the market into the various age group of consumers such as students, working adults and seniors and charge them differing prices over the same bundled services (mobile, broadband and TV) purchased through the 3rd degree price discrimination. This will allow DirecTV-AT&T to reach out to the group of consumers (e.g. students & senior citizens) who were not able to purchase their services previously.

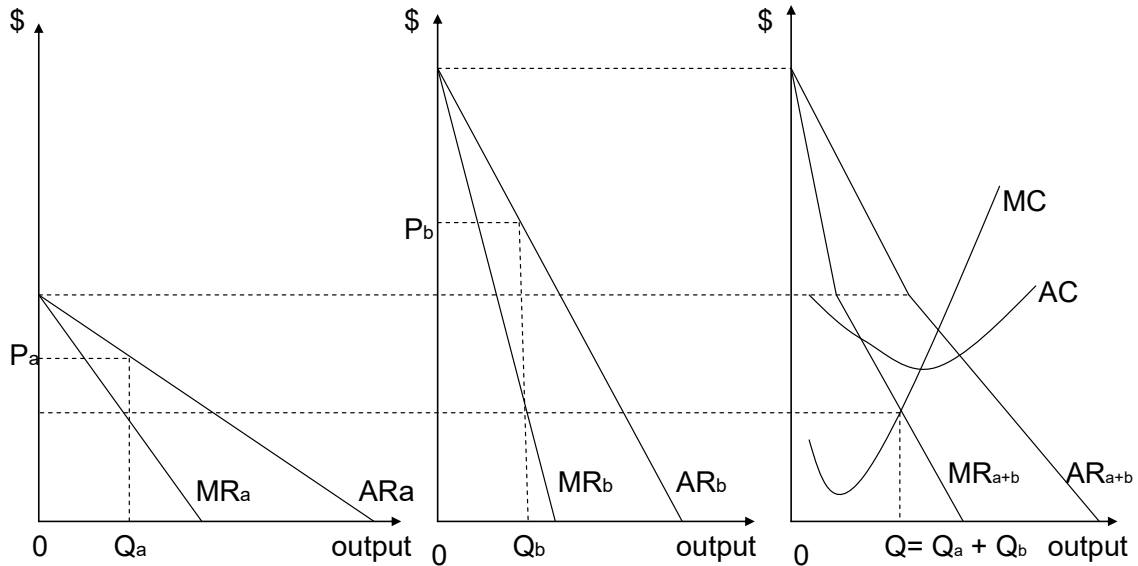


Fig (i). Seniors

Fig (ii). Working Adults

Fig (iii). Seniors + Working Adults

DirectTV-AT&T will maximize profits by equating the MC of the total output with the MR in each market, i.e. with MRa in Seniors' market and with MRb in working adults' market. The firm will therefore sell OQ_a in seniors' market and OQ_b in working adults' market. DirectTV-AT&T discriminates by charging OP_a in the seniors' market and OP_b in working adults' market. DirectTV-AT&T will sell the product at a lower price in the market with a demand which is relatively more price elastic.

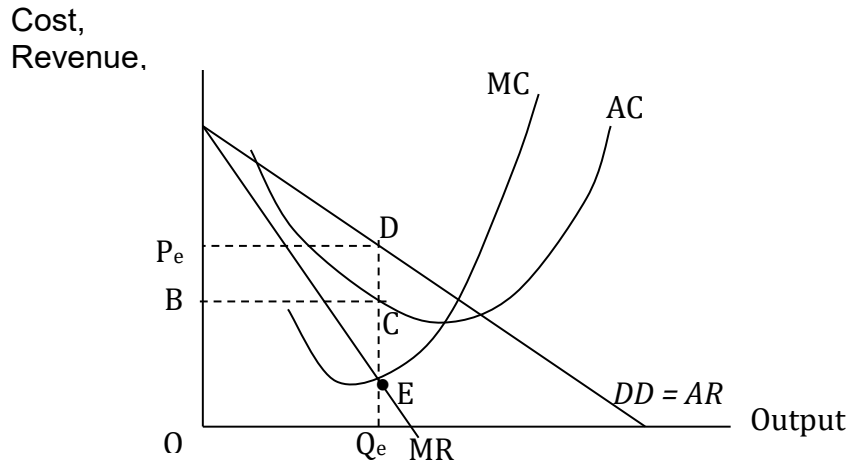
Disadvantage of the merger between DirecTV & AT&T to consumers and society

Consumers: Prices may not necessarily be lower

Though the merger will allow DirecTV-AT&T to reap EOS, but the level of EOS reaped may not necessarily be substantial. Hence, AC may not fall significantly and will only result in a minimal reduction in price. Coupled with the need to advertise, the cost savings may not be passed down to the consumers and prices may instead remain the same or possibly be higher in order to maintain DirecTV-AT&T's supernormal profits.

Society: Greater allocative inefficiency

With greater market power, DirecTV-AT&T will behave like a monopoly after the merger and can restrict output to increase P, thus consumer surplus falls resulting in greater allocative inefficiency.



As observed from the diagram, as $P > MC$, there is allocative inefficiency for DirecTV-AT&T. This allocative inefficiency will be greater than before the merger took place while the firms were operating in an oligopolistic market structure.

Society: Lesser competition resulting in X-inefficiency

After the merger with the less efficient firms being driven out of the industry, the lesser competition will result in DirecTV-AT&T feeling less pressured to seek for more cost efficient methods to stay relevant and hence the complacency may result in X-inefficiency.

Society: Greater inequity between consumers and producers

DirecTV-AT&T earns supernormal profits by extracting consumer surplus by selling at higher prices and offering lower quantity which also creates the problem of unfairness (inequity). DirecTV-AT&T is allowed to grow wealthy at the expense of the consumers.

Benefits of merger on producers (DirecTV-AT&T)

Producers: Increase in supernormal profits earned

Profits = Total Revenue (TR) – Total Costs (TC).

DirecTV-AT&T will enjoy a greater market share due to its wider market outreach and hence achieve higher TR. In addition, the merger will allow the combination of resources to advertise and increase its demand further and make its demand more price inelastic. Thus, TR can rise.

Due to the merger, DirecTV-AT&T can enjoy more internal EOS such as financial EOS where it will be able to obtain bigger loans from banks at a more favorable interest rates due to its credibility. This will lead to lower average costs.

DirecTV-AT&T's merger will allow the removal of redundant departments/workers where it is possible to combine the 2 accounting department into 1 accounting department and thus lowering costs further.

Hence, with a rise in TR and a fall in AC, there will be an increase in profits earned by DirecTV-AT&T.

Producers: Access to both firms' resources and greater innovation

DirecTV-AT&T's merger will pool the resources from both firms and allow the new management to gain the know-how expertise to lead the large firm forward.

With the supernormal profits earned (as mentioned in the previous paragraph), there is greater capability of DirecTV-AT&T to engage in innovation coupled with the resources from both firms to improve their services to gain stronger foothold in the industry. To expand their market share further, DirecTV-AT&T will be incentivized to make use of their supernormal profits to research on how their services can bring about greater convenience to their users. Hence, DirecTV-AT&T gains greater dynamic efficiency through their innovation.

Disadvantage of merger on producers (DirecTV-AT&T)

Producers: Internal Diseconomies of Scale (disEOS)

DirecTV-AT&T may produce beyond the minimum efficient scale (MES) and incur internal disEOS, such as managerial disEOS as there could be communication breakdown across departments. DirecTV-AT&T could suffer from *poor communication* because they find it difficult to maintain an effective flow of information between departments, divisions or between head office and subsidiaries when they grow too big and have thousands of staff to manage. Time lags in the flow of information can also create problems in terms of the speed of response to changing market conditions.

Furthermore, there could be a clash of corporate culture between DirecTV and AT&T as they have different working styles. The internal disEOS will lead to higher costs being incurred and thus LRAC may rise.

It is also to be noted that there is a high costs such as legal and accounting fees which will be incurred in the process of integration as well.

Thus, if TR does not rise faster than TC, profits may fall and to maintain profits, it depends on whether the larger firm can capitalize on its greater resources to expand its market share and avoid possible disEOS.

Synthesis of content to address the question: Does the merger of DirecTV and AT&T benefit the consumers and society more than producers?

A merger between AT&T and DirecTV *may not necessarily* mean that consumers and society will always benefit more than producers.

- 1) Whether the consumers and society benefits more than the producers depends on the level of competition in the industry. If the merger is formed from the perspective of providing a rival to challenge other competitors within the industry, consumers and society would generally benefit more due to the likelihood of non – pricing strategies that will be implemented by the firms to differentiate themselves. Despite the merger in this context, there would still be competition from rivals within the industry such as Charter Communications and Time Warner Cable that will help to drive prices down and increase output to benefit consumers and society more than the producers.
- 2) After the merger, regulations are required to be set and followed in order to ensure that the consumers and society get to benefit more than the producers. The Federal Communications Commission (FCC) in which regulates the interstate communications by radio, television, wire, satellite, and cable in United States will need to clearly indicate the rules which DirecTV-AT&T will need to abide to. For example, in the merger conditions, DirecTV-AT&T will need to pledge to deploy high speed fiber Internet offerings to millions which will help to offset the possible reduction in output due to reduced competition. DirecTV-AT&T will also need to take into consideration in continuing to provide standalone broadband services for low-income consumers at a discounted rate instead of forcing bundled services of broadband and TV to the lower income group in order to raise profits. Furthermore, fiber build out will reach schools and libraries where they will get to enjoy subsidized rates. Thus, regulations will shift the scale of benefits towards the consumers and society more than producers.
- 3) However, if the merger is formed from the perspective to strengthen market power in the bid to lessen competition and create a 'monopoly' within the industry without much regulation put in place, then it would lead to substantially higher prices and lesser choices for consumers in order to raise profits. In this case, the producers are the likely winners who will stand to benefit more than the consumers and society.

Conclusion

In conclusion, the merger between DirecTV and AT&T does not result in an automatic outcome where the consumers/society will always benefit more than the producers. It depends on the intentions behind the merger and the existence of regulations to keep the newly merged firms in check to ensure that they will live up to the promises and claims which they have made.

Mark Scheme:		
L3	For a well-explained answer that discusses how the merger affects the consumers, society and producers with reference to the context of the question. Candidate also addresses the question on who benefits more from the merger.	7-9
L2	For an underdeveloped answer that discusses how merger affects the consumers, society and producers in the context of the question without addressing who benefits more from the merger.	5-6
L1	For a largely inaccurate or incomplete explanation with no reference to the context of the question.	1-4
Evaluation:		
E2	Well justified stand with insightful evaluative comments.	3-4
E1	Vague conclusion with poor economic reasoning and lack elaboration.	1-2

4. Record unemployment has led to a rise in the number of young entrepreneurs leaving southern Europe to seek their fortunes. Growth is also likely to remain elusive because southern Europe is suffering from fiscal austerity and a shortfall of credit.

Sources: *BBC News*, 27 June 2013 and *Economist*, 9 March 2014

- (a) Explain how the rise in the number of entrepreneurs leaving should be a cause of concern for southern Europe. [10]
- (b) Discuss the extent to which low unemployment should be the most important goal to a government. [15]

Suggested Answer

(a)

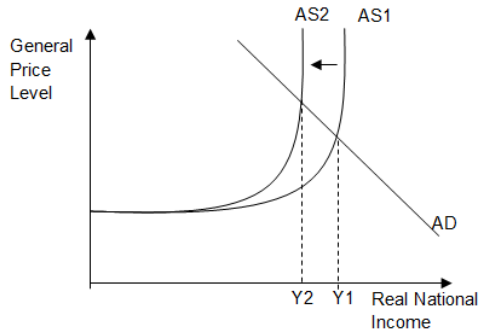
Introduction

Entrepreneurship is one of the 4 factors of production.

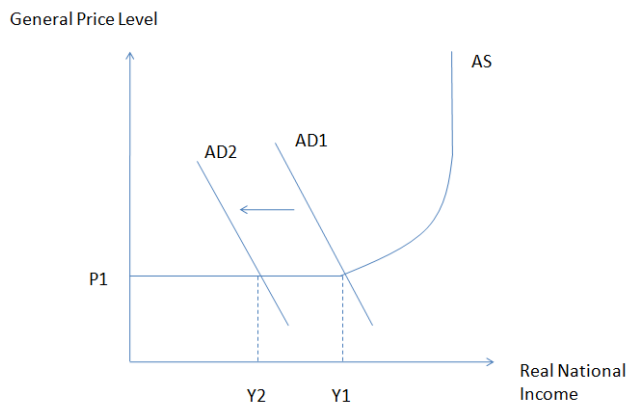
Main Development

Rise in number of entrepreneurs leaving Europe

- fall in quantity of FOP in terms of Entrepreneurship → leftward shift of AS from AS1 to AS2 → fall in potential EG
 → fall in real GDP from Y1 to Y2, assuming economy is at intermediate/classical range → fall in actual EG



2. fall in entrepreneurs starting production activities → less opportunity for government to collect corporate taxes → fall in tax revenue → govt has less funds available to carry out policies to get their economy out of a recession (eg expansionary fiscal policy) → unemployment persists
3. Negative investment climate in Southern Europe → fall in Invt → fall in AD → IPONY



4. → unemployment which is already at record levels according to the preamble, worsens to a greater extent

Mark Scheme:

L3	Range of negative impacts on Southern Europe is covered Points are well developed Low L3 for 2 well developed points (max 8m)	7-10
L2	Limited development of points	5-6
L1	Brief listing of points	1-4

(b) Discuss the extent to which low unemployment should be the most important goal to a government. [15]

Introduction

There are 4 main macroeconomic objectives. However, there are also other objectives such as reducing public debt through austerity measures.

Thesis

Yes, low unemployment is the most important goal of a govt

1. Pursuing low unemployment will enable other goals to be achieved, therefore low unemployment can be considered the most important goal.

Explain how government spending in areas such as education and training to reduce structural unemployment can also lead to an increase in AD due to the increase in G. This will lead to an increase in actual economic growth given that economies in Southern Europe are likely to be in the Keynesian range due to the high unemployment levels.

2. There are significant costs that come with high unemployment, therefore low unemployment can be considered the most important goal.

Economic Costs:

Unemployment represents a loss of output, i.e. the GDP of an economy is less than its potential (of full employment) GDP. This difference is the GDP (or output, or contractionary) gap.

Loss of income to the factors of production

Unemployment normally results in a loss of income. The majority of the unemployed experience a decline in their material well-being and living standards.

Loss of national output to the economy

Unemployment represents an inefficient use of scarce resources.

If there are unemployed resources within the economy, this means that the economy is operating within the production possibility curve (PPC). This leads to national output being produced below potential (i.e. loss of **potential national output**).

In addition, there is also a strong link between unemployment and consumer spending. As consumer's confidence falls, so the willingness of households to spend declines and households build up their precautionary savings. This could lead to a further fall in AD and economic growth. This aggravates the extent of the loss of national output.

Loss of tax revenue to the government

The government also loses tax revenues since the unemployed pay no income tax and spend less. In addition, the government has to incur higher administrative costs in the running of welfare programs particularly in countries which give out unemployment benefits. It has to spend extra on health care, social services and the police.

Therefore it is important to focus on achieving low unemployment as austerity measures are currently in place to reduce the public debt, and being able to collect higher tax revenue will help to achieve the goal of reducing the public debt.

Social Costs:

Personal hardships and increasing poverty

Lacking a job means inability to pay bills and to purchase both necessities and luxuries.

Lack of self esteem, decay of unused skills and mental depression

Unemployed workers lack social contact with fellow employees and may suffer from fall in self-esteem, mental stress and illness. The longer each individual's period of time out of work, the greater the loss of skill and motivation. An unmotivated, deskilled pool of long-term unemployed is a serious economic and social problem

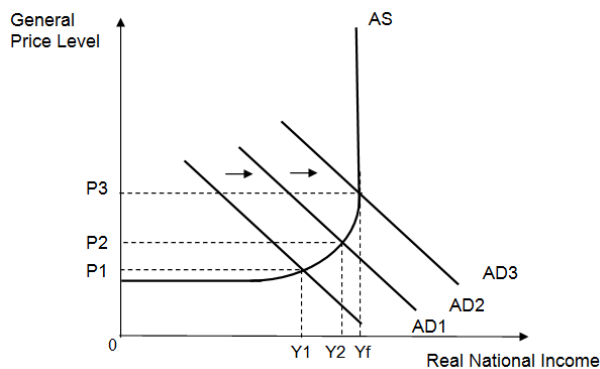
Prolonged unemployment of the worker could degenerate into domestic violence and crime.

Anti-thesis

No, low unemployment may not be the most important goal of a govt

1. Pursuing low unemployment may lead to other macro goals being at risk.

If the economy reaches the intermediate range, and AD continues to increase (from AD1 to AD2 to AD3) due to any expansionary demand management policy, this would lead to the risk of demand pull inflation occurring.



2. No, low unemployment may not be the most important goal of a govt as it may lead to a further worsening of the public debt. The policies would require funding, of which the government may need to borrow.

Conclusion:

Whether low unemployment is the most important goal of a government depends on the severity of the level of unemployment that the economy faces. According to the preamble, there is record unemployment which indicates that unemployment is an

urgent issue that needs to be dealt with in Southern Europe and therefore it should be the most important goal during this period of time.

However, the government first needs to secure funds to carry out their policies to reduce unemployment. As stated in the preamble, they have difficulty securing credit and this would delay the implementation of the needed policies. In the short run, the borrowing may lead to an increase in public debt, but in the long run the government can start to reduce the debt when personal income taxes rise due to greater employment levels.

Mark Scheme:

L3	Points are well developed Range of points on both thesis and antithesis are explained	9-11
L2	Limited development of points	6-8
L1	Brief listing of points	1-5

E2	Well justified stand	3-4
E1	Stand without justification	1-2

Alternative Approach for 4(b):

Introduction:

- State the 4 major objectives of government policy:
 - sustained economic growth
 - full employment
 - low inflation
 - healthy balance of payments
- Full employment is often considered to be achieved when unemployment rate is at 2 – 3%.

Main Development

Thesis:
Low unemployment is an important goal for the government due to the costs of high unemployment.

Anti-thesis:
However, there are also other just as important macroeconomic goals.

Note:
 For the anti-thesis, you can either provide a detailed and rigorous analysis on the importance of one other objective (e.g. low inflation).
OR you can explain why each of the other 3 objectives are important (analysis of each objective will be less detailed but should contain sufficient rigour).
 The first approach is used below.

Reasons to avoid high unemployment (high costs of high unemployment on economic agents)

Economy:

- Loss of output and income (GDP is less than its potential GDP). High level of unemployment represents a waste of scarce resources that are not maximised for the achievement of growth
- Social costs (e.g. increasing poverty & higher crime rate)

Government:

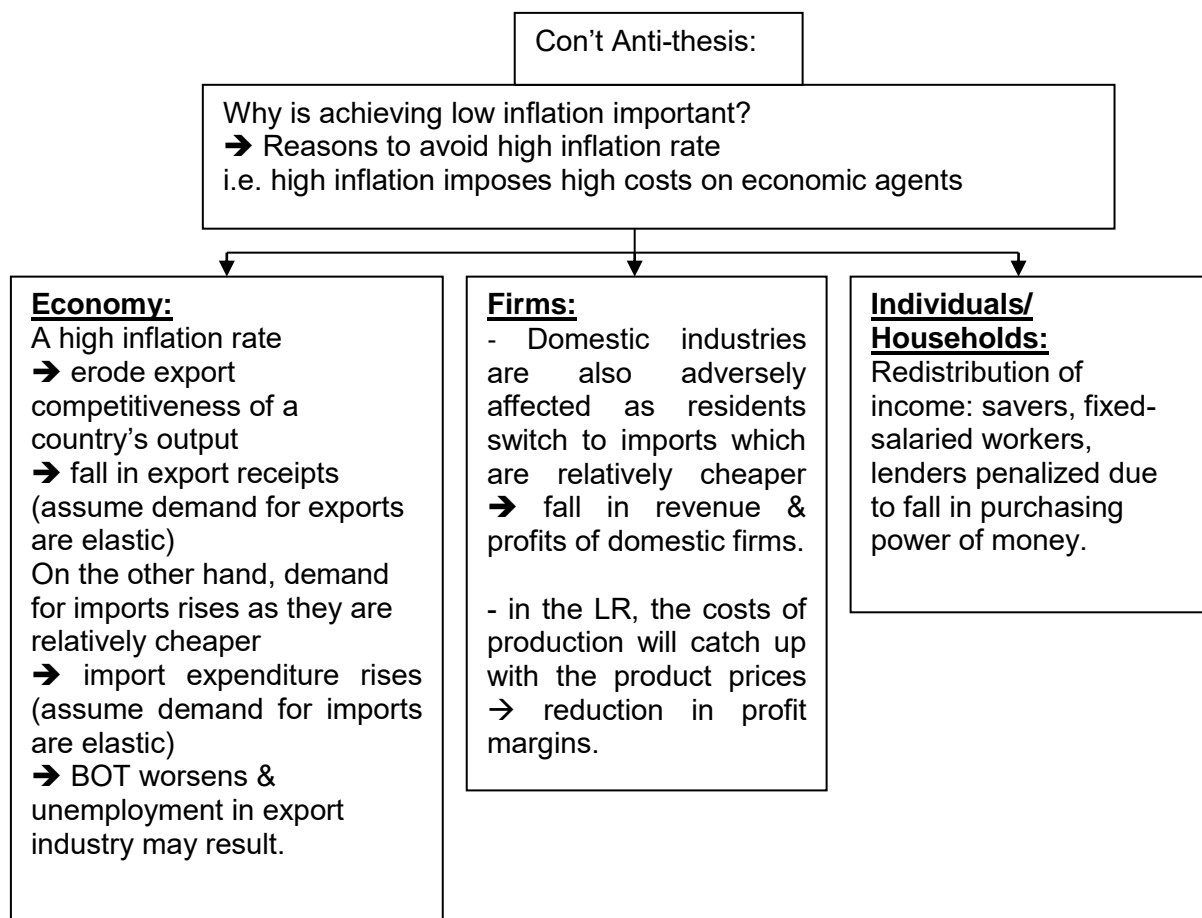
- loss of tax revenue since the unemployed pay no income tax and spend less.
- higher expenditure on unemployment benefits & related welfare payment
- increase expenditure on crime control & social services

Unemployed:

- suffer hardship due to loss of earning
- lower standard of living
- decay of unused skills.
- loss of self-esteem
- increased risks of stress-related illness (e.g. depression)

For example, the pursuit of full employment may bring about an increase in inflation rate according to the SR Phillips curve.

For some economies, → reducing inflation rate may be their top priority instead.



Conclusion :

- Solving unemployment may conflict with other macro-economic objectives as the policies used may have negative effects. For example, an expansionary monetary or fiscal policy may resolve unemployment problem but may lead to inflation (SR Phillips curve) and hence balance of payments difficulties. Thus the government will have to strike a good balance between the various macroeconomic objectives.
- Whether low unemployment should be the most important goal of govt policy also depends on the situation that the economy is facing. If an economy is currently experiencing hyperinflation, then low inflation may be a more urgent objective. However, if an economy is currently experiencing a recession and large scale unemployment, then full employment may be a more urgent objective.

5. (a) Explain how injections affect the circular flow of income of an economy. [10]

(b) Discuss the significance of the multiplier size, Marshall-Lerner condition and factor endowment in influencing macroeconomic policy decisions to raise international competitiveness in Singapore. [15]

Suggested Answers:

Part (a).

Introduction:

Define the circular flow of Income & injections:

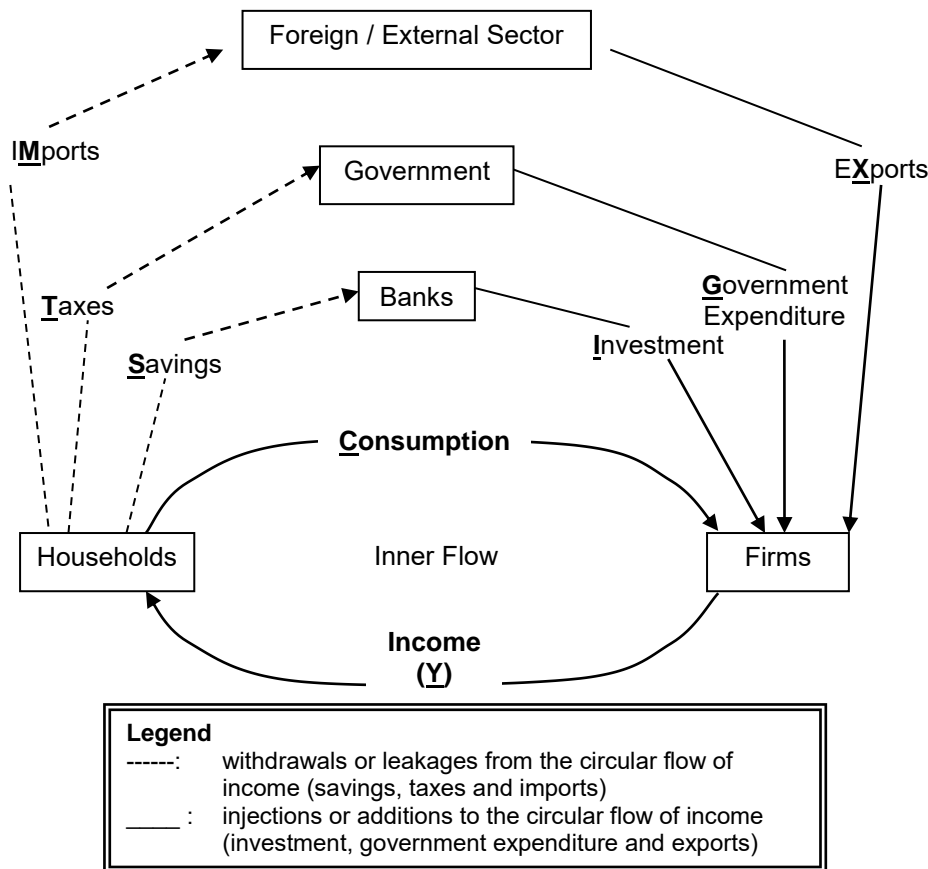
- Illustrates the flow of income from households to firms in return for the products that firms supply and the flow of income from firms to households in return for the factor services that households supply.
- The circular flow of income in a 4-sector economy which comprises households, firms, government and foreign sector shows the flow of goods, services, and their payments around the economy.
- 'Injection (J)': an addition to the circular flow which does not come from the expenditure of domestic households. Injections are investment (I), government spending (G) and exports (X).
- 'Withdrawal (W)': any part of income that is not passed on within the circular flow of income. Withdrawals include savings (S), taxes (T) and imports (M).

Development 1:

Explain the circular flow of income (illustrate with circular flow of income diagram):

- The circular flow of income in a 4-sector economy which comprises of households, firms, government and foreign sector shows the flow of goods, services, and their payments around the economy.

Circular Flow of Income Diagram:



As illustrated by the following diagram, firms and households come together in the factors and goods market. In the product market, firms supply goods and households demand goods. In the factor market, households supply factor services and firms demand factor services.

- **Households:**
 - supply their factors of production in return for payments [i.e. factor incomes which are rent (land), wages (labour), interest (capital) and profits (entrepreneurship)]
 - pay for goods and services produced by firms (i.e. consumption expenditure)
 - receive financial help from the government (i.e. part of G)
 - save some of the income they earn (S), use part of it to pay taxes (T) to the government, and spend some on imported goods (M).

- **Firms:**
 - supply goods and services to households → firms' expenditures make up the income receipts for household (e.g wages), while households' expenditures make up the income receipts for firms.
 - may earn revenue by selling their goods to foreigners (X).
 - invest in new plant and machinery (I).
 - receive financial grants or subsidies from the government (G)

- In an economy, equilibrium national income is achieved when the sum of leakages/withdrawals from the circular flow of income equal sum of injections into the circular flow of income.

$$S+T+M = I+G+X$$

(Withdrawals = Injections)

Development 2:

Explain how a change (e.g. fall) in injections affect the circular flow of income:

- Weak economic data may result in pessimistic outlook by firms as lower profitability of investment projects is expected. An example is the recent reports in Aug 2015 that China's manufacturing output data fell to a 2-year low, which resulted in pessimistic outlook globally, given China's importance in the world market. Moreover, major economic events such as the EU debt crisis (e.g. Greece crisis) will also weaken global investment outlook. This may cause the level of investment expenditure to fall $\rightarrow I \downarrow \rightarrow$ Injections fall (i.e. $W > J$)
- If a major trading partner falls into recession, the fall in foreign income will lead to a fall in their purchasing power. This results in falling demand for exports of the domestic country $\rightarrow \downarrow X \rightarrow$ Injections fall (i.e. $W > J$). An example is the recessions in Singapore's major trading partners like EU and USA in 2009 causing an adverse impact on Singapore's export revenue.

Analysis:

- \downarrow injections $\rightarrow \downarrow AD$
- IPONY: Firms' Inventories increase \rightarrow This will signal to firms to reduce production \rightarrow Firms lay off workers to reduce output level \rightarrow Rise in unemployment \rightarrow Fall in income \rightarrow Fall in income causes spending by households to decrease. As one's spending becomes another group's income, this fall in spending will lead to a fall in income of another group because of the decreasing demand for the goods and services they produce \rightarrow The multiplier effect is triggered off leading to a multiple decrease in production, output and national income.

Relate to circular flow of income:

- The size of circular flow of income is thus reduced.
- \downarrow injections will result in Withdrawals (W) $>$ Injections (J) (compared to initial equilibrium where $W = J$)
- The resulting fall in income will cause households to save less, spend less on imported goods and services and pay less taxes $\rightarrow \downarrow W$
- $\downarrow W$ will equate total withdrawals and injections again at new equilibrium i.e. $W = J$.

Mark Scheme:

Level	Description	Marks
L3	A well-developed and competent explanation of how a change in injections can impact the circular flow of income (with clear analysis & diagram using the circular flow of income).	7-10
L2	Under - developed explanation which is able to address the impact on the circular flow of income to some extent but lacking in rigour. Candidates have demonstrated some understanding of the concept of circular flow of income. A well-developed & rigorous answer using AD/AS analysis (which includes the multiplier process) without using the circular flow of income – cap at L2.	5-6
L1	Superficial understanding of the impact of the change in injections on the circular flow of income or an answer that did not understand the concept of circular flow, e.g. using AD/AS analysis.	1-4

5(b). Discuss the significance of the multiplier size, Marshall-Lerner condition and factor endowment in influencing macroeconomic policy decisions to raise international competitiveness in Singapore. [15]

Introduction:

- State the characteristics of Singapore economy: Singapore is a small & open economy, highly dependent on trade.
- State examples of macroeconomic policies: Demand-management policies (fiscal policy, exchange-rate based monetary policy), Supply-side policies (market-oriented, interventionist policies), International policies (e.g. trade policies).

Main Development:

Analysis of how the 3 characteristics influence decisions regarding macroeconomic policies in Singapore:

i) The multiplier size

Topic sentence: The effectiveness of **demand-management policies** is dependent on the size of the multiplier.

Definition: The multiplier indicates the number of times income changes relative to the initial change in AE.

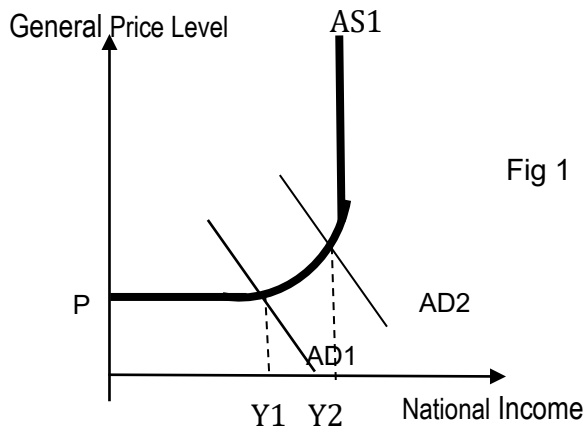
Formula: $\text{Multiplier} = 1/(1 - \text{MPC})$, where MPC = Marginal Propensity to Consume on domestically produced goods & services

Explanation of how a demand-management policy works via k effect:

If the government adopts expansionary fiscal policy, increasing G by \$100m, then AD also increases by \$100m (via its affect on G).

Firms will experience a fall in inventories, signalling to the firms to increase production. Firms will hire more workers to increase output. This results in increase in employment and income increases. As income increases, spending by the households will increase. As one's spending becomes another's income, this increase in spending will lead to an increase in income of another group of people because of the increasing demand for the goods and services they produce. The

multiplier effect is triggered off leading to a multiple increase in production, output and national income from Y1 to Y2. This will boost actual growth and employment.



Analysis of how size of k can influence policy decisions:

The multiplier size will influence the decisions regarding macroeconomic policies. The value of the multiplier will indicate the extent a change in government expenditure can trigger a much larger change in national income.

- Application to Singapore: Singapore has a small multiplier due to a high MPS and MPM. MPS is high due to compulsory savings via the Central Provident Fund (CPF) scheme. Currently, the total CPF contribution rates is 37% of total wages. The high MPS is also due to the Asian culture of thrift. Moreover, Singapore's lack of natural resources results in high import dependency, thus MPM is high. Singapore's small k size limits the effectiveness of demand-management policies. Hence, in the case of fiscal policy in Singapore, a larger increase in G may be needed to bring about a desired increase in national income.
- Due to our **small k** limiting the effectiveness of the demand-management aspect of fiscal policy, **Singapore adopts fiscal policy with a LR supply-side focus**. For example, to raise international competitiveness, S'pore is increasing G on training to raise productivity. This will increase AD in the short run as well as increase $LRAS$ in the long run to bring about sustained EG.

ii) Marshall-Lerner Condition

Topic sentence: The effectiveness of **exchange-rate policy** to control demand-pull inflation or to boost the economy is dependent on the Marshall-Lerner condition.

Definition: The Marshall-Lerner condition states that a currency appreciation/depreciation will only lead to a reduction/increase in $(X-M)$ if the sum of price elasticities of demand for imports and exports is greater than one, i.e. $E_{p_x} + E_{p_M} > 1$.

Exchange Rate Policy in Singapore:

The Singapore government adopts a gradual and modest appreciation of the Singdollar and its key aim is to control inflationary pressures in Singapore. The use of exchange-rate policy to control inflation will help to improve the international competitiveness of our exports. Occasionally, Singapore also depreciates the Singdollar (i.e. adopts a zero percent appreciation stance) to increase our international competitiveness in times of severe recession to boost the economy.

Explanation of how exchange rate policy works:

- We assume that the Singapore government adopts a gradual and modest appreciation of the Singdollar. Although the main aim of an appreciation of Singdollar is to control import price-push inflation, the policy is also able to tackle demand-pull inflation indirectly.
- By adopting a gradual and modest appreciation of the Singdollar, prices of Singapore's exports rise in foreign currency terms while prices of imports fall in domestic currency terms, thus causing quantity demanded for exports to fall, and the quantity demanded for imports to rise. This will result in a decrease in $(X-M)$, provided that the Marshall-Lerner condition is satisfied, i.e. when $E_{p_x} + E_{p_m} > 1$. Thus, this will cause AD to decrease from AD_1 to AD_2 , resulting in a fall in GPL from P_1 to P_2 since the Singapore the economy is operating on the intermediate range as shown in Fig 2, hence controlling demand-pull inflationary pressures.

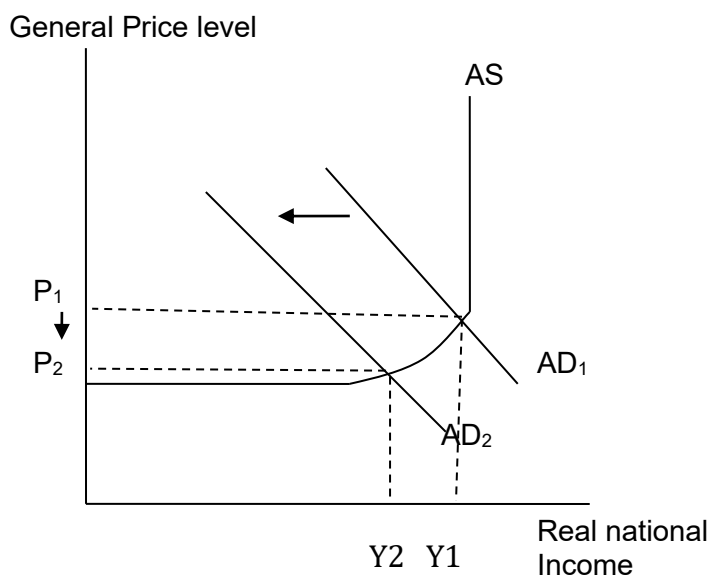


Fig 2

Analysis of how the Marshall-Lerner condition can influence policy decisions:

The effectiveness of appreciation of SGD to control demand-pull inflation depends on the Marshall-Lerner Condition.

- The **Marshall-Lerner condition is significant to Singapore as exchange rate policy is used extensively**. Singapore actively engages in exchange rate centered monetary policy. Given the economic characteristics, such as openness to trade and lack of natural resources have made Singapore susceptible to imported price-push inflation and exchange rate policy is the most direct tool to tackle the problem of rising import prices. Furthermore, the S'pore economy's heavy reliance on external demand and FDIs have made it necessary for the country to adopt free capital mobility. Given the perfect capital mobility and the central role of exchange rate in managing the domestic economy, the MAS operates an exchange-rate centred monetary policy.
- The Marshall-Lerner condition will affect the ability of exchange rate policy in controlling demand-pull inflation via a reduction in AD. It has no effect on the ability of the policy in dealing with import price-push inflation since an appreciation directly reduces the price of imports and this is not dependent on

Marshall-Lerner condition. Thus, the **Marshall-Lerner condition may not be much of a concern in time periods where the only source of inflation prevalent in the economy is import-price push inflation or if demand-pull inflation is very mild and negligible.**

- In general, given that Singapore exports mainly consumer electronics and manufactured goods, demand for Singapore's exports is likely to be price-elastic since there are many other substitutes produced by other industrialised nations such as Taiwan and China. Although Singapore's demand for imports tends to be price-inelastic as a result of the lack of natural resources, the **Marshall-Lerner condition (i.e. sum of price elasticities of demand for exports and imports is greater than 1) is likely to hold in Singapore in the long run** due to the price elastic nature of Singapore's exports. Hence, the policy of appreciating the SGD is likely to be effective in dealing with demand-pull inflation as well. This further strengthens the government's choice of using exchange rate policy to control inflation in Singapore and boost the international competitiveness of its exports.

iii) Factor Endowment

Topic sentence: The type of industries the Singapore government will focus its **supply-side policies** on developing is dependent on factor endowment. Singapore's areas of comparative advantage can also impact our **trade policies** (e.g. the countries Singapore negotiates FTAs with). The supply-side policies aims to boost our international competitiveness of the sectors S'pore has comparative advantage in. FTAs with our trading partners will also boost the competitiveness of S'pore's exports in these foreign markets since trade restrictions such as tariffs are removed.

Definition: Factor endowment (factor quantity) refer to the available quantity of factor of production such as land, labour, capital and entrepreneurial skills in a country. These factors of production are not evenly distributed over different countries resulting in differences in opportunity cost of production.

Analysis of how factor endowment can influence policy decisions:

- In terms of factor endowment, Singapore has abundance of capital and technology. This allows Singapore to produce goods which require capital and technology-intensive production at lower opportunity costs, giving it a comparative advantage over other countries. In addition, Singapore also has a highly-skilled labour force to support such production activities. Thus, Singapore has comparative advantage in the production of capital and technology-intensive goods such as chemical, biomedical products. Singapore will export such goods. Due to a small domestic demand, Singapore is largely an export-driven economy.
- Hence, the Singapore government will adopt **supply-side policies** to develop these sectors (e.g. provide financing for start-ups/R&D initiatives, industry-specific training courses, provide tax incentives/expertise/support to expand the sector, etc) and boost its export competitiveness, e.g. As announced in Budget 2013, EDB (Economic Development Board) will support the emerging satellite industry in Singapore through a \$90 million Satellite Industry Development Fund which will go towards public research activities, help local companies expand into the satellite sector or beef up existing capabilities.
- Other examples include incentives to encourage R&D, lowering of corporate taxes to attract MNCs. For example, the Singapore government introduced the Productivity and Innovation Credit Scheme which provides tax incentives and cash payouts to support businesses in the costs they incur for improvement in

productivity and innovation. These supply-side policies will lead to an improvement in productivity, and improves the competitiveness of Singapore's products.

- In addition, as a result of Singapore's comparative advantage in capital-intensive and high tech manufacturing and being an export-driven economy, Singapore actively pursues **free trade agreements (FTAs)** with major trading partners (especially those who imports high tech manufacturing products), e.g. US, China, Japan, India, etc. Singapore's network of FTAs has expanded to cover 20 regional and bilateral FTAs with 31 trading partners. FTAs → removal of trade restrictions (e.g. tariffs) by member countries on S'pore's products will boost our export competitiveness in foreign markets → $\uparrow(X-M)$ & FDI → $\uparrow AD$ → multiple increase in national income & employment via the multiplier effect.

Conclusion:

- Stand: In Singapore, all 3 factors - k size, factor endowment and M-L condition are important considerations in the choice of policy instruments to boost international competitiveness.
- Justification: Singapore's small multiplier size greatly limits the effectiveness of demand-management policies, resulting in the govt adopting fiscal policy with a supply-side focus. Since Marshall-Lerner condition is likely to be met in Singapore's case due to the price elastic nature of our exports, rendering the demand-management aspect of exchange rate policy effective in curbing demand-pull inflation, hence Singapore chooses to use exchange rate policy to keep both demand-pull & import price-push inflation under control. Our comparative advantage in capital and technology intensive production signals the govt to provide financing & support to expand such industries via its supply-side policies. Being an export-driven economy, these supply-side & exchange rate policies aim to boost Singapore's international competitiveness by keeping inflationary pressures low and boosting productivity and R&D.
- Evaluative comment: Of the 3 factors, factor endowment is the more significant consideration for Singapore's policy directions to boost international competitiveness. M-L is less significant as our key aim of exchange rate policy is to deal with import price-push inflation, which Singapore is more susceptible to, given its small & open nature & the policy's effectiveness to deal with import price-push inflation is not dependent on M-L condition.

Mark Scheme:

Level	Knowledge, Application, Understanding & Analysis	Marks
L3	For an answer that <ul style="list-style-type: none"> • shows well-developed discussion on the significance of the multiplier size, Marshall-Lerner condition & factor endowment in influencing decisions regarding 	9-11

	<p>macroeconomic policies to raise international competitiveness.</p> <ul style="list-style-type: none"> demonstrates depth and scope, using economic framework (AD/AS diagram) to analyse the effects of all the three concepts in influencing macroeconomic policy decisions. demonstrates consistent application to the Singapore context. Answer also demonstrates good real-world knowledge of the Singapore context & policies. 	
L2	<p>For an answer that</p> <ul style="list-style-type: none"> attempts to use economic framework (AD/AS diagram) to analyse the effects of the concepts in influencing macroeconomic policy decisions to raise international competitiveness. is lacking in either depth or scope (e.g. answer only addresses 2 out of the 3 concepts) is largely theoretical, limited application to the Singapore context. 	6-8
L1	<p>For an answer that</p> <ul style="list-style-type: none"> shows some knowledge of multiplier, Marshall-Lerner condition & factor endowment with mere description of the content words. does not attempt to answer the question has inadequate economic analysis a well-developed explanation of 1 of the concepts only. 	1-5
Up to 4 additional marks for evaluation		
E2	For an insightful evaluative assessment supported by well-developed economic reasoning.	3-4
E1	Unexplained judgment or an evaluative assessment with weak substantiation.	1-2

6. Globalisation is desirable, so long as the global economy is not in recession and prices are kept low.

Discuss the validity of the above statement to economies, workers, firms, consumers and the government. [25]

Suggested answer:

Outline:

Definition of globalization → freer movement for trade, capital, labour and ideas

Desirability → benefits and costs of globalization

Condition → world economy is healthy and prices are stable → trade partners are enjoying economic growth with low inflation

Basis of comparison:

Economies → GDP growth rate, inflation, unemployment rate and BOP

Firms → profit level

Government → fiscal position

Workers and consumers → merged them as households → workers would require analysis on costs of production and consumers would require analysis on SOL.

When global economy is *not* in recession and prices are *stable*

	Benefits	Costs
Economies	<p>Increase in trade, capital → general improvement to current and capital account, improves BOP</p> <p>Simultaneous increase in (X-M) and I → increase AD and NY in SR.</p> <p>Could increase LRAS in LR is I was on capital goods</p> <p>Fall in demand deficient unemployment and prices will be stable in LR</p>	<p>Emergence of low-costs producers → development of sunset industry within domestic economy → may lead to structural unemployment</p> <p>Greater availability of goods and services for consumers → increase in consumption of imports → (X-M) falls → fall in AD and NY</p> <p>May lead to demand-pull inflation in SR due to greater demand for goods and services from abroad, assuming domestic economy has trade advantage</p>
Government	<p>Increase in FDI by foreign firms → setting up more offices in domestic economy → increase in corporate tax revenue collected by govt → fiscal position improves → greater availability of funds for purpose of expanding</p>	<p>Greater expenditure by govt to protect sunset/sunrise industries or to stimulate innovation and R&D → worsen fiscal position</p>

	the economy	
Firms	<p>Increase in TR through exporting goods and services to more foreign markets → AR/DD shifts out</p> <p>The increase in production allows firm to harness internal EOS → fall in TC → MC falls</p> <p>Together, profits for firms would increase</p>	<p>Unfair trade practice → protectionistic policies employed by trade partners to protect sunset/sunrise industries → may cause domestic firms to face unfair competition → eg: tariffs → reduces total revenue earned → fall in profits</p> <p>Greater competition for factor inputs → may lead to increase in prices of factor inputs → costs-push inflation</p>
Workers	<p>Greater competition for jobs → labour productivity may increase due to need to be more efficient</p> <p>Exchange of ideas/technology can further labour productivity → lowers COP</p> <p>Workers can seek higher wages for employment in other countries → improvement in mSOL</p>	<p>Movement of skilled labour overseas → brain drain → compromise increase in LRAS</p> <p>Reduces the amount of income tax revenue collected by govt → fiscal position may worsen.</p> <p>Displacement of domestic labour from more competitive foreign labour → reinforce the fall in domestic unemployment</p> <p>Greater competition for jobs → lowers wages → reduces mSOL, longer working hours → worsens nmSOL</p>
Consumers/ household	<p>Enjoys lower prices for goods & services due to increase in competition, greater choices available → consumers' welfare increases.</p>	<p>Increase in production of goods and services may result in greater pollution, negative externality → worsens nmSOL</p>

When global economy is in recession and prices are unstable

	Benefits	Costs
Economies	<p>Inflationary pressures in trade partners may switch household consumption towards price competitive imports → domestic (X-M) may increase → BOP improves through current account, AD and NY increase and unemployment falls</p>	<p>Contagion effect → fall in (X-M) due to households in trade partners consuming less imports → worsens BOP → leads to fall in AD and NY, employment</p> <p>More susceptible to import price-push inflation</p>
Government	<p>Govt may gain revenue should they impose tariffs on imports</p>	<p>Greater expenditure by govt to negate negative impact of contagion effect</p>
Firms	<p>Diversion of resources to innovation and R&D to improve from advertising → improves costs efficiency, dynamic</p>	<p>Fall in TR and increase in TC from inability to harness internal EOS → fall in profits</p> <p>Persistent subnormal profits may</p>

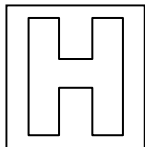
	<p>efficiency Consolidation of market → inefficient will shut down and exit industry → efficient firms will be able to harness greater market share → transition of market structure could be possible Merging of firms to harness greater internal EOS → lowers costs of production to maintain profit levels</p>	<p>cause firm to shutdown → cite shutdown conditions</p>
Workers	<p>Greater labour mobility will allow displaced labour to seek employment in other countries Workers may be able to secure higher wages in countries which are experiencing economic growth</p>	<p>Increase in demand deficient unemployment/cyclical unemployment Greater competition for jobs particularly from labours displaced from cyclical unemployment from trade partners</p>
Consumers/ household	<p>Fall in production could reduce negative externality incur on households → nmSOL improves</p>	<p>SOL worsens → erosion of purchasing power, due to loss of income from retrenchment/rising price levels → mSOL worsens, greater stress to search for jobs → nmSOL worsens</p> <p>Income disparity may widens → owners of factors of production will weather the recession better than workers</p>

Conclusion

Globalisation is, without a doubt, a double edge sword. It will bestow benefits as well as costs to any and every economies. Yet, to mitigate these costs, governments have to acknowledge protectionism should always be employed as a short run stance to buy time for their economies to adjust to changes. The true solution to the perils of globalization, ironically, is to further embrace globalization and establish more trade ties with different economies to diversify the risks. Even so, trade theories may not always deliver their promised fruits and the government should always the long run development of their countries, but of course, not at the expense of current woes.

Mark Scheme:

Level of Response	Descriptor	Marks
L3	<p>For a rigorous and well-developed answer that use economic analysis to compare between benefits and costs of globalization across all 5 stakeholders, with insights to different type of economies, time period analysis and different level of technology.</p> <p>Note: To score full marks, students must span across all 5 stakeholders.</p> <p>OR</p> <p>For a well-developed answer that provides the comparison of the costs and benefits of globalization and how countries can strive to reap more benefits.</p>	15-21
L2	<p>Theoretical explanation about the benefits and costs of globalization on the 5 stakeholders.</p> <p>A well-developed but <u>one-sided explanation</u> that focuses on either the benefits or the costs of globalization on some of the stakeholders [LL2: 10-12 m]</p>	10-14
L1	For an answer that merely list the different impacts of globalization on the stakeholders.	1-9
Evaluation		
E2	Well-presented and evaluative conclusion.	3-4
E1	Brief or vague conclusion that contains unjustified evaluations.	1-2



TEMASEK JUNIOR COLLEGE
JC2 Preliminary Examinations 2015
General Certificate of Education Advanced Level
Higher 1

ECONOMICS

Paper 1

8819/01

Wednesday 2 September 2015
3 hours

Additional Materials: Answer Paper

READ THESE INSTRUCTIONS FIRST

Write your Centre number, index number, CG and name on all the work you hand in.

Write in dark blue or black pen.

You may use a HB pencil for any diagrams or graphs.

Do not use staples, paper clips, glue or correction fluid.

Hand in your answer scripts to each question separately.

Do NOT turn over this page until you are told to do so.

Answer **all** questions.

Begin each question on a fresh sheet of paper.

At the end of the examination, fasten each question separately and securely together.

The number of marks is given in brackets [] at the end of each question or part question.

This document consists of **8** printed pages

Section A

Answer **all** questions in this section.

Question 1

Singapore's Transportation System

Table 1: Top 3 most important public transport attributes¹

	2011	2012	2013	2014
1)	Travel Time	Travel Time	Travel Time	Travel Time
2)	Waiting Time	Safety / Security	Waiting Time	Safety / Security
3)	Reliability	Waiting Time	Reliability	Waiting Time

Source: Land Transport Authority, Singapore

Table 2: COE Prices in Singapore (Category A Yearly Average)

2009	2010	2011	2012	2013
\$11,600	\$30,405	\$48,206	\$63,898	\$74,690

Source: Land Transport Authority, Singapore

Extract 1: Singapore reveals 3 economic solutions to traffic congestion for Asian peers

Traffic congestion reduces a country's potential for creating prosperity. Singapore identified this early in the piece and was able to create an effective system of incentives and constraints so traffic wasn't a hindrance to economic growth.

It's always a shock when people first hear about how much it'll cost to get behind the wheel of a brand new Honda Jazz in Singapore. After hitting a low of S\$3,864 in March 2011 the Certificate of Entitlement (COE) for a new car will now set you back over S\$70,000. When you add on the additional registration fee, the level of which ratchets up to 180 per cent of the Open Market Value of the vehicle, you end up paying 2-3 times the regular price of the car.

By increasing the price of vehicles, the COE system restricts the amount of people that want or are able to buy a car. Twice a month, the Singapore Land Transport Authority runs an auction process for the available COEs. The amount of COEs is determined by a quota system.

Further to the quota system and additional registration fees that new car owners need to pay, there's also the Electronic Road Pricing (ERP) system that incentivises drivers to avoid certain areas at peak times. Costing about the same as a cup of coffee, passing underneath an ERP gantry can cost a normal car up to S\$5 during peak hours. If drivers aren't in a rush they'll think twice before turning down a road that could lead them to an ERP gantry.

Source: Singapore Business Review, 24 July 2013

¹ Land Transport Authority (LTA) has conducted the Public Transport Customer Satisfaction Survey since 2006. The annual survey measures regular commuters' satisfaction with Singapore's mass public transport services, namely bus and Mass Rapid Transit (MRT) services.

Extract 2: Fare regulation framework

Public bus and train services are provided on a commercial basis, within the maximum fares approved by Public Transport Council (PTC). The Government does not provide direct subsidies for public transport operations.

To keep public transport fares affordable to the general public, public transport infrastructures such as MRT/LRT lines and bus interchanges are funded entirely by the Government. In addition, public buses are also exempted from COE payments. The Government also pays for the development and software cost of the contactless smartcard system. Therefore, bus and train operators are only responsible for operations, maintenance costs and investments in service improvements.

In regulating bus and train fares, the PTC carries out its statutory mandate to safeguard public interest by keeping fares affordable while ensuring the long-term financial viability of the public transport operators.

Source: Public Transport Council, Singapore

Extract 3: Despite push for public transport, a love for cars endures

Marketing consultant Walter Lim, 44, scrapped his Nissan Sunny less than three weeks ago. For the first time in about 16 years, he is without his own set of wheels, and he now takes public transport with his wife and 11-year-old son. His reason for the change in lifestyle? The marginal utility derived from owning a car no longer matched the price he was paying, said Mr Lim matter-of-factly. He was forking out S\$4,700 a year as his car neared the end of its 10-year COE cycle.

Like Mr Lim, more people here have been giving up their cars in recent years. Based on the latest statistics from the Land Transport Authority, as of last month, the number of cars on the road was 589,615 — down from 604,633 a year ago and the peak of 607,292 in 2013 — and the lowest since the end of 2010, when the figure was 584,399.

Meanwhile, public transport ridership has been growing steadily. It went up last year by 4.6 per cent to hit a record 6.65 million trips per day, and its mode share grew to 66 per cent, up from 64 per cent in 2013.

The Government has invested huge amounts of money to improve public transport as it seeks to wean Singaporeans off their cars. There will be 99 new trains by 2019, and 450 new buses by 2017 — on top of the 550 already added in recent years. By 2030, there will be new rail lines, more covered walkways, and a 700km cycling network.

Non-constituency Member of Parliament Gerald Giam, 38, in a Facebook post last month said that he had given up his car. He told TODAY that he did so after the COE for his second-hand 2005 Toyota Corolla Altis expired. With the duration of his journeys now two to three times longer compared to when he drove, Mr Giam said that advance planning is essential before he and his family leave home.

But people like Mr Lim and Mr Giam are the exception, not the norm. Transport analysts noted that Singaporeans' soft spot for automobiles is tough to eradicate.

Source: Adapted from: Today, Singapore, 17 July 2015

Questions

- (a) Explain whether public transport in Singapore is a public good. [4]
- (b) Using a diagram, explain why there is need for the government to intervene in the market for private transport in Singapore. [6]
- (c) (i) Using Table 2, describe the trend in COE prices. [2]
- (ii) Analyse the impact of the above trend in COE prices on the market for public transport. [4]
- (d) (i) Explain how the price elasticity of demand of private transport affects the usefulness of the anti-traffic congestion policies mentioned in Extract 1. [6]
- (ii) Assess which factors are more important in influencing the extent of the price elasticity of demand for private transport in Singapore. [8]

[Total: 30]

Question 2

Growth and Debt

Extract 1: Developed economies take lead in growth

The global economy's jagged recovery inched forward in 2013, with fast-growing emerging markets losing pace while developed nations gained strength.

The 2013 performance reflected something of a role reversal among the players. After years of notching far slower growth than many emerging-market counterparts, some leading economies are at last showing strength. The global snapshot also reveals the far-flung effects of monetary policy, as decisions by central bankers in developed nations reverberated through emerging markets.

In 2013, central banks in the U.S., Japan and Europe showered money on their economies, held interest rates low and promised to continue to do so in a bid to animate a recovery that remains tepid almost five years after the worst recession since the Great Depression. In emerging markets such as Brazil and India, domestic demand softened and exports sagged as rates were boosted to stem inflation.

The combination of fast-growing economies slowing slightly while the developed world picks up the pace sets the stage for "synchronized growth," in 2014, said Tu Packard, senior economist at Moody's Analytics. That means, she said, that "demand from developed markets will support developing-market growth, and they will support each other."

Source: Wall Street Journal, 30 Dec 2013

Extract 2: Global inflation slowing further

Despite the massive monetary easing by major central banks, inflation remains tame worldwide, partly reflecting large output gaps and high unemployment. Global inflation is projected to moderate further to 2.6 per cent in 2013, down from 2.9 per cent in 2012. This decline mainly results from somewhat lower inflation in the United States and Europe in the face of subdued demand, continued high unemployment and contained energy and food prices.

Average inflation in the developing economies, by contrast, will increase slightly from 5.4 per cent in 2012 to 5.6 per cent in 2013. This increase will stem from both cyclical factors, including a pick-up in demand in parts of East Asia and Latin America and the Caribbean, and one-off policy measures such as lower fuel subsidies and higher minimum wages.

Various economies, especially in South Asia and Africa, will continue to face high inflation rates, mainly owing to elevated inflationary expectations, rapid credit growth and structural bottlenecks such as energy shortages. In 2014, global inflationary pressures are expected to remain mild even as economic activity, particularly in developed countries, strengthens. Most developing regions are likely to see a moderate decline in inflation as international commodity prices ease.

Source: UN World Economic Situation and Prospect 2013

Table 1: Selected data of US budget and debt positions

	2008	2009	2010	2011	2012	2013
Revenue (Trillion)	4.7	3.7	4.7	5.1	4.9	5.6
Spending (Trillion)	5.3	6.0	5.9	6.1	6.1	6.0
Debt to GDP ratio	64.8	76	87.1	95.2	99.4	100.83

Source: US Department of Treasury

Extract 3: Bad fiscal policy

The IMF minced no words with regard to U.S. fiscal policy: "the deficit reduction in 2013 has been excessively rapid and ill-designed," while praising the Federal Reserve for "appropriately" continuing to add stimulus to the economy even as signs of gradual recovery have begun to appear, although monetary policymakers should continue to prepare for an exit. In particular, the self-imposed, automatic across-the-board spending cuts ("sequester") not only reduce growth in the short term, but indiscriminate reductions in education, science, and infrastructure spending, if protracted, could also reduce long term potential growth. The slower pace of deficit reduction would help the recovery at a time when monetary policy has limited room to support it further.

"Adopting a more balanced and gradual pace of fiscal consolidation would help global growth in the short run," the report said. And it stressed that among other benefits, this revised fiscal policy would "partly relieve monetary policy of its burden of supporting the recovery, reducing the risks to U.S. and global financial stability from a prolonged period of low interest rates."

Revenue collections are estimated to increase to about 2½ percent of GDP this year, from 1¼ percent in 2012 partly due to higher marginal rates for upper-income taxpayers and the expiration of the payroll tax cut.

Source: Marketnews.com, 14 June 2013

Extract 4: To print or not to print

You can hardly turn on the television these days without hearing a politician or pundit warning the American public that we'll "end up like Greece" if the federal government doesn't get its fiscal house in order soon. And it's true that we don't want to end up like Greece: The global financial crisis caused its already-problematic debt to soar; financial markets began demanding higher and higher interest rates to fund that debt; which in turn undermined the economy further, again causing deficits to rise.

But let's take a step back and recognize that, for several reasons, the U.S. is in a dramatically different economic position than Greece.

Perhaps the most important difference between the two countries is that the U.S. prints its own currency, meaning it can essentially create money out of thin air. If our creditors demand we repay them, we can just print dollars. By contrast, when Greece borrows money, it borrows Euros, a currency over which it has no control. That's not to say the U.S. doesn't need to worry about its debt. For developed economies that print their own currencies — like the U.S., the U.K., and Japan — the risk is not outright default, but runaway inflation. In other words, if we have to resort to the printing press to pay our debts, this may cause the supply of dollars to outstrip demand for them, and the value of our currency to plummet.

Source: Time.com, 01 Mar 2013

Extract 5: Paying with the future

Political dysfunction in Washington has led to the American public being barraged by continuous media reports about the fiscal deficit, the massive public debt, and the sequester. But the political skirmishes and impasses around these short-term events are distracting us from the real danger ahead: Our reckless fiscal trajectory that threatens America's competitiveness.

The nation's reported debt has almost tripled — to over \$16.6 trillion — just since 2000, and the interest on this debt will be paid every year into the future. Bill Clinton observed in 1992 that the government is “spending more on the present and the past, and building less for the future.” Yet during the past 20 years this problem has gotten far worse. Paying for interest on the public debt and meeting our unfunded obligations and promises will drive mandatory governmental spending to unsustainable levels.

Economist Paul Krugman and others argue that the government should take advantage of today's very low interest rates to borrow to stimulate our current economy since the risk of crowding out private investment is negligible. But their analysis ignores the balance sheet effects of borrowing to pay for today's consumption. Every trillion dollars we borrow today will require much higher mandatory interest payments when the debt is inevitably refinanced in the future. This will worsen future government's ability to invest for competitiveness and higher living standards.

Source: Fortune, 11 Apr 2013

Questions

- (a) (i) Define stagflation. [1]
- (ii) With reference to data, comment on the evidence of stagflation for developing countries. [3]
- (b) Explain what the author of Extract 1 means by “synchronized growth” and the policies that had “set the stage” for such growth to be achieved. [4]
- (c) Identify and explain **one** demand and **one** supply factor in Extract 2 that might affect inflation. [4]
- (d) Based on the data, discuss the effectiveness of expansionary fiscal and monetary policies in facilitating the recovery of the US economy. [8]
- (e) Discuss the justifications for implementing the ‘sequester’ and the likely effects on the world economy. [10]

[Total: 30]

Section B

Answer **one** question from this section

- 3 (a) Explain how scarcity is managed in a free market when consumers and producers aim to maximise their own welfare. [10]
- (b) Discuss the need for the government to always intervene to ensure efficient resource allocation. [15]
- 4 (a) Explain how a small and open economy could encounter trade-offs in its economic objectives. [10]
- (b) Comment on whether the policies employed by the Singapore government to counter these trade-offs are effective in achieving their intended outcomes. [15]

2015 TJC JC2 Economics Prelim H1 CSQ1 Suggested Answer

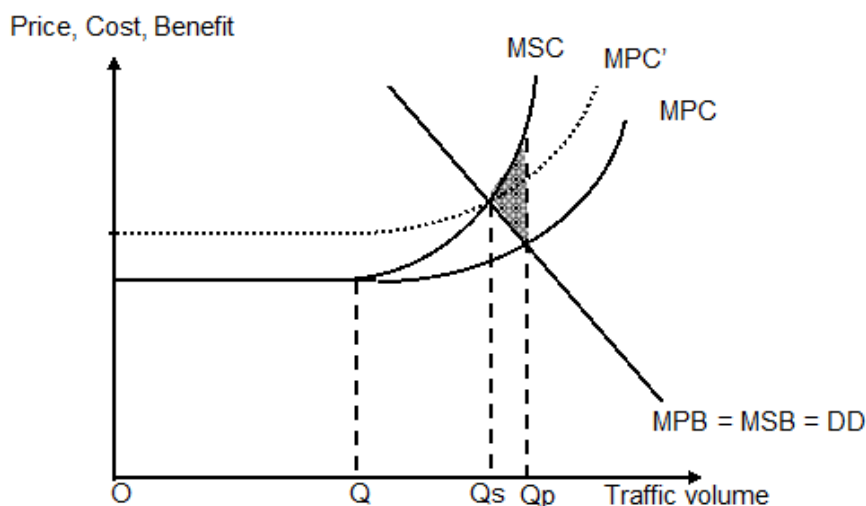
(a) Explain whether public transport in Singapore is a public good. [4]

- A public good is a good which is non-excludable and non-rival in consumption [1]
- Public transport is excludable because commuters who do not pay for the train or bus fares can be prevented from boarding the train or asked by the bus driver to disembark [1]
- Public transport is also rival in consumption as a commuter who boards a bus or train may deprive another commuter of a seat or space to board. [1]
- Since public transport is both excludable and rival in consumption, it is not a public good but a private good. [1]

(An answer which looks at public transport as being a quasi-public good because it is excludable but possibly non-rival in consumption before congestion sets in i.e. when all the seats or space has been taken up, is also acceptable)

(b) Using a diagram, explain why there is need for the government to intervene in the market for private transportation in Singapore. [6]

- The consumption of private transportation in Singapore generates negative externalities in the form of traffic congestion, which refer to the adverse spillover effects imposed on third parties from the production or consumption of a good.
- When a person drives his car during peak periods on a busy road, he slows down traffic and causes delay to other road users. The cost of such delays is then borne by third parties like their employers as their workers turn up late for work and the delivery of their goods are delayed.
- As traffic congestion disrupts economic activity hence adversely effects economic growth, curbing such congestion “could reduce a country’s potential for creating prosperity” (extract 1)



- In the above diagram, there are no traffic jams and hence no external

- costs generated up to OQ. Thus MPC and MSC are identical.
- Beyond OQ, congestion sets in and worsens, so the MPC for each driver rises as he wastes increasingly more time and fuel being stuck in a worsening traffic jam.
 - With increasing delays imposed on employers and businesses, MEC also rises, causing the MSC to diverge more and more from the MPC.
 - Assuming that there are no positive externalities or merit good effects, the demand curve DD which is also the marginal private benefit (MPB) curve will be equal to the marginal social benefit (MSB) curve.
 - Without intervention, the free market traffic volume is Q_p where $MPB = MPC$, while the socially efficient outcome where $MSB = MSC$ is at Q_s .
 - From Q_s to Q_p , as $MSC > MSB$, the deadweight loss of the shaded area is generated.
 - Since $Q_p > Q_s$, the road is over consumed so there is a need for the government to intervene to reduce the traffic congestion

L1: Identify the relevant source of market failure. [1]

L2: Explain how private transportation generates negative externalities [2-3]

L3: Analyse how negative externalities lead to market failure [4-6]

Full marks will also be awarded for candidates who utilise generic negative externalities diagram.

(c) (i) Using Table 2, describe the trend in COE prices. [2]

COE prices are generally increasing [1] at a decreasing rate [1].

(ii) Analyse the impact of the above trend in COE prices on the market for public transport. [4]

- Rising COE prices translate to higher car prices and thus higher cost of private car ownership. As public and private transport are substitutes, rising cost of private car ownership should raise the demand for public transport, thus causing public transport fares and volume to rise [2]
- However, as fares are regulated by the Public Transport Council (extract 2), public transport fares may remain unchanged. [1]
- Also, as car ownership is directly limited by the COE quota, rising COE and thus car prices may have no impact on the demand for public transport. [1]

Candidates with correct application of elasticity concepts will be awarded one bonus mark.

(d) (i) Explain how the price elasticity of demand of private transport affects the usefulness of the anti-traffic congestion policies mentioned in Extract 1 [6]

- The policies mentioned in extract 1 are the COE and ERP.
- Price elasticity of demand (PED) refers to the responsiveness of quantity demanded when the price of the good changes.
- The higher the magnitude of PED, the flatter the demand curve.

- For a given tax imposed, the flatter the demand curve the greater the fall in the quantity demanded.
- Since ERP is like a tax on road usage, the higher the PED for private transport, the greater the fall in use of private transport, hence the greater the reduction in traffic congestion.
- A higher PED thus makes a policy like ERP more effective.

- The COE system is actually a quota that is being placed on the amount of new cars being sold
- For a given reduction in the COE quota, the higher the PED the smaller the rise in COE prices, the less politically unpopular the policy will be.
- Hence a higher PED makes a policy like the COE quota system more politically acceptable.

L1: Define PED and identify the relevant policies. [1-2]

L2: Explain how the PED of private transport affects the usefulness of ERP. [3-4]

L3: Analyse how the PED of private transport affects the usefulness of COE. [5-6]

(ii) Assess which factors are more important in influencing the extent of the price elasticity of demand for private transport in Singapore [8]

Question interpretation

- What are the factors affecting PED?
- How do these factors affect the size of the PED?
- Which factors are more important in influencing the extent of the PED of private transport in Singapore?

Introduction

- The factors affecting PED are the availability and/or closeness of substitutes, the degree of necessity and the time period.
- The answer aims to explain these factors before analysing how they influence the PED of private transport.
- It concludes by assessing the relative importance of these factors.

Availability and/or closeness of substitutes

- The higher the availability and/or closeness of substitutes, the more price elastic is the demand.
- By making public transport more frequent and comfortable with introduction of 450 new buses and 99 new trains (extract 3), this causes public transport to become a closer substitute to private transport, thus enabling the demand for private transport to become more price elastic.

Degree of necessity

- The higher the degree of necessity, the lower the price elasticity of demand.
- By expanding the public transport network (extract 4) to cover areas which were previously less accessible by public transport, this reduces the necessity of using private transport to travel to such places, thus making the demand for private transport more price elastic.

Time period

- The price elasticity of demand generally increases with time because it takes time for buyers to recognise and respond to a price change.
- Should the cost of owning or running a car rise, it will still take time for people to make the switch to taking public transport because existing car owners in Singapore like Mr Walter Lim and Mr Giam (extract 4) tend to wait for their existing COE to expire before they decide to stop driving.

Conclusion (relative importance of the factors)

- Table 1 shows that public transport users consistently rank travel time above waiting time as an attribute of public transport.
- This suggests that reducing the necessity of private transport is arguably more important than improving its substitutability.
- Nevertheless, as extract 3 suggests that it may take a long time for higher COE and ERP prices to take effect, time period could arguably be the most important factor determining the PED of private transport in Singapore.

L1: Identify the factors affecting PED [1]

L2: Explain these factors affecting PED [2-3]

L3: Analyse how these factors affect the PED of private transport in Singapore [4-6]

E: Evaluate the relative importance of these factors in determining the PED of private transport in Singapore [+2]

Suggested Answers

(a)(i) Define Stagflation [1]

- Stagflation refers to the situation where the economy is facing rising inflation and slowing growth and/or rising unemployment.

Or

- Stagflation refers to the situation where the economy is facing high inflation and low growth and/or high unemployment.

(ii) With reference to data, comment on the evidence of stagflation for developing countries. [3]

Evidence from the case (any one of the following to score the first two marks)

- Evidence from extract 1 suggests that growth in developing countries may be slowing down. Signs such as ‘fast-growing emerging markets losing pace’ and ‘fast-growing economies slowing slightly’ provide prima facie evidence of slowing growth. Evidence from extract 2 suggests rising inflation from developing countries. Signs include ‘average inflation rising from 5.4 to 5.6 per cent’ and ‘high inflation, especially in South Asia and Africa.’ [2]
- Extract 2 mentions that average inflation in the developing economies will increase slightly from 5.4 per cent in 2012 to 5.6 per cent in 2013 partly due policy measures such as lower fuel subsidies and higher minimum wages. As these causes of inflation are cost push in nature, this provides evidence of stagflation [2]
- Extract 2 mentions that various economies, especially in South Asia and Africa, will continue to face high inflation rates partly due to structural bottlenecks such as energy shortages. As these causes of inflation are cost push in nature, this provides evidence of stagflation [2]

Since the command word is ‘comment’ and not ‘explain’, there needs to be a comment on the extent of the evidence to score the 3rd mark e.g.

- However, more data such as actual growth rate or unemployment rate is required to make a more accurate judgment on whether there was indeed stagflation. [1]

(b) Explain what the author of extract 1 means by “synchronized growth” and the policies that had “set the stage” for such growth to be achieved. [4]

- According to extract 1 “synchronized growth” “means that the demand from developed markets will support developing-market growth, and they will support each other.” What this means is higher growth in developed countries generates more income for them to purchase imports from developing countries. This raises the growth and income of developing countries which then enables them to buy more imports from the developed countries. Since their growths are mutually reinforcing, they are therefore synchronized [2]
- According to extract 1, central banks in the U.S., Japan and Europe showered money on their economies, held interest rates low and promised to continue to do so in a bid to animate a recovery. This suggests that these developed countries engaged in

expansionary monetary policy to stimulate consumption, investment and hence AD, thus causing their output, income and hence demand for imports from the developing countries to rise [2]

(c) Identify and explain one demand and one supply factor in Extract 2 that might affect inflation. [4]

- Demand factor: Continued high unemployment in developed countries implies that demand is not yet high enough to ensure employment of workers. This suggests that demand-pull inflation is unlikely. [2m]
- Supply factor: Easing of international commodity prices may reduce cost of production for countries that needs to import raw materials. This reduced cost-push inflation. [2m]

(Other demand such as rapid credit growth, elevated inflationary expectations and supply factors such as higher minimum wage, lower fuel subsidies are also acceptable)

(d) Based on the data, discuss the effectiveness of expansionary fiscal and monetary policies in facilitating the recovery of the US economy? [8]

Question interpretation

- What is meant by expansionary fiscal and monetary policies?
- How do these policies work?
- What are the limitations of these policies?
- How effective are these policies in facilitating the US economic recover?

Introduction

- As the US was facing an economic downturn since the 2008/2009 financial crisis, both expansionary monetary and fiscal policies were used to stimulate the economy in order to generate an economic recovery.
- The budget deficits in Table 1 suggests the use of expansionary fiscal policy while the terms “showered money” and “held interest rates low” in extract 1 suggests that the use of expansionary monetary policy

How can these policies be used to stimulate the US economy?

- Expansionary fiscal policy refers to deliberate increases in government spending (G) and reduction in direct taxation (T) in order to boost aggregate demand (AD)
- Raising G provides a direct boost to AD while lowering T causes AD to rise by stimulating consumption (C) and investments (I)
- Expansionary monetary policy refers to the deliberate lowering of interest rates in order to boost AD via stimulating I and C from borrowing by firms and households respectively
- A rise in AD along the horizontal or upward sloping portion of the AS curve (i.e. there exists spare capacity) causes real output and employment to rise
- Subsequently, AD, output and income rises further due to subsequent rounds of diminishing rises in income induced consumption caused by the multiplier effect

How effective have these policies been for the US economy?

- Although extract 1 suggests some signs of a recovery, this was challenged by extract 2 where ‘large output gaps and high unemployment are still wide-spread’.

- This suggests that the effectiveness of monetary policy was limited, possibly due to poor economic outlook blunting firms and households desire to borrow, hence causing investment and consumption to be interest insensitive
- This is further strengthened by Extract 3 which states that 'monetary policy has limited room' to support growth further, which suggests that US could be facing a liquidity trap, which occurs when interest rates are already so low that any further rate reductions become meaningless.
- Similarly, the lack of strong and decisive economic recovery seems to also suggest that the effectiveness of expansionary fiscal policy was limited.
- The size of US multiplier and crowding out are both unlikely reasons to explain the ineffectiveness of expansionary fiscal policies. This is supported by extract 5 where the low interest rates environment negates the risk of crowding out.
- The ineffectiveness could therefore be attributed to bleak economic outlook that blunts the effectiveness of the payroll tax cuts mentioned in extract 3 to stimulate household spending. The high unemployment mentioned by in extract 2 also reduces the effect of cutting taxes. There could also be long time lags needed for fiscal policy to take effect and also the high and increasing level of US government debt (table 1) constraining its ability to spend even more that what has already been done.

Conclusion

- Although both policies were arguably ineffective in facilitating a recovery, extract 3 suggests that these policies probably helped to curb the worsening of the recession. In other words, the recession would be much worse if the policies were not implemented.
- Despite implementing the sequester in 2013 (extract 1), resulting in the smallest budget deficit over the last few years (table 1), 'developed nations (including the US) gained strength' during that time period (extract 1), implying that monetary policy was more effective than fiscal policy in aiding economic recovery.
- Extract 3 highlighted the importance of the role of fiscal policy when it suggest reducing the rate of deficit cuts would help with economic recovery when liquidity trap has set in. This implies that perhaps fiscal policy in terms of government spending can still maintain a role amid the bleak economic outlook to kick-start the recovery.

L1: Define expansionary monetary and fiscal policies [1]

L2: Explain how these policies work and their limitations [2-4]

L3: Analyze the effectiveness of these policies using case data [5-7]

E: Evaluate the overall effectiveness of these policies in facilitating the US economic recovery [+1]

(e) Discuss the justifications for implementing the 'sequester' and the likely effects on the world economy. [10]

Question interpretation

- What is the 'sequester'?
- What are the arguments for and against implementing the 'sequester'?
- What are the likely effects of implementing the 'sequester' on the US and world economy?

Introduction

- The 'sequester' is a form of automatic spending cuts that that is self-imposed to reduce the massive amount of debt accumulated by the US govt.

- The answer aims to explain the arguments for and against implementing the ‘sequester’ before analyzing and evaluating the likely effects on the US and world economy.

Arguments for implementing the ‘sequester’

- From table 1, US debt to GDP ratio has been rising and by 2013 it has exceeded 100%
- By reducing the level of debt, it prevents the US government from falling into a debt trap where debt gets bigger due to the higher interest needed to secure more borrowings (like Greece mentioned in extract 4)
- If the debt is held by foreigners, the greater interest payment in the future means “building less for the future” and “worsen government ability to invest for competitiveness and higher living standards” (extract 5) in the future
- If the debt is not reduced and becomes unsustainable, a stage will come when no one will be willing lend to the US government anymore as they will doubt its ability to pay them back

Arguments against implementing the ‘sequester’

- However, extract 5 suggested increasing borrowing since risk of crowding out private investment is negligible in the current pessimistic climate.
- Furthermore, unlike Greece, which has to borrow in Euro but has no ability to print it, the US can always resort to printing US\$ to finance its debt (extract 4) so it does not necessary have to engage in such drastic austerity measures
- Nevertheless if the US government were to resort to monetizing their debt, the main worry is that this could eventually lead to ‘runaway inflation’ (extract 4).

What are the likely effects on the world economy?

- As the sequester originates from the US, we first analyse the effect it has on the US before the implications on the rest of the world.
- The effect on the US in the short term is a weakening of a stimulus to growth amid a situation where recovery is still weak. This would reduce the rate of recovery and may even cause growth to become negative.
- Given that interest rates at already at zero hence “monetary policy has limited room to support” growth (extract 3) the impact of the sequester on US growth is likely to be quite adverse in the short run
- In the long-run, “indiscriminate reductions in education, science, and infrastructure” (extract 3) will arguably reduce US growth even further as such spending reduction if protracted will inevitably hamper the growth in country’s productive capacity
- For the world economy, the uncertainty caused by US’s sequester is likely slow down and prolong global economic recovery. This is especially so when extract 1 suggests that growth in fast-growing developing countries showed signs of slowing down.
- As these are the economies that supported the developed countries during the recession of 2008, the world economy might be facing another downturn after a brief recovery.
- However, for some developing countries, the slowdown in the US might bring some relief from inflation as extract 1 shows evidence of overheating in these countries e.g.
 - In emerging markets such as Brazil and India, domestic demand softened and exports sagged as rates were boosted to stem inflation.
 - Cyclical factors, including a pick-up in demand in parts of East Asia and Latin America and the Caribbean
 - Various economies, especially in South Asia and Africa, will continue to face high inflation rates, mainly owing to elevated inflationary expectations, rapid credit growth

Conclusion

- Overall, the effect of the 'sequester' on the US economy seem undoubtedly adverse while the impact on the world economy is arguably mixed as the current economic conditions differ from country to country.

L1: Recognize the meaning of the sequester [1]

L2: Explain whether the sequester was justified [2-5]

L3: Analyze the possible effects on US and the global economy [6-8]

E: Evaluate the likely effects on these economies. [+2]

(a) Explain how scarcity is managed in a free market when consumers and producer aim to maximise their own welfare. (10)

Question interpretation

- What is the problem of scarcity?
- How does consumer and producer maximise their own welfare?
- How does individual welfare maximisation create market forces?
- How are resources allocated by the market forces in a perfectly competitive free market?

Introduction

- The problem of scarcity arises because society's wants are unlimited but resources are limited.
- Since resources are scarce, the goods produced by resources are also scarce
- In a free market where consumers and producers aim to maximise their own welfare, the resulting market forces of demand and supply enables such scarce goods to be allocated.
- This essay aims to explain how welfare maximisation by consumers and producers create the market forces of demand and supply before analysing how such market forces enable scarce goods to be allocated in a perfectly competitive free market.

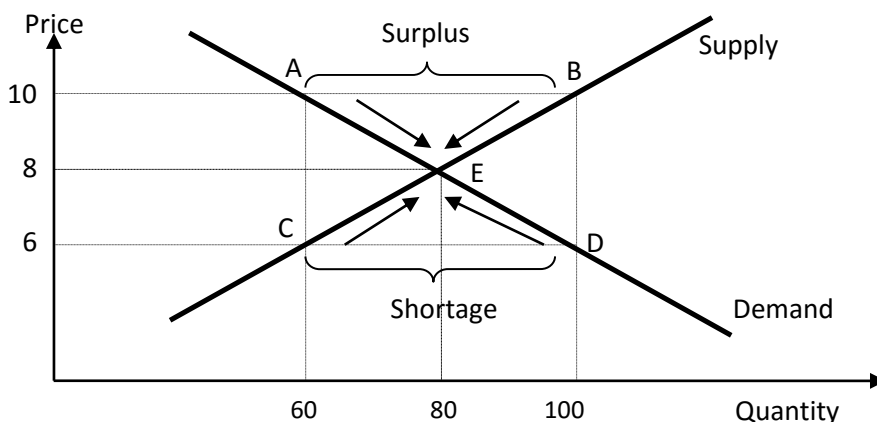
How does welfare maximisation by consumers create demand?

- A consumer seeks to maximize his satisfaction derived from the consumption of a good
- To maximise his welfare, the consumer will buy an additional unit of a good as long as the value of the expected satisfaction derived is greater than the price
- However, due to diminishing marginal utility, the satisfaction derived from buying and consuming each successive unit of a good decreases
- Hence when the price of a good decreases, the consumer will buy more units of the good, so there is an inverse relationship between price and quantity demanded
- This explains why the demand curve of an individual consumer is downward sloping

How does welfare maximisation by producer create supply?

- The producer seeks to maximize his welfare by maximising profits.
- The producer maximizes profit by selling an additional unit of a good when the price that can be earned is higher than the marginal cost of producing that unit
- Due to diminishing returns, where the output derived from employing the additional unit of the variable factor falls, marginal cost will rise with output
- Hence, when the price of a good increases, the new price now exceeds marginal costs so the producer increases profits by producing and selling more units
- There is thus a positive relationship between price and quantity supplied which explains why the supply curve of an individual producer is upward sloping

How do market forces allocate scarce resources?



- The market demand curve is the horizontal summation of the individual demand curve while the market supply curve is the horizontal summation of the individual supply curve
- In a perfectly competitive free market, the market equilibrium is achieved at the point where the market demand & supply curves intersect, such that quantity demanded is equal quantity supplied
- If the current price is \$10, the quantity supplied is 100 units while the quantity demanded is 60 units resulting in a surplus of 40 units
- To clear this surplus, suppliers will lower prices until the equilibrium price of \$8 is achieved such that quantity demanded rises from 60 to 80 units while quantity supplied falls from 100 to 80 units
- Conversely, if the price is \$6, the quantity supplied is 60 units while the quantity demanded is 100 units resulting in a shortage of 40 units
- To meet the shortage, suppliers will raise prices until the equilibrium price of \$8 is achieved such that quantity demanded falls from 100 to 80 units while quantity supplied rises 60 to 80 units
- In conclusion, consumers' and producers' attempts at maximising their own welfare create the market forces that enable the price of a scarce good to adjust such that it can be allocated from producers to consumers

L1: Define scarcity and/or the free market [1]

L2: Explain how welfare maximisation by consumers and producers create market forces [2-5]

L3: Analyse how the free market enables a scarce good to be allocated [6-10]

(b) Discuss the need for the government to always intervene to ensure efficient resource allocation. [15]

Question interpretation

- What is efficiency?
- When is the free market efficient and when is it inefficient?
- How can government intervention improve efficiency and how may it worsen efficiency instead?
- Is government intervention always necessary to enable efficient resource allocation?

Introduction

- Allocative efficiency arises when resources are allocated in a way which enables society's welfare to be maximized.
- While the absence of market failure enables the free market to achieve allocative efficiency, the presence of market failure instead causes allocative inefficiency to arise
- Even though, government intervention to manage such market failures can enable allocative efficiency to be restored, the possibility of government failure nevertheless exists.
- The essay aims to first explain how free markets can result in both efficient and inefficient outcomes, before analysing how government intervention can also be efficient or inefficient.
- It concludes by evaluating whether government intervention **is** always necessary for efficient resource allocation to occur.

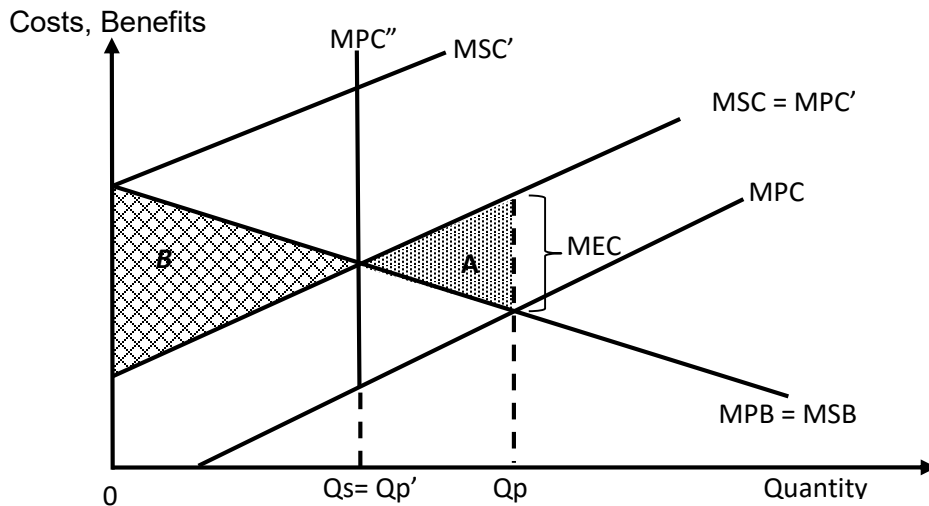
When will the free market be allocatively efficient?

- Allocative efficiency is achieved at an output Q_s where marginal social costs (MSC) is equal to the marginal social benefit (MSB)
- For any output below Q_s , there is potential welfare to be gained as $MSB > MSC$, so society's welfare can be increased if more of the good is produced and consumed
- For any output above Q_s , there is negative welfare generated as $MSB < MSC$, so society's welfare can be increased if less of the good is produced and consumed

- In the absence of market failure, the marginal private costs (MPC) is equal to the marginal social costs (MSC) and the marginal private benefit (MPB) is equal to the marginal social benefit (MSB)
- The free market will produce and consume at Q_p where $MPB = MPC$, which also coincides with Q_s where $MSB = MSC$, hence the market is allocatively efficient.

When will the free market be allocatively inefficient?

- As there are many sources of market failures, the essay aim to illustrate how market failure can arise from the existence of negative externalities
- Negative externalities refer to the adverse effects imposed on 3rd parties from the production or consumption of a good, where 3rd parties refer to those not directly involved in the good's transaction.
- For example when a steel plant emits toxic fumes into the air, the polluted air causes respiratory illness to those living nearby, who are the third parties as they do not transact in steel.



- Negative externalities cause MSC to exceed MPC by the marginal external cost (MEC).
- If we assume no positive externalities or merit good effects then $MPB = MSB$
- The private equilibrium quantity Q_p occurs where $MPB = MPC$ while the social equilibrium quantity Q_s occurs where $MSB = MSC$.
- Between Q_p and Q_s , $MSC > MSB$, so a deadweight loss of area **A** arises from the negative welfare generated, hence the free market is allocatively inefficient.

How can government intervention improve outcomes?

- If the government imposes a tax that is equal to MEC, this shifts MPC up to MPC' .
- The new private equilibrium quantity $Q_{p'}$ which occurs where $MPC' = MPB$, now coincides with the social equilibrium quantity Q_s , hence allocative efficiency is achieved.
- Alternatively, the government could impose a quota at $Q_{p'}$ which is equal to the socially optimum output of Q_s , thus causing the MPC to be perfectly inelastic at this output level i.e. MPC''
- In extreme cases where the negative externalities are so large such that the marginal social cost curve MSC' intersects the MSB at the vertical axis, then socially optimum output level is zero
- In this situation, it is socially optimal for the government to ban the production of the good where a ban is equivalent to setting the quota at output zero
- For example some countries ban the production of nuclear energy because of the potential extreme environmental devastation that could arise if there was a serious radiation leak

How can government intervention worsen outcomes?

- When the externalities are not that severe, banning the good might involve a greater welfare loss as compared to no intervention
- If the marginal social costs was at MSC (rather than MSC'), imposing a ban causes a welfare loss of shaded area **B** which is more than area **A**, the welfare loss generated by free market provision
- Since the post intervention outcome is worse than pre-intervention, government failure arises.

Conclusion

- The markets for most goods and services generally exhibit little or no market failure and government intervention in such markets is actually distortionary
- Even when there is significant market failure, due to imperfect information, governments may wrongly estimate the social cost or benefits, hence resulting in excessive intervention which can worsen rather than improve outcomes.
- **In reality government failure is not uncommon** as policy decisions are often influenced by not only economic but also social and political considerations.
- Hence I would argue that it is not always necessary for governments to intervene in markets for efficient allocation of resources to be achieved.

L1: Define allocative efficiency and a relevant type of market failure [1-2]

L2: Explain how free markets can result in efficient and inefficient outcomes [3-6]

L3: Analyse how government intervention can improve but also worsen resource allocation [7-11]

E: Evaluate whether such government intervention is always necessary to ensure efficient resource allocation [+4]

4(a) Explain how a small and open economy could encounter trade-offs in economic objectives. [10]

Question interpretation

- What are some possible economic trade-offs?
- How does the size and openness of the economy dictate the kind of trade-offs an economy faces?

Introduction

- Macroeconomic trade-offs refer to two desirable but necessarily incompatible aspects of the economy
- A small economy generally has a small domestic population and thus limited domestic demand, while a globalised economy is one which is highly reliant on trade and international factor flows.
- This essay aims to explore some of these trade-offs that are characteristic of a small and open economy.

Internal versus external stability

- A small and open economy is likely to manage its exchange rates to better regulate the impact of trade on the economy as it is likely to be both export and import dependent
- If the central bank undervalues exchange rate by selling its own currency in the forex market, this leads to an overall BOP surplus, which raises money supply, thus potentially causing demand-pull inflation.
- If the central bank overvalues the exchange rate by buying back its own currency in the forex market, this leads to an overall BOP deficit, which causes money supply to contract, thus potentially curbing aggregate demand, output and employment.
- Hence, maintaining external stability could result in greater internal instability.
- Alternatively, efforts to maintain internal stability could result in external instability.
- If a small and open economy tries to fight inflation by raising interest rates, in the absence of capital controls, hot money inflows leads to an appreciation of the exchange rate.
- This could erode export competitiveness, harm the country's exports, worsen the country's BOT and potentially lead to demand-deficient unemployment.
- On the flipside, if the country lowers interest rates to fight demand-deficient unemployment, hot money outflows leads to a depreciation of the exchange rate, hence bringing about imported inflation.

Long run growth versus macroeconomic stability

- A small and open economy is likely to rely on trade and foreign capital to drive its economic growth.
- Given its small domestic population and thus limited source of internal demand, a small open economy has to look outwards in order to sustain actual growth, both in the short and long term.
- However, as external sources of growth like exports or foreign capital can potentially be very volatile, higher economic growth often comes at the expense of greater macroeconomic stability
- Conversely, if a small open economy were to hedge itself against external macroeconomic risks by shifting towards a consumption driven growth model or an import-substitution industrialisation model, its long run growth would likely be lower.

Long run growth versus equity

- Reducing income inequality can be achieved by raising corporate taxes and making the personal income taxes more progressive
- However, raising corporate taxes discourages inflows of FDI and foreign portfolio investments, thus adversely affecting both the quantity and quality of investments.
- Making personal income taxes more progressive often involve raising tax rates on high income earners, which will not only deter the inflow high skilled labour but also drive local high skilled labour overseas
- Such reductions in the quality and quantity of capital and labour will adversely affect long-run growth.
- Conversely, attempts to raise long run growth by attracting FDI and foreign portfolio investments as well as foreign high skilled labour with lower and less progressive direct taxes will worsen income distribution.
- As a small open economy tends to be more dependent on foreign capital and labour, the trade-off between growth and equity is likely to be greater

Inflation and unemployment

- Achieving full employment requires the AD curve to rise up along the upward sloping portion of the AS curve, thus resulting in higher prices
- A larger rightward shift of the AD curve results in lower unemployment but also higher prices, hence there is a trade-off between inflation and unemployment (illustrate with a diagram).
- Compared to larger economies, smaller ones are likely to face more serious land and labour constraints, so factor prices will likely be bid up more quickly, thus causing the trade-off to be more severe.

Suggested Mark Scheme		
L1	Identify the macroeconomic trade-offs of the Singapore economy.	1
L2	Explain the macroeconomic trade-offs but in very general terms, without consideration of a small and open economy.	2 – 7
L3	Analyse the various trade-offs in the context of a small and open economy.	8 – 10

4(b) Comment on whether the policies employed by the Singapore government to counter these trade-offs are effective in achieving their intended outcomes. [15]

Question interpretation

- What are policies currently adopted by Singapore to deal with the possible economic trade-offs?
- How do these policies work to avoid or reduce these trade-offs?
- How effective have these policies been in avoiding or reducing these trade-offs?

Introduction

- The existence of economic trade-offs means that governments need to either choose policies which enable such trade-offs to be avoided or if not employ additional policies to mitigate the unintended consequences
- This essay thus aims to first analyse such policies that the Singapore government has employed before evaluating their effectiveness in achieving their intended outcomes

Internal versus external stability

- While attempting to achieve external stability by managing the exchange rate, MAS has to allow domestic interest rates to follow world interest rates because Singapore needs free international capital mobility to function as an international financial centre.
- With major economies like the US, the EU and Japan all having near zero interest rates, this has caused Singapore's interest rates to also be very low, thus resulting in a property market bubble and also higher inflation because of escalating COE prices
- The Singapore government has managed the resulting internal instability with property cooling measures e.g. raising of the Buyer's Stamp Duty and implementing the Total Debt Servicing Ratio (TDSR).
- By taxing property purchases and placing tighter limits on households' ability to borrow, this has quelled the demand for mortgages and car loans, thus slowing the growth of housing and car prices.
- These policies have arguably been effective as housing prices have since fallen by about 10% from the height of the property market boom in 2013 and COE prices have also been declining since the TDSR was implemented.

Economic growth and macroeconomic instability

- While a high dependence on trade and FDI has enabled Singapore to grow strongly, this has caused Singapore to be very susceptible to external demand and supply shocks.
- The Singapore government reduces the extent of such trade-offs by diversifying the country's export and import markets through the establishment of a plethora of bilateral and multilateral FTAs
- Singapore also uses supply side policies to counter external demand shocks, which not only boosts output and employment in the short run but also promotes potential growth in the long run
- One such policy is the Wage Credit Scheme which is essentially a wage subsidy that lowers production costs, thus shifting the AS curve downwards thereby boosting output and employment during a recession
- Wage subsidies also help to improve the cash flow of firms thus minimising bankruptcy, thereby helping to preserve productive capacity so that economy recovers faster when the global markets eventually pick up

- Such supply side policies have arguably been very effective as evident by Singapore's stellar 14.5% growth in 2010, which occurred right after the 2009 recession that was caused by the global financial crisis

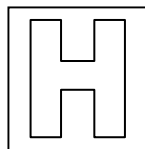
Long run growth versus equity

- To promote long run growth, Singapore has always relied on inflows of FDI and foreign skilled labour
- To attract such investments and labour, Singapore has one of the lowest corporate and personal income tax rates in the developed world
- However, Singapore Gini's coefficient has also increased substantially over the years, thus illustrating the trade-off between long run growth and equity
- To counter rising income inequality, the Singapore government has increased transfer payments to the low-income group in the form of larger tax rebates and direct transfers like Workfare which works like a wage subsidy that is targeted at low-wage workers.
- Unlike unemployment benefits which reduce the incentive to work, such targeted wage subsidies create the incentive for employment, hence greater equity can be achieved without jeopardising long run growth
- These policies have arguably been effective as Singapore's Gini coefficient (before transfers and taxes) has declined from 0.482 in 2007 to 0.464 in 2014.
- Singapore's Gini Coefficient after transfers and taxes is also significantly lower at 0.412 in 2014, which arguably shows that substantial redistribution of income has occurred

Conclusion

- The Singapore government has used a variety of policies to either avoid or reduce the mentioned trade-offs and the evidence so far shows that they have been largely effective in achieving their intended objectives
- Nevertheless, as a small open economy in an increasingly complex globalised environment, new trade-offs are bound to arise
- Hence the Singapore government must continue to look ahead so that it can foresee and implement appropriate policies to deal with such unintended consequences.

Suggested Mark Scheme		
L1	Identifies the macroeconomic policies used by the Singapore government.	1 – 2
L2	Explain the various macroeconomic policies without considering how they help manage the trade-offs.	3 – 7
L3	Analyse the various policies in context of the macroeconomic trade-offs.	8 – 11
E	Evaluate the effectiveness of the macroeconomic policies.	+4



TEMASEK JUNIOR COLLEGE
JC2 Preliminary Examinations 2015
General Certificate of Education Advanced Level
Higher 2

ECONOMICS

Paper 1

9732/01

Wednesday 2 September 2015
2 hours 15 minutes

Additional Materials: Answer Paper

READ THESE INSTRUCTIONS FIRST

Write your Centre number, index number, CG and name on all the work you hand in.

Write in dark blue or black pen.

You may use a HB pencil for any diagrams or graphs.

Do not use staples, paper clips, glue or correction fluid.

Hand in your answer scripts to each question separately.

Do NOT turn over this page until you are told to do so.

Answer **all** questions.

Begin each question on a fresh sheet of paper.

At the end of the examination, fasten each question separately and securely together.

The number of marks is given in brackets [] at the end of each question or part question.

This document consists of 7 printed pages and 1 blank page.

Answer all questions.

Question 1

Singapore's Transportation System

Table 1: Top 3 most important public transport attributes¹

	2011	2012	2013	2014
1)	Travel Time	Travel Time	Travel Time	Travel Time
2)	Waiting Time	Safety / Security	Waiting Time	Safety / Security
3)	Reliability	Waiting Time	Reliability	Waiting Time

Source: Land Transport Authority, Singapore

Extract 1: Singapore reveals 3 economic solutions to traffic congestion for Asian peers

Traffic congestion reduces a country's potential for creating prosperity. Singapore identified this early in the piece and was able to create an effective system of incentives and constraints so traffic wasn't a hindrance to economic growth.

It's always a shock when people first hear about how much it'll cost to get behind the wheel of a brand new Honda Jazz in Singapore. After hitting a low of S\$3,864 in March 2011 the Certificate of Entitlement (COE) for a new car will now set you back over S\$70,000. When you add on the additional registration fee, the level of which ratchets up to 180 per cent of the Open Market Value of the vehicle, you end up paying 2-3 times the regular price of the car.

By increasing the price of vehicles, the COE system restricts the amount of people that want or are able to buy a car. Twice a month, the Singapore Land Transport Authority runs an auction process for the available COEs. The amount of COEs is determined by a quota system.

Further to the quota system and additional registration fees that new car owners need to pay, there's also the Electronic Road Pricing (ERP) system that incentivises drivers to avoid certain areas at peak times. Costing about the same as a cup of coffee, passing underneath an ERP gantry can cost a normal car up to S\$5 during peak hours. If drivers aren't in a rush they'll think twice before turning down a road that could lead them to an ERP gantry.

Source: Singapore Business Review, 24 July 2013

Extract 2: Fare regulation framework

Public bus and train services are provided on a commercial basis, within the maximum fares approved by Public Transport Council (PTC). The Government does not provide direct subsidies for public transport operations.

To keep public transport fares affordable to the general public, public transport infrastructures such as MRT/LRT lines and bus interchanges are funded entirely by the Government. In addition, public buses are also exempted from COE payments. The Government also pays for the development and software cost of the contactless smartcard system. Therefore, bus and train operators are only responsible for operations, maintenance costs and investments in service improvements.

¹ Land Transport Authority (LTA) has conducted the Public Transport Customer Satisfaction Survey since 2006. The annual survey measures regular commuters' satisfaction with Singapore's mass public transport services, namely bus and Mass Rapid Transit (MRT) services.

In regulating bus and train fares, the PTC carries out its statutory mandate to safeguard public interest by keeping fares affordable while ensuring the long-term financial viability of the public transport operators.

Source: Public Transport Council, Singapore

Extract 3: Singapore transport fare hike draws protest

About 400 people protested on Saturday against what they said were unjustified increases to public-transport fares in Singapore, marking the first major show of public dissent here this year.

Protesters gathered at Hong Lim Park in central Singapore, the only place where demonstrations are allowed here, to criticize a state-appointed panel's decision last week to approve a 3.2% increase to public bus and rail fares that will take effect in April. Their rally comes amid growing public disquiet over perceived inadequacies in public transport, and follows a series of disruptions to subway services in recent weeks.

"Why is the government allowing the fare hike now, when it should first tackle the ongoing problems with our trains and buses?" said Dennis Khew, a 41-year-old sales executive who joined the protest.

Subway networks run by SMRT Corp. and SBS Transit, a unit of ComfortDelGro, have been plagued by repeated service disruptions, including severe breakdowns in December 2011 that stranded hundreds of thousands of commuters for hours. Citizens have also complained of overcrowding on buses and trains, as well as what they say is an inadequate taxi industry that doesn't provide sufficient cabs for commuters during peak hours.

Source: The Wall Street Journal, 26 January 2014

Extract 4: Despite push for public transport, a love for cars endures

The Government has invested huge amounts of money to improve public transport as it seeks to wean Singaporeans off their cars. There will be 99 new trains by 2019, and 450 new buses by 2017 — on top of the 550 already added in recent years. By 2030, there will be new rail lines, more covered walkways, and a 700km cycling network.

Non-constituency Member of Parliament Gerald Giam, 38, in a Facebook post last month said that he had given up his car. He told TODAY that he did so after the COE for his second-hand 2005 Toyota Corolla Altis expired. With the duration of his journeys now two to three times longer compared to when he drove, Mr Giam said that advance planning is essential before he and his family leave home.

But people like Mr Giam are the exception, not the norm. Transport analysts noted that Singaporeans' soft spot for automobiles is tough to eradicate.

Source: Today, Singapore, 17 July 2015

Questions

- (a) Explain whether public transport in Singapore is a public good. [2]
- (b) Using a diagram, explain why there is need for the government to intervene in the market for private transport in Singapore. [6]
- (c) Analyse the impact of higher COE prices on the market for public transport [4]
- (d) Discuss whether rail fares charged by public transport operators in Singapore should be regulated. [8]
- (e) Discuss the extent to which factors influencing price elasticity of demand are relevant to the Singapore government in encouraging the switch from private to public transport through policies mentioned in Extract 1. [10]

[Total: 30]

Question 2

Growth and Debt

Extract 1: Developed economies take lead in growth

The global economy's jagged recovery inched forward in 2013, with fast-growing emerging markets losing pace while developed nations gained strength.

The 2013 performance reflected something of a role reversal among the players. After years of notching far slower growth than many emerging-market counterparts, some leading economies are at last showing strength. The global snapshot also reveals the far-flung effects of monetary policy, as decisions by central bankers in developed nations reverberated through emerging markets.

In 2013, central banks in the U.S., Japan and Europe showered money on their economies, held interest rates low and promised to continue to do so in a bid to animate a recovery that remains tepid almost five years after the worst recession since the Great Depression. In emerging markets such as Brazil and India, domestic demand softened and exports sagged as rates were boosted to stem inflation.

The combination of fast-growing economies slowing slightly while the developed world picks up the pace sets the stage for "synchronized growth," in 2014, said Tu Packard, senior economist at Moody's Analytics. That means, she said, that "demand from developed markets will support developing-market growth, and they will support each other."

Source: Wall Street Journal, 30 Dec 2013

Extract 2: Global inflation slowing further

Despite the massive monetary easing by major central banks, inflation remains tame worldwide, partly reflecting large output gaps and high unemployment. Global inflation is projected to moderate further to 2.6 per cent in 2013, down from 2.9 per cent in 2012. This decline mainly results from somewhat lower inflation in the United States and Europe in the face of subdued demand, continued high unemployment and contained energy and food prices.

Average inflation in the developing economies, by contrast, will increase slightly from 5.4 per cent in 2012 to 5.6 per cent in 2013. This increase will stem from both cyclical factors, including a pick-up in demand in parts of East Asia and Latin America and the Caribbean, and one-off policy measures such as lower fuel subsidies and higher minimum wages.

Various economies, especially in South Asia and Africa, will continue to face high inflation rates, mainly owing to elevated inflationary expectations, rapid credit growth and structural bottlenecks such as energy shortages. In 2014, global inflationary pressures are expected to remain mild even as economic activity, particularly in developed countries, strengthens. Most developing regions are likely to see a moderate decline in inflation as international commodity prices ease.

Source: UN World Economic Situation and Prospect 2013

Table 1: Selected data of US budget and debt positions

	2008	2009	2010	2011	2012	2013
Revenue (Trillion)	4.7	3.7	4.7	5.1	4.9	5.6
Spending (Trillion)	5.3	6.0	5.9	6.1	6.1	6.0
Debt to GDP ratio	64.8	76	87.1	95.2	99.4	100.83

Source: US Department of Treasury

Extract 3: Bad fiscal policy

The IMF minced no words with regard to U.S. fiscal policy: "the deficit reduction in 2013 has been excessively rapid and ill-designed," while praising the Federal Reserve for "appropriately" continuing to add stimulus to the economy even as signs of gradual recovery have begun to appear, although monetary policymakers should continue to prepare for an exit. In particular, the self-imposed, automatic across-the-board spending cuts ("sequester") not only reduce growth in the short term, but indiscriminate reductions in education, science, and infrastructure spending, if protracted, could also reduce long term potential growth. The slower pace of deficit reduction would help the recovery at a time when monetary policy has limited room to support it further.

"Adopting a more balanced and gradual pace of fiscal consolidation would help global growth in the short run," the report said. And it stressed that among other benefits, this revised fiscal policy would "partly relieve monetary policy of its burden of supporting the recovery, reducing the risks to U.S. and global financial stability from a prolonged period of low interest rates."

Revenue collections are estimated to increase to about 2½ percent of GDP this year, from 1¼ percent in 2012 partly due to higher marginal rates for upper-income taxpayers and the expiration of the payroll tax cut.

Source: Marketnews.com, 14 June 2013

Extract 4: To print or not to print

You can hardly turn on the television these days without hearing a politician or pundit warning the American public that we'll "end up like Greece" if the federal government doesn't get its fiscal house in order soon. And it's true that we don't want to end up like Greece: The global financial crisis caused its already-problematic debt to soar; financial markets began demanding higher and higher interest rates to fund that debt; which in turn undermined the economy further, again causing deficits to rise.

But let's take a step back and recognize that, for several reasons, the U.S. is in a dramatically different economic position than Greece.

Perhaps the most important difference between the two countries is that the U.S. prints its own currency, meaning it can essentially create money out of thin air. If our creditors demand we repay them, we can just print dollars. By contrast, when Greece borrows money, it borrows Euros, a currency over which it has no control. That's not to say the U.S. doesn't need to worry about its debt. For developed economies that print their own currencies — like the U.S., the U.K., and Japan — the risk is not outright default, but runaway inflation. In other words, if we have to resort to the printing press to pay our debts, this may cause the supply of dollars to outstrip demand for them, and the value of our currency to plummet.

Source: Time.com, 01 Mar 2013

Extract 5: Paying with the future

Political dysfunction in Washington has led to the American public being barraged by continuous media reports about the fiscal deficit, the massive public debt, and the sequester. But the political skirmishes and impasses around these short-term events are distracting us from the real danger ahead: Our reckless fiscal trajectory that threatens America's competitiveness.

The nation's reported debt has almost tripled — to over \$16.6 trillion — just since 2000, and the interest on this debt will be paid every year into the future. Bill Clinton observed in 1992 that the government is “spending more on the present and the past, and building less for the future.” Yet during the past 20 years this problem has gotten far worse. Paying for interest on the public debt and meeting our unfunded obligations and promises will drive mandatory governmental spending to unsustainable levels.

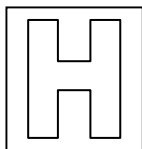
Economist Paul Krugman and others argue that the government should take advantage of today's very low interest rates to borrow to stimulate our current economy since the risk of crowding out private investment is negligible. But their analysis ignores the balance sheet effects of borrowing to pay for today's consumption. Every trillion dollars we borrow today will require much higher mandatory interest payments when the debt is inevitably refinanced in the future. This will worsen future government's ability to invest for competitiveness and higher living standards.

Source: Fortune, 11 Apr 2013

Questions

- (a) (i) Define stagflation. [1]
- (ii) With reference to data, comment on the evidence of stagflation for developing countries. [3]
- (b) Explain what the author of Extract 1 means by “synchronized growth” and the policies that had “set the stage” for such growth to be achieved. [4]
- (c) Identify and explain **one** demand and **one** supply factor in Extract 2 that might affect inflation. [4]
- (d) Based on the data, discuss the effectiveness of expansionary fiscal and monetary policies in facilitating the recovery of the US economy. [8]
- (e) Discuss the justifications for implementing the ‘sequester’ and the likely effects on the world economy. [10]

[Total: 30]



TEMASEK JUNIOR COLLEGE
JC2 Preliminary Examinations 2015
General Certificate of Education Advanced Level
Higher 2

ECONOMICS

9732/02

Paper 2: Essay Questions

Friday 28 August 2015
2 hours 15 minutes

Additional Materials: Answer Paper, Cover Sheet

READ THESE INSTRUCTIONS FIRST

Write your Centre number, index number, CG and name on all the work you hand in.

Write in dark blue or black pen.

You may use a HB pencil for any diagrams or graphs.

Do not use staples, paper clips, glue or correction fluid.

Hand in your answer scripts to each question separately.

Do NOT turn over this page until you are told to do so.

Answer **three** questions in total, of which **one** must be from Section A, and **one** from Section B and **one** from either Section A or Section B

Begin each question on a fresh sheet of paper.

At the end of the examination, fasten each question separately and securely together.

Write down the question number of the questions attempted on the cover sheet and place it on top of your answer scripts when you hand in. Do not fasten the cover sheet to any of your answer scripts.

The number of marks is given in brackets [] at the end of each question or part question.

This document consists of 2 printed pages.

Answer **three** questions in total.

Section A

One or two of your three chosen questions must be from this section

- 1 Growing affluence in emerging markets like China and Vietnam has led to rising tourist numbers in Singapore. However, the higher foreign worker levy has resulted in higher cost of operations for hotels. At the same time, the rise of Airbnb, a company that helps people rent out private accommodation has resulted in greater choice for travellers.

Discuss the likely combined impact of the above factors on the revenue of different hotel markets in Singapore. [25]

- 2
- (a) With the aid of a diagram, explain how price discrimination benefits producers, consumers and society [10]
- (b) Discuss whether in the real world, all firms big and small, aim to produce at their profit maximising output levels. [15]

- 3
- (a) Explain how consumers and producers in the process of maximising their own welfare enable the problem of scarcity to be managed in a free market [10]
- (b) Discuss whether government intervention is always necessary to ensure that scarce resources are allocated in the most efficient manner. [15]

Section B

One or two of your three chosen questions must be from this section

- 4
- (a) Explain the possible economic trade-offs faced by a small and open economy [10]
- (b) Discuss the effectiveness of the policies currently adopted by the Singapore government to manage these trade-offs [15]

- 5 According to data from the World Bank, 2014 GDP (PPP adjusted) figures were US\$17.6 trillion and US\$17.4 trillion dollars for China and USA respectively. However if GDP statistics are not adjusted for cost of living, the U.S. economy still dwarfs China's, at US\$17.4 trillion versus US\$10.4 trillion

- (a) Explain the indicators that could be used to complement or replace GDP, when measuring the various aspects of standards of living [10]
- (b) Discuss the problems of using PPP adjusted GDP in making international comparisons of the various aspects of living standards between these two countries. [15]

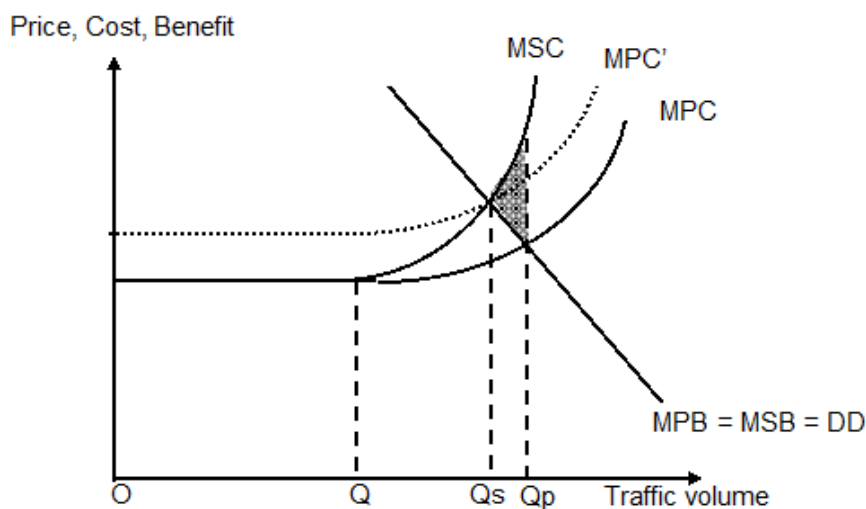
- 6 The US's massive and sustained trade deficit is a long term macroeconomic problem that is caused primarily by China's currency manipulation. Hence, imposing protectionist measures against Chinese imports is not only fair but also effective and beneficial. Do you agree? [25]

(a) Explain whether public transport in Singapore is a public good. [2]

- Public transport in Singapore is not a public good as it is excludable. If commuters do not pay the corresponding fares, they can be excluded from consuming public transport services. [1]
- Public transport in Singapore is not a public good as it is rival in consumption. The consumption of public transport services by one commuter reduces the number of seats or space available for another commuter. [1]

(b) Using a diagram, explain why there is need for the government to intervene in the market for private transport in Singapore. [6]

- The consumption of private transportation in Singapore generates negative externalities in the form of traffic congestion, which refer to the adverse spillover effects imposed on third parties from the production or consumption of a good.
- When a person drives his car during peak periods on a busy road, he slows down traffic and causes delay to other road users. The cost of such delays is then borne by third parties like their employers as their workers turn up late for work and the delivery of their goods are delayed.
- As traffic congestion disrupts economic activity hence adversely effects economic growth, curbing such congestion “could reduce a country’s potential for creating prosperity” (extract 1)



- In the above diagram, there are no traffic jams and hence no external costs generated up to OQ. Thus MPC and MSC are identical.
- Beyond OQ, congestion sets in and worsens, so the MPC for each driver rises as he wastes increasingly more time and fuel being stuck in a worsening traffic jam.
- With increasing delays imposed on employers and businesses, MEC also rises, causing the MSC to diverge more and more from the MPC.
- Assuming that there are no positive externalities or merit good effects, the demand curve DD which is also the marginal private benefit (MPB) curve will be equal to the marginal social benefit (MSB) curve.
- Without intervention, the free market traffic volume is Qp where MPB = MPC, while the socially efficient outcome where MSB = MSC is at Qs.
- From Qs to Qp, as $MSC > MSB$, the deadweight loss of the shaded area is

generated.

- Since $Q_p > Q_s$, the road is over consumed so there is a need for the government to intervene to reduce the traffic congestion

L1: Identify the relevant source of market failure. [1]

L2: Explain how private transportation generates negative externalities [2-3]

L3: Analyse how negative externalities lead to market failure [4-6]

Full marks will also be awarded for candidates who utilise generic negative externalities diagram.

(c) Analyse the impact of higher COE prices on the market for public transport. [4]

- Rising COE prices translate to higher car prices and thus higher cost of private car ownership. As public and private transport are substitutes, rising cost of private car ownership should raise the demand for public transport, thus causing public transport fares and volume to rise [2]
- However, as fares are regulated by the Public Transport Council (extract 2), public transport fares may remain unchanged. [1]
- Also, as car ownership is directly limited by the COE quota, rising COE and thus car prices may have no impact on the demand for public transport. [1]

Candidates with correct application of elasticity concepts will be awarded one bonus mark.

(d) Discuss whether rail fares charged by public transport operators in Singapore should be regulated. [8]

Question interpretation

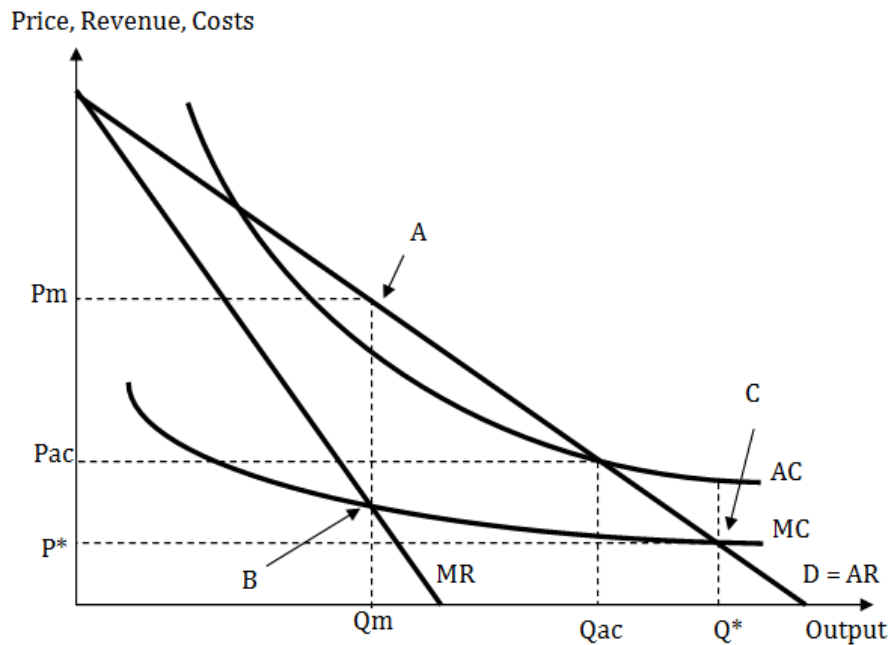
- *What is the relevant market structure for rail services in Singapore?*
- *What are the reasons for and against rail fare regulation in Singapore?*
- *Should rail fares in Singapore be regulated?*

Introduction

- The market for rail services in Singapore resembles that of a natural monopoly, which refers to a situation where a single firm can supply the entire market at a lower cost than two or more firms.
- This essay aims to analyse the reasons for and against regulating rail fares in Singapore before evaluating the need for such regulation

Reasons for regulating rail fares in Singapore

- Due to the high cost of setting up the rail infrastructure e.g. the network of tracks, tunnels & stations, the fixed costs are probably much larger than the variable costs (cost arising from the fuel used and wear and tear incurred from taking an additional passenger).
- Thus AC follows the shape of AFC, which is always falling with output.



- If left to the free market the monopolist will produce Q_m , where $MC=MR$ and charge a price P_m . However, the allocative efficient price and output occurs at P^* and Q^* where $P=MC$ or $DD = MC$.
- With P_m being much higher than P^* , this means many consumers will find rail fares being too costly and thus refrain from taking trains, resulting in Q_m , which is very much lower than Q^* .
- There will be substantial under consumption of rail services, which will cause a large loss of potential welfare that is equal to area ABC , hence the free market will be highly allocatively inefficient.
- Extract 2 mentions that Singapore' public transport operators do not need to cover the fixed cost of building the public transport infrastructure as this is fully borne by the government,
- This means that they do not need to cover the entire AC (which includes AFC) but only need to cover the operating costs i.e. AVC (which is equal to MC if MC is assumed to be constant).
- Thus, MC pricing can be employed to achieve the allocatively efficient outcome without causing public transport operators to suffer losses.

Reasons against regulating rail fares in Singapore

- Regulation of rail fares means that private rail operators will only earn normal profits in the long run.
- They therefore lack the ability to engage in costly upgrading of rail mechanics or extensive maintenance of the rail system.
- This could have led to the repeated service disruption and severe breakdowns mentioned in extract 3.
- Without supernormal profits, private rail operators also lack the incentive and ability to improve service standards that could encourage the population to make the shift from private to public transportation.

Conclusion

- Given the severe market failure arising from a natural monopoly,

governments arguably need to intervene in public transportation, therefore, my view is that rail fares should be regulated in Singapore

- However, instead of MC pricing, the price should be set higher so that the cost of upgrading and maintaining the rail system is accounted for.
- Alternatively, MC pricing could still be used if the government is willing to also bear the cost of upgrading and maintenance of the rail system.

L1: Recognise that rail transport in Singapore is a natural monopoly. [1]

L2: Explain the reasons for regulating rail fares in Singapore. [2-5]

L3: Analyse the reasons against regulating fares in Singapore. [6-7]

E: Evaluate whether rail fares in Singapore should be regulated. [+1]

For L1+ L2 the max marks allocated for the different approaches are:

- *Equity argument or answers with little or no economic analysis [max 2]*
- *Positive externalities argument [max 3]*
- *Generic market dominance argument [max 4]*
- *Natural monopoly argument [max 5]*

L3 and E marks are awarded independently from L1+L2

- (e) **Discuss the extent to which factors influencing price elasticity of demand are relevant to the Singapore government in encouraging the switch from private to public transport through policies mentioned in Extract 1.** [10]

Question interpretation

- What are the policies mentioned in extract 1?
- What is price elasticity of demand and how does it affect the effectiveness of these policies?
- What are the factors affecting PED of private transport in Singapore?
- Which is the more relevant elasticity factor?

Introduction

- The policies mentioned in extract 1 are the COE, ARF and ERP schemes
- This essay aims to first explain the meaning of PED and how it affects the effectiveness of these policies in curbing traffic congestion before analysing the factors affecting PED of private transport in Singapore
- It concludes by assessing which factors are more relevant in influencing the effectiveness of these policies.

How does PED affect the effectiveness of COE, ARF and ERP?

- Price elasticity of demand (PED) refers to the responsiveness of quantity demanded when the price of the good changes, ceteris paribus.
- It is measured by taking the percentage change in quantity demanded of a good over the percentage change in its price.
- With a higher PED, raising ownership and usage costs of private cars through these policies will curb the demand for private cars more substantially, thus helping to reduce traffic congestion more effectively

What are the factors affecting the PED for private transport?

- The first factor is availability and closeness of substitutes

- An increase in the availability and/or closeness of substitutes for a good will result in an increase in its PED
- Extract 4 mentions of new buses and trains being put into operation and new rail lines being constructed
- This should improve the quality of public transport in terms of comfort, accessibility, frequency and reliability, thus making it a closer substitute to private transport, thereby raising the PED of private transport

(Instead of availability and closeness of substitutes, an answer which frames the above points under the factor degree of necessity is also acceptable)

- The second factor is the time period
- As people need time to factor in and respond to a price change, the PED of a good tends to increase with time
- Time is required for private transport users to respond to higher COE prices, ARF rates and ERP charges before switching to public transport.
- In the short-run, policies aimed at raising private transport costs may have limited effectiveness as most users may be unable or unwilling to change their travel pattern or modes.
- However, such adjustments can be made in the long run so the demand for private transport is likely to become more price elastic over time.
- For example extract 4 mentions of Mr Giam making the decision to give up his private car after using it for many years.

(Higher COE prices causing the cost of owning a car to form a larger proportion of income is not applicable in this context)

Conclusion

- Table 1 shows commuters consistently ranking travel time, waiting time and reliability as being the most important attributes of public transport
- This suggests that making public transport a closer substitute to private transport is arguably the more important factor

OR

- Extract 4 suggests that drivers often only decide whether to switch transport modes after their existing COE has expired
- This arguably suggests that the time period could instead be the more important factor

L1: Define PED and identify the relevant policies [1-2]

L2: Explain how PED affects the effectiveness of these policies [3-4]

L3: Analyse the factors affecting the PED of private transport [5-8]

E: Evaluate the relative importance of these factors [+2]

Suggested Answers

(a)(i) Define Stagflation [1]

- Stagflation refers to the situation where the economy is facing rising inflation and slowing growth and/or rising unemployment.

Or

- Stagflation refers to the situation where the economy is facing high inflation and low growth and/or high unemployment.

(ii) With reference to data, comment on the evidence of stagflation for developing countries. [3]

Evidence from the case (any one of the following to score the first two marks)

- Evidence from extract 1 suggests that growth in developing countries may be slowing down. Signs such as ‘fast-growing emerging markets losing pace’ and ‘fast-growing economies slowing slightly’ provide prima facie evidence of slowing growth. Evidence from extract 2 suggests rising inflation from developing countries. Signs include ‘average inflation rising from 5.4 to 5.6 per cent’ and ‘high inflation, especially in South Asia and Africa.’ [2]
- Extract 2 mentions that average inflation in the developing economies will increase slightly from 5.4 per cent in 2012 to 5.6 per cent in 2013 partly due policy measures such as lower fuel subsidies and higher minimum wages. As these causes of inflation are cost push in nature, this provides evidence of stagflation [2]
- Extract 2 mentions that various economies, especially in South Asia and Africa, will continue to face high inflation rates partly due to structural bottlenecks such as energy shortages. As these causes of inflation are cost push in nature, this provides evidence of stagflation [2]

Since the command word is ‘comment’ and not ‘explain’, there needs to be a comment on the extent of the evidence to score the 3rd mark e.g.

- However, more data such as actual growth rate or unemployment rate is required to make a more accurate judgment on whether there was indeed stagflation. [1]

(b) Explain what the author of extract 1 means by “synchronized growth” and the policies that had “set the stage” for such growth to be achieved. [4]

- According to extract 1 “synchronized growth” “means that the demand from developed markets will support developing-market growth, and they will support each other.” What this means is higher growth in developed countries generates more income for them to purchase imports from developing countries. This raises the growth and income of developing countries which then enables them to buy more imports from the developed countries. Since their growths are mutually reinforcing, they are therefore synchronized [2]
- According to extract 1, central banks in the U.S., Japan and Europe showered money on their economies, held interest rates low and promised to continue to do so in a bid to animate a recovery. This suggests that these developed countries engaged in

expansionary monetary policy to stimulate consumption, investment and hence AD, thus causing their output, income and hence demand for imports from the developing countries to rise [2]

(c) Identify and explain one demand and one supply factor in Extract 2 that might affect inflation. [4]

- Demand factor: Continued high unemployment in developed countries implies that demand is not yet high enough to ensure employment of workers. This suggests that demand-pull inflation is unlikely. [2m]
- Supply factor: Easing of international commodity prices may reduce cost of production for countries that needs to import raw materials. This reduced cost-push inflation. [2m]

(Other demand such as rapid credit growth, elevated inflationary expectations and supply factors such as higher minimum wage, lower fuel subsidies are also acceptable)

(d) Based on the data, discuss the effectiveness of expansionary fiscal and monetary policies in facilitating the recovery of the US economy? [8]

Question interpretation

- What is meant by expansionary fiscal and monetary policies?
- How do these policies work?
- What are the limitations of these policies?
- How effective are these policies in facilitating the US economic recover?

Introduction

- As the US was facing an economic downturn since the 2008/2009 financial crisis, both expansionary monetary and fiscal policies were used to stimulate the economy in order to generate an economic recovery.
- The budget deficits in Table 1 suggests the use of expansionary fiscal policy while the terms “showered money” and “held interest rates low” in extract 1 suggests that the use of expansionary monetary policy

How can these policies be used to stimulate the US economy?

- Expansionary fiscal policy refers to deliberate increases in government spending (G) and reduction in direct taxation (T) in order to boost aggregate demand (AD)
- Raising G provides a direct boost to AD while lowering T causes AD to rise by stimulating consumption (C) and investments (I)
- Expansionary monetary policy refers to the deliberate lowering of interest rates in order to boost AD via stimulating I and C from borrowing by firms and households respectively
- A rise in AD along the horizontal or upward sloping portion of the AS curve (i.e. there exists spare capacity) causes real output and employment to rise
- Subsequently, AD, output and income rises further due to subsequent rounds of diminishing rises in income induced consumption caused by the multiplier effect

How effective have these policies been for the US economy?

- Although extract 1 suggests some signs of a recovery, this was challenged by extract 2 where ‘large output gaps and high unemployment are still wide-spread’.

- This suggests that the effectiveness of monetary policy was limited, possibly due to poor economic outlook blunting firms and households desire to borrow, hence causing investment and consumption to be interest insensitive
- This is further strengthened by Extract 3 which states that 'monetary policy has limited room' to support growth further, which suggests that US could be facing a liquidity trap, which occurs when interest rates are already so low that any further rate reductions become meaningless.
- Similarly, the lack of strong and decisive economic recovery seems to also suggest that the effectiveness of expansionary fiscal policy was limited.
- The size of US multiplier and crowding out are both unlikely reasons to explain the ineffectiveness of expansionary fiscal policies. This is supported by extract 5 where the low interest rates environment negates the risk of crowding out.
- The ineffectiveness could therefore be attributed to bleak economic outlook that blunts the effectiveness of the payroll tax cuts mentioned in extract 3 to stimulate household spending. The high unemployment mentioned by in extract 2 also reduces the effect of cutting taxes. There could also be long time lags needed for fiscal policy to take effect and also the high and increasing level of US government debt (table 1) constraining its ability to spend even more that what has already been done.

Conclusion

- Although both policies were arguably ineffective in facilitating a recovery, extract 3 suggests that these policies probably helped to curb the worsening of the recession. In other words, the recession would be much worse if the policies were not implemented.
- Despite implementing the sequester in 2013 (extract 1), resulting in the smallest budget deficit over the last few years (table 1), 'developed nations (including the US) gained strength' during that time period (extract 1), implying that monetary policy was more effective than fiscal policy in aiding economic recovery.
- Extract 3 highlighted the importance of the role of fiscal policy when it suggest reducing the rate of deficit cuts would help with economic recovery when liquidity trap has set in. This implies that perhaps fiscal policy in terms of government spending can still maintain a role amid the bleak economic outlook to kick-start the recovery.

L1: Define expansionary monetary and fiscal policies [1]

L2: Explain how these policies work and their limitations [2-4]

L3: Analyze the effectiveness of these policies using case data [5-7]

E: Evaluate the overall effectiveness of these policies in facilitating the US economic recovery [+1]

(e) Discuss the justifications for implementing the 'sequester' and the likely effects on the world economy. [10]

Question interpretation

- What is the 'sequester'?
- What are the arguments for and against implementing the 'sequester'?
- What are the likely effects of implementing the 'sequester' on the US and world economy?

Introduction

- The 'sequester' is a form of automatic spending cuts that that is self-imposed to reduce the massive amount of debt accumulated by the US govt.

- The answer aims to explain the arguments for and against implementing the ‘sequester’ before analyzing and evaluating the likely effects on the US and world economy.

Arguments for implementing the ‘sequester’

- From table 1, US debt to GDP ratio has been rising and by 2013 it has exceeded 100%
- By reducing the level of debt, it prevents the US government from falling into a debt trap where debt gets bigger due to the higher interest needed to secure more borrowings (like Greece mentioned in extract 4)
- If the debt is held by foreigners, the greater interest payment in the future means “building less for the future” and “worsen government ability to invest for competitiveness and higher living standards” (extract 5) in the future
- If the debt is not reduced and becomes unsustainable, a stage will come when no one will be willing lend to the US government anymore as they will doubt its ability to pay them back

Arguments against implementing the ‘sequester’

- However, extract 5 suggested increasing borrowing since risk of crowding out private investment is negligible in the current pessimistic climate.
- Furthermore, unlike Greece, which has to borrow in Euro but has no ability to print it, the US can always resort to printing US\$ to finance its debt (extract 4) so it does not necessary have to engage in such drastic austerity measures
- Nevertheless if the US government were to resort to monetizing their debt, the main worry is that this could eventually lead to ‘runaway inflation’ (extract 4).

What are the likely effects on the world economy?

- As the sequester originates from the US, we first analyse the effect it has on the US before the implications on the rest of the world.
- The effect on the US in the short term is a weakening of a stimulus to growth amid a situation where recovery is still weak. This would reduce the rate of recovery and may even cause growth to become negative.
- Given that interest rates are already at zero hence “monetary policy has limited room to support” growth (extract 3) the impact of the sequester on US growth is likely to be quite adverse in the short run
- In the long-run, “indiscriminate reductions in education, science, and infrastructure” (extract 3) will arguably reduce US growth even further as such spending reduction if protracted will inevitably hamper the growth in country’s productive capacity
- For the world economy, the uncertainty caused by US’s sequester is likely slow down and prolong global economic recovery. This is especially so when extract 1 suggests that growth in fast-growing developing countries showed signs of slowing down.
- As these are the economies that supported the developed countries during the recession of 2008, the world economy might be facing another downturn after a brief recovery.
- However, for some developing countries, the slowdown in the US might bring some relief from inflation as extract 1 shows evidence of overheating in these countries e.g.
 - In emerging markets such as Brazil and India, domestic demand softened and exports sagged as rates were boosted to stem inflation.
 - Cyclical factors, including a pick-up in demand in parts of East Asia and Latin America and the Caribbean
 - Various economies, especially in South Asia and Africa, will continue to face high inflation rates, mainly owing to elevated inflationary expectations, rapid credit growth

Conclusion

- Overall, the effect of the ‘sequester’ on the US economy seem undoubtedly adverse while the impact on the world economy is arguably mixed as the current economic conditions differ from country to country.

L1: Recognize the meaning of the sequester [1]

L2: Explain whether the sequester was justified [2-5]

L3: Analyze the possible effects on US and the global economy [6-8]

E: Evaluate the likely effects on these economies. [+2]

1. **Growing affluence in emerging markets like China and Vietnam has led to rising tourist numbers in Singapore. However, the higher foreign worker levy has resulted in higher cost of operations for hotels. At the same time, the rise of Airbnb, a company that helps people rent out private accommodation has resulted in greater choice for travellers.**

Discuss the likely combined impact of the above factors on the revenue of different hotel markets in Singapore. [25]

Question interpretation

- What are the different hotel markets?
- How do the mentioned events affect the demand and supply of hotels?
- How do the elasticities of demand differ for different types of hotels in Singapore?
- How will such differences affect the change in revenue for different hotel markets in Singapore?
- What is the likely change in revenue for each type of hotel market?

Introduction

- The hotel market can be segmented into the markets for luxurious, mid-tier and budget hotels.
- This essay will first explain how growing affluence, higher foreign worker levy and the rise of Airbnb affect the demand and supply of different types of hotels.
- The essay then seeks to employ the concepts of price and income elasticities of demand to analyse how the above factors affect the revenues of the different hotel markets in Singapore.

Impact of growing affluence on total revenue of different hotel markets

- Due to rising income levels per capita in China and Vietnam, households in these countries can afford to take more overseas vacations, thus resulting in rising tourist numbers in Singapore.
- As the demand for hotels is derived from the demand for overseas holidays to Singapore, the increase in demand for travel to Singapore causes the demand for hotels in Singapore to rise.
- The demand curve for hotels shifts to the right, resulting in a rise in price and quantity, hence an increase in total revenue (price x quantity).

- The extent of rise in total revenue depends on the magnitude of income elasticity of demand.
- Income elasticity of demand measures the responsiveness of demand for a good to a change in income levels and is calculated by taking the percentage change in demand over the percentage change in income.
- For inferior goods with negative income elasticity, the demand will fall as income rises. Hence both price and output will fall, causing total revenue to fall.
- For normal goods, with positive income elasticity, the demand will rise as income rises. Hence both price and output will rise, causing total revenue to rise.
- The higher the magnitude of the income elasticity of demand, the greater the change in price, output and total revenue.

- Income elasticities differ for different types of hotels because consumers tend to switch from cheaper hotels with fewer amenities to more expensive upscale hotels when their income rises.
- Hence upscale luxurious hotels that provide a variety of services and on-site amenities (e.g. Marina Bay Sands) are likely to be normal-luxuries with high positive income elasticity of demand ($YED > 1$), while cheaper mid-tier hotels (e.g. Amara Singapore Hotel) are likely to be normal-necessities with positive but low income elasticity of demand ($YED < 1$).
- In fact, demand for cheap budget hotels (e.g. Fragrance Hotel) that offer basic accommodation with little or no services may even fall as people upgrade their stays to costlier hotels when their income rises. Hence, the income elasticity of demand for such hotels is likely to be negative ($YED < 0$).
- Thus, while total revenues for both luxurious and mid-tier hotels will rise, the increase is likely to be much larger for luxurious hotels. On the other hand, the total revenue for cheap budget hotels is likely to fall.

Impact of higher foreign worker levy on total revenue of different hotel markets

- The foreign worker levy is a tax on the hiring of foreign workers, and an increase in the levy will increase the cost of operations for hotels due to higher labour costs.
- The supply curve for hotels will shift upwards, resulting in a rise in price and a fall in quantity.
- The direction of change in total revenue will depend on the magnitude of the price elasticity of demand for the hotel rooms.

- Price elasticity of demand measures the responsiveness of quantity demanded of a good to a change in its price, *ceteris paribus*. It is calculated by taking the percentage change in quantity demanded over the percentage change in price.
- When demand is price elastic, an increase in price leads to a more than proportionate decrease in quantity demanded, so the gain in revenue from charging higher prices is lesser than the loss in revenue from selling less output, hence total revenue falls.
- When demand is price inelastic, the opposite applies, and an increase in price causes total revenue to rise instead.

- Even though luxurious hotels cost more than the other types of hotels, the former tend to attract the rich and wealthy while the latter tend to cater to less well-off individuals.
- Hence, expenditure on stays at luxurious hotels is likely to take up a smaller proportion of their clientele's income than that for mid-tier/budget hotels.
- This means that demand for luxurious hotels is likely to be price inelastic while demand for mid-tier/budget hotels is expected to be price elastic.
- For a given decrease in supply due to an increase in foreign worker levy, the increase in price will lead to a less than proportionate fall in quantity demanded for luxurious hotels but a more than proportionate fall for mid-tier/budget hotels.
- Thus, total revenue for luxurious hotels tend to rise while that for mid-tier/budget hotels tend to fall following a hike in foreign worker levy.

Impact of Airbnb on total revenue of different hotel markets

- The rise of Airbnb would mean that travellers now have the option of staying at private accommodation instead of traditional hotels.
- Such residential sharing services increase the availability of substitutes to travellers, as both hotels and private accommodation serve the same function of providing temporary lodging.
- Consequently, the demand for traditional hotels falls as some travellers switch to staying at private homes instead during their stay in Singapore.
- The fall in demand will cause a fall in both price and quantity, hence a decrease in total revenue of hotels.

- However, as private accommodations available for rent on Airbnb often do not come with the standardised services found in luxurious full-service hotels, they are not able to effectively compete with these hotels for the high-end and business travellers.
- Hence, such private lodgings are usually not considered as close substitutes to luxurious hotels.
- On the other hand, such alternative private accommodations are likely to be considered close substitutes to mid-tier hotels and especially so to the cheap budget hotels where services and amenities are minimal.
- Thus demand and total revenue is likely to fall the most for budget hotels, followed by mid-tier and then luxurious hotels.

Combined impact on total revenue of mentioned events

- Given that budget hotels are likely to be considered inferior goods with a price elastic demand, the combination of the above factors is most likely to result in a fall in total revenue in the market from PQ to P1Q1 (Figure 1).

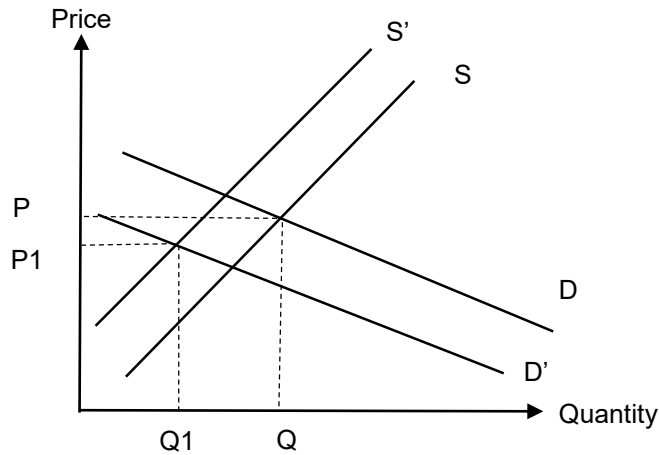


Figure 1: Impact on market for budget hotels

- For the luxurious and mid-tier hotel markets, because the events result in differing changes in revenue, it is necessary to determine the relative impact of the mentioned factors in order to conclude the likely change in total revenue.

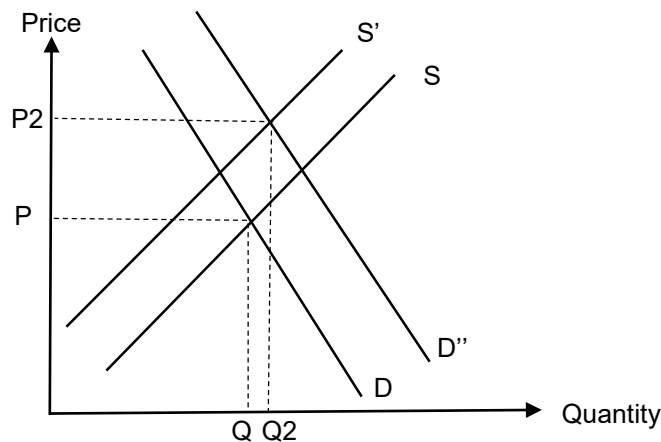


Figure 2: Impact on market for luxurious hotels

- For luxurious hotels, given the likely positive and high income elasticity and the likely low degree of substitutability with Airbnb accommodations, the impact on demand from rising affluence is likely to offset the impact from Airbnb so demand is likely to rise from D to D''
- Coupled with fall in supply along a price inelastic demand curve, total revenue is likely to rise from PQ to P2Q2 as seen in Figure 2.

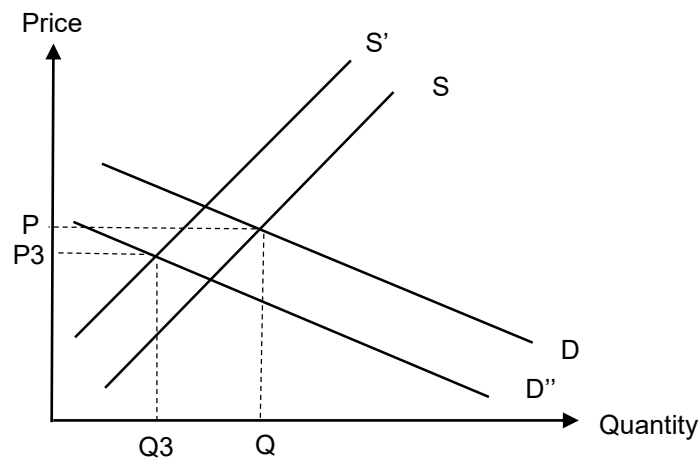


Figure 3: Impact on market for mid-tier hotels

- For mid-tier hotels given the likely positive but low income elasticity and the likely high degree of substitutability with Airbnb accommodations, the impact of Airbnb on demand is likely to exceed that from rising affluence, thus causing overall demand to fall from D to D''
- Coupled with the fall in supply along a price elastic demand curve, total revenue will likely fall from PQ to P3Q3

Conclusion

- In summary, given the characteristics of the different types of hotels, total revenues for budget and mid-tier hotels are likely to fall while total revenue for luxurious hotels is likely to rise.
- However, categorising hotels into luxurious, mid-tier and budget hotels is arguably an over-simplification of the hotel market in Singapore.
- The hotel market is highly differentiated with many sub-categories (e.g. boutique hotels, business hotels) which cater to a clientele that is widely varied in terms of income, needs and preferences.
- As each hotel is likely to have some market power, additional information on characteristics of each individual hotel is arguably required before more accurate assessments can be made.

Mark Scheme

L1	Recognize the impact of the mentioned events on the market for hotels	1-3
L2	Explain how the mentioned events will affect the overall market demand, supply and total revenue of hotels	4-10
L3	Analyse with diagrams how demand elasticities differ for different types of hotels and the resulting impact on total revenues	11-21
E	Assess the likely overall change in total revenue of the different types of hotels in the Singapore context	+4

2(a) With the aid of a diagram, explain how price discrimination benefits producers, consumers and society. [10]

Question interpretation

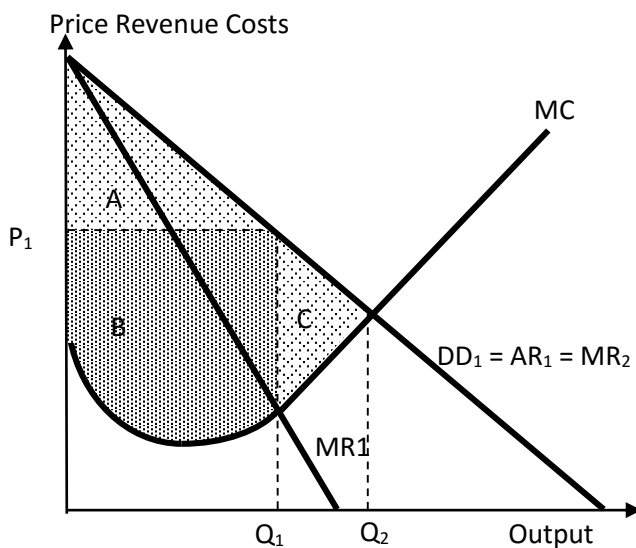
- What is price discrimination?
- How price discrimination works?
- How consumers, producers and society benefit from price discrimination?

Introduction

- Price discrimination refers to the practice of a firm charging different prices for the same product to different buyers, for reasons not associated with differences in costs.
- The essay aims to explain how firms engage in price discrimination before analysing the possible benefits to producers, consumers and society.

How does price discrimination work

- 1st degree price discrimination (also known as perfect price discrimination) is an extreme case of price discrimination where each buyer is charged the maximum price that he or she is willing to pay for each unit of the good.



- In the absence of price discrimination, the firm maximises profit by producing at output Q_1 where $MR_1 = MC$, and charges a price of P_1 along the demand curve $DD_1 = AR_1$
- If the firm engages in 1st degree price discrimination, it does not have to lower the price of previous units in order to sell the additional unit
- Hence the MR curve becomes MR_2 , which is equal to the demand curve $DD_1 = AR_1$
- The new profit maximising output now occurs at Q_2 , where $MR_2 = MC$

How does price discrimination benefit producers and consumers?

- Without price discrimination, the producer surplus (i.e. operating profits) = total revenue - total variable costs = $P_1 \times Q_1$ - area under MC until output Q_1 = area B
- With 1st degree price discrimination, producer surplus = total revenue - total variable costs = area between MR_2 and MC up to output Q_2 = area (A+B+C)
- The producer benefits as the rise in producer surplus = area (A+B+C) - area B = area (A+C)
- Without price discrimination, output between Q_1 and Q_2 would not be produced and consumed,
- However, with 1st degree price discrimination, the consumers that consume these units of output so they can be considered as having benefitted from such consumption

How does price discrimination benefit society?

- Without price discrimination, the firm produces at Q_1 where $P_1 > MC$ (or $DD > MC$)
- Each additional unit of output between Q_1 and Q_2 can generate welfare for society if they were produced hence there is a deadweight loss of area C due to this loss in potential welfare
- With 1st degree price discrimination, the firm produces at output Q_2 , thus enabling this deadweight loss to be recovered, hence society benefits from a rise in welfare

L1: Define price discrimination [1]

L2: Explain with a diagram how a firm engages in price discrimination [2-4]

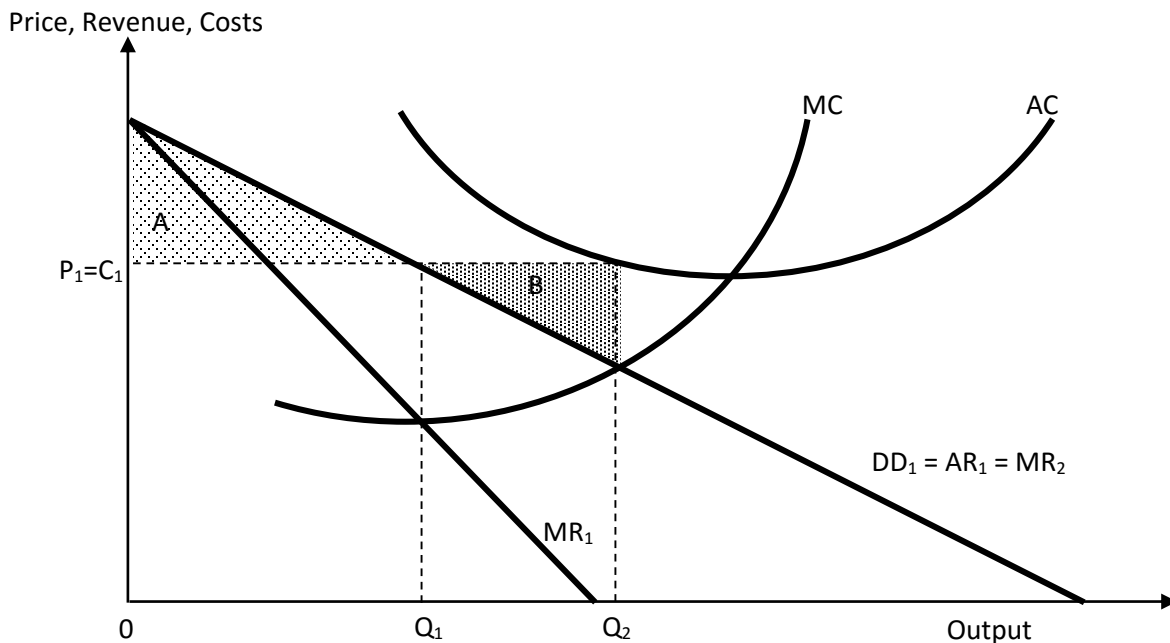
L3: Analyse benefits of price discrimination to producers, consumers and society [5-10]

Alternative answer

Introduction

- If the demand in a market is too low, it may not be economically viable for production to take place if the firm were to charge a single price for all its customers
- For example the population of a small town may be too low to profitably run a health clinic
- With price discrimination, cross subsidization and hence profitable production can occur, which will benefit the producer, consumers and society

How can 1st degree price discrimination enable cross subsidisation occur?



- In the diagram, the demand DD₁ is so low that it lies entirely below the average cost curve AC
- If a single price was charged, losses will be made even at the profit maximising price and output of P₁ and Q₁, where MC = MR₁
- As this market is not commercially viable without price discrimination, the good will not be produced in the long run.
- If the firm engages in 1st degree price discrimination, it does not have to lower the price of previous units in order to sell the additional unit, so the marginal revenue curve becomes MR₂ and output will be at Q₂, where MC = MR₂
- For example in a small town where the doctor knows the economic background of all his patients, he can make it a point to charge his poorer patients less without needing to lower his fees for his more wealthy patients
- From output 0 to Q₁, total revenue exceeds total cost by area A, while from output Q₁ to Q₂, total cost exceeds total revenue by area B.
- The profits that the doctor makes from his richer patients can be used to cross-subsidize the losses that he incurs from his poorer patients
- If area A is more than or equal to area B, a doctor can earn at least normal profits so he will be willing to set up a health clinic in that small town

How does cross subsidisation benefit producer, consumers and society?

- Since area A > area B, the doctor benefits as he is now able to earn supernormal profits
- While all consumers benefit because the good would not have even been available without price discrimination, the poorer patients benefit more as they pay less than the richer patients
- If the good were not produce, the loss in potential welfare i.e. the deadweight loss would be the entire area between DD_1 and MC from output 0 to Q_2
- However, with 1st degree price discrimination, Q_2 will be produced, hence society benefits because this deadweight loss will now be recovered.

L1: Define price discrimination [1]

L2: Explain how price discrimination enables cross subsidisation to occur [2-6]

L3: Analyse benefits of cross subsidisation to producers, consumers, and society [7-10]

(Note: 3rd degree price discrimination can also be used to explain the benefits to consumers from cross subsidisation. For example, the higher MRT fares paid by working adults can be seen as being used to cross subsidised the lower MRT fares paid by students and senior citizens, thus benefitting the latter. However, the limitation of using 3rd degree price discrimination is that the benefits to the producer and society can only be inferred but not explicitly illustrated)

2(b) Discuss whether in the real world, all firms big and small, aim to produce at their profit maximising output levels. [15]

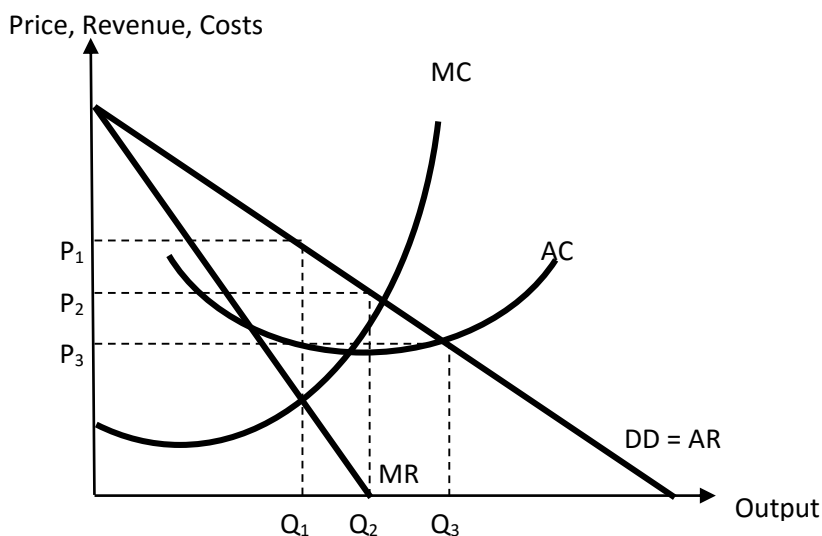
Question interpretation

- What is the short run profit maximizing output level in theory?
- What are the possible reasons why a firm may not want to produce at this output level?
- Why may a firm be unable to produce at this output level even if aim to do so?
- How likely will big and small firms in the real world produce at this output level?

Introduction

- In economic theory, in order to maximize profits, a firm sets its output at where marginal cost = marginal revenue and charge a price along the corresponding point along the demand curve
- This essay aims to first explain the possible reasons why a firm may not want to produce at this level before analysing why it may be unable to do even if it wants to
- It concludes by evaluating how likely will big and small firms in the real world produce at their profit maximising output levels.

What are the possible reasons why firms may not aim to produce at their profit maximising output?



- Due to the separation between ownership and management, which refers to the situation where the owners of the firm hire managers to run it, profit satisficing rather than profit maximising behaviour may arise
- This is because the performance of these managers are often tied to indicators like market share which can be measured in terms of revenue or output
- These managers thus aim to maximize these variables instead of profits, although they still need to achieve a profit level that is satisfactory to the owners.

- If the manager aims to maximize revenue, output will be at Q_2 where $MR = 0$ and the price will be at P_2 along the midpoint of the demand curve where the price elasticity is one
- Since $P_2 > AC$, supernormal profits are earned which is likely be satisfactory to the shareholders.
- If the manger instead aims to maximize output, then highest possible output that can be produced while still enabling normal profits to be earned will be Q_3 where $AC = AR$.
- Since normal profits are still earned, this should be just sufficient to keep shareholders satisfied
- If the shareholders require more than normal profit to be satisfied, then output will have to be correspondingly lower than Q_3 and price higher than P_3 .

- Another view is that large firms aim more to maximising long run profits which may be at the expense short run profits.
- Maximising revenue or output raises the firm's market share, which reduces the price elasticity of demand in the long run, thus raising the firms pricing power and profits.
- The same argument can be also applied to growth maximisation, where extra costs are incurred in extensive advertising, product development and capacity investments, which enable firms to gain a stronger foothold in the market.
- Although such expenditure inevitably reduces short run profits, they should pay off in the long run with the resulting expansion of the firm's demand and capacity.

Why may a firm be unable to produce at the short run profit maximising level even if it aims to do so?

- In the real world as information is imperfect, it may not be possible for all firms to accurately estimate marginal costs and marginal revenue in order to maximize profits
- Firms therefore often rely on simpler "rule of thumb" pricing models like 'cost plus pricing'
- Cost plus pricing involve estimating the average cost and attaching a mark-up to determine the price, such that $P = AC + m$.
- Instead of setting output at the profit maximising level where $MC=MR$, the firm instead decides on the amount of output to produce that is based on the expected demand for its goods and the amount of resources (e.g. financing) that its able to acquire
- Once the goods have been produced, the price the firm sets will include a mark-up that is over and above the average cost of production
- If the firm expects the demand for its product to be strong, then it will set a higher mark-up but if it expects demand to be weaker, then it will set a lower mark-up

Conclusion

- In reality, the divorce between management and ownership is more likely to occur for large public listed companies than for small and medium sized enterprises
- Also, capturing market share is arguably only important for oligopolies and not for small monopolistic firms as the latter's market shares are likely to be negligible in the first place
- Hence, my opinion is that small firms are more likely to set prices at $MC= MR$ than larger firms
- However, given that imperfect information arguably applies to both large and small firms, the most likely outcome is that neither big nor small firms set prices at $MC=MR$ in reality

L1: Recognise how firms in theory set their output at the profit maximising level [1-2]

L2: Explain why firms may not want to set output at this profit maximising level [3-8]

L3: Analyse why firms may be unable to set output at this profit maximising level [9-11]

E: Evaluate whether big and small firms in reality set output at their profit maximising levels [+4]

(a) Explain how consumers and producers in the process of maximising their own welfare enable the problem of scarcity to be managed in a free market. [10]

Question interpretation

- What is the problem of scarcity?
- How does consumer and producer maximise their own welfare?
- How does individual welfare maximisation create market forces?
- How are resources allocated by the market forces in a perfectly competitive free market?

Introduction

- The problem of scarcity arises because society's wants are unlimited but resources are limited.
- Since resources are scarce, the goods produced by resources are also scarce
- In a free market where consumers and producers aim to maximise their own welfare, the resulting market forces of demand and supply enables such scarce goods to be allocated.
- This essay this aims to explain how welfare maximisation by consumers and producers create the market forces of demand and supply before analysing how such market forces enable scarce goods to be allocated in a perfectly competitive free market.

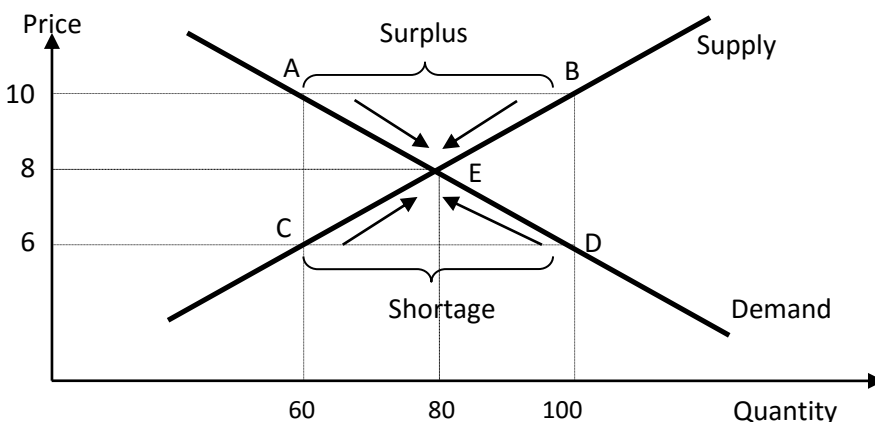
How does welfare maximisation by consumers create demand?

- A consumer seeks to maximize his satisfaction derived from the consumption of a good
- To maximise his welfare, the consumer will buy an additional unit of a good as long as the value of the expected satisfaction derived is greater than the price
- However, due to diminishing marginal utility, the satisfaction derived from buying and consuming each successive unit of a good decreases
- Hence when the price of a good decreases, the consumer will buy more units of the good, so there is an inverse relationship between price and quantity demanded
- This explains why the demand curve of an individual consumer is downward sloping

How does welfare maximisation by producer create supply?

- The producer seeks to maximize his welfare by maximising profits.
- The producer maximizes profit by selling an additional unit of a good when the price that can be earned is higher than the marginal cost of producing that unit
- Due to diminishing returns, where the output derived from employing the additional unit of the variable factor falls, marginal cost will rise with output
- Hence, when the price of a good increases, the new price now exceeds marginal costs so the producer increases profits by producing and selling more units
- There is thus a positive relationship between price and quantity supplied which explains why the supply curve of an individual producer is upward sloping

How do market forces allocate scarce resources?



- The market demand curve is the horizontal summation of the individual demand curve while the market supply curve is the horizontal summation of the individual supply curve
- In a perfectly competitive free market, the market equilibrium is achieved at the point where the market demand & supply curves intersect, such that quantity demanded is equal quantity supplied
- If the current price is \$10, the quantity supplied is 100 units while the quantity demanded is 60 units resulting in a surplus of 40 units
- To clear this surplus, suppliers will lower prices until the equilibrium price of \$8 is achieved such that quantity demanded rises from 60 to 80 units while quantity supplied falls from 100 to 80 units
- Conversely, if the price is \$6, the quantity supplied is 60 units while the quantity demanded is 100 units resulting in a shortage of 40 units
- To meet the shortage, suppliers will raise prices until the equilibrium price of \$8 is achieved such that quantity demanded falls from 100 to 80 units while quantity supplied rises 60 to 80 units
- In conclusion, consumers' and producers' attempts at maximising their own welfare create the market forces that enable the price of a scarce good to adjust such that it can be allocated from producers to consumers

L1: Define scarcity and/or the free market [1]

L2: Explain how welfare maximisation by consumers and producers create market forces [2-5]

L3: Analyse how the free market enables a scarce good to be allocated [6-10]

(b) Discuss whether government intervention is always necessary to ensure that scarce resources are allocated in the most efficient manner. [15]

Question interpretation

- What is efficiency?
- When is the free market efficient and when is it inefficient?
- How can government intervention improve efficiency and how may it worsen efficiency instead?
- Is government intervention always necessary to enable efficient resource allocation?

Introduction

- Allocative efficiency arises when resources are allocated in a way which enables society's welfare to be maximized.
- While the absence of market failure enables the free market to achieve allocative efficiency, the presence of market failure instead causes allocative inefficiency to arise
- Even though, government intervention to manage such market failures can enable allocative efficiency to be restored, the possibility of government failure nevertheless exists.
- The essay aims to first explain how free markets can result in both efficient and inefficient outcomes, before analysing how government intervention can also be efficient or inefficient.
- It concludes by evaluating whether government intervention **is** always necessary for efficient resource allocation to occur.

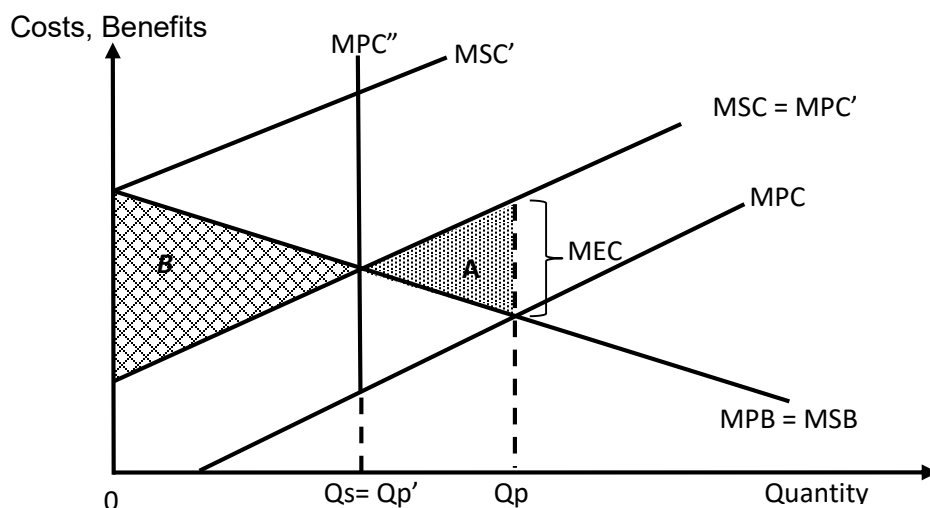
When will the free market be allocatively efficient?

- Allocative efficiency is achieved at an output Q_s where marginal social costs (MSC) is equal to the marginal social benefit (MSB)
- For any output below Q_s , there is potential welfare to be gained as $MSB > MSC$, so society's welfare can be increased if more of the good is produced and consumed
- For any output above Q_s , there is negative welfare generated as $MSB < MSC$, so society's welfare can be increased if less of the good is produced and consumed

- In the absence of market failure, the marginal private costs (MPC) is equal to the marginal social costs (MSC) and the marginal private benefit (MPB) is equal to the marginal social benefit (MSB)
- The free market will produce and consume at Q_p where $MPB = MPC$, which also coincides with Q_s where $MSB = MSC$, hence the market is allocatively efficient.

When will the free market be allocatively inefficient?

- As there are many sources of market failures, the essay aim to illustrate how market failure can arise from the existence of negative externalities
- Negative externalities refer to the adverse effects imposed on 3rd parties from the production or consumption of a good, where 3rd parties refer to those not directly involved in the good's transaction.
- For example when a steel plant emits toxic fumes into the air, the polluted air causes respiratory illness to those living nearby, who are the third parties as they do not transact in steel.



- Negative externalities cause MSC to exceed MPC by the marginal external cost (MEC).
- If we assume no positive externalities or merit good effects then $MPB = MSB$
- The private equilibrium quantity Q_p occurs where $MPB = MPC$ while the social equilibrium quantity Q_s occurs where $MSB = MSC$.
- Between Q_p and Q_s , $MSC > MSB$, so a deadweight loss of area **A** arises from the negative welfare generated, hence the free market is allocatively inefficient.

How can government intervention improve outcomes?

- If the government imposes a tax that is equal to MEC, this shifts MPC up to MPC' .
- The new private equilibrium quantity $Q_{p'}$ which occurs where $MPC' = MPB$, now coincides with the social equilibrium quantity Q_s , hence allocative efficiency is achieved.
- Alternatively, the government could impose a quota at $Q_{p'}$ which is equal to the socially optimum output of Q_s , thus causing the MPC to be perfectly inelastic at this output level i.e. MPC''
- In extreme cases where the negative externalities are so large such that the marginal social cost curve MSC' intersects the MSB at the vertical axis, then socially optimum output level is zero
- In this situation, it is socially optimal for the government to ban the production of the good where a ban is equivalent to setting the quota at output zero
- For example some countries ban the production of nuclear energy because of the potential extreme environmental devastation that could arise if there was a serious radiation leak

How can government intervention worsen outcomes?

- When the externalities are not that severe, banning the good might involve a greater welfare loss as compared to no intervention
- If the marginal social costs was at MSC (rather than MSC'), imposing a ban causes a welfare loss of shaded area **B** which is more than area **A**, the welfare loss generated by free market provision
- Since the post intervention outcome is worse than pre-intervention, government failure arises.

Conclusion

- The markets for most goods and services generally exhibit little or no market failure and government intervention in such markets is actually distortionary
- Even when there is significant market failure, due to imperfect information, governments may wrongly estimate the social cost or benefits, hence resulting in excessive intervention which can worsen rather than improve outcomes.
- **In reality government failure is not uncommon** as policy decisions are often influenced by not only economic but also social and political considerations.
- Hence I would argue that it is not always necessary for governments to intervene in markets for efficient allocation of resources to be achieved.

L1: Define allocative efficiency and a relevant type of market failure [1-2]

L2: Explain how free markets can result in efficient and inefficient outcomes [3-6]

L3: Analyse how government intervention can improve but also worsen resource allocation [7-11]

E: Evaluate whether such government intervention is always necessary to ensure efficient resource allocation [+4]

4(a) Explain the possible economic trade-offs faced by a small and open economy. [10]

Question interpretation

- What are some possible economic trade-offs?
- How does the size and openness of the economy dictate the kind of trade-offs an economy faces?

Introduction

- Macroeconomic trade-offs refer to two desirable but necessarily incompatible aspects of the economy
- A small economy generally has a small domestic population and thus limited domestic demand, while a globalised economy is one which is highly reliant on trade and international factor flows.
- This essay aims to explore some of these trade-offs that are characteristic of a small and open economy.

Internal versus external stability

- A small and open economy is likely to manage its exchange rates to better regulate the impact of trade on the economy as it is likely to be both export and import dependent
- If the central bank undervalues exchange rate by selling its own currency in the forex market, this leads to an overall BOP surplus, which raises money supply, thus potentially causing demand-pull inflation.
- If the central bank overvalues the exchange rate by buying back its own currency in the forex market, this leads to an overall BOP deficit, which causes money supply to contract, thus potentially curbing aggregate demand, output and employment.
- Hence, maintaining external stability could result in greater internal instability.
- Alternatively, efforts to maintain internal stability could result in external instability.
- If a small and open economy tries to fight inflation by raising interest rates, in the absence of capital controls, hot money inflows leads to an appreciation of the exchange rate.
- This could erode export competitiveness, harm the country's exports, worsen the country's BOT and potentially lead to demand-deficient unemployment.
- On the flipside, if the country lowers interest rates to fight demand-deficient unemployment, hot money outflows leads to a depreciation of the exchange rate, hence bringing about imported inflation.

Long run growth versus macroeconomic stability

- A small and open economy is likely to rely on trade and foreign capital to drive its economic growth.
- Given its small domestic population and thus limited source of internal demand, a small open economy has to look outwards in order to sustain actual growth, both in the short and long term.
- However, as external sources of growth like exports or foreign capital can potentially be very volatile, higher economic growth often comes at the expense of greater macroeconomic stability
- Conversely, if a small open economy were to hedge itself against external macroeconomic risks by shifting towards a consumption driven growth model or an import-substitution industrialisation model, its long run growth would likely be lower.

Long run growth versus equity

- Reducing income inequality can be achieved by raising corporate taxes and making the personal income taxes more progressive
- However, raising corporate taxes discourages inflows of FDI and foreign portfolio investments, thus adversely affecting both the quantity and quality of investments.
- Making personal income taxes more progressive often involve raising tax rates on high income earners, which will not only deter the inflow high skilled labour but also drive local high skilled labour overseas
- Such reductions in the quality and quantity of capital and labour will adversely affect long-run growth.
- Conversely, attempts to raise long run growth by attracting FDI and foreign portfolio investments as well as foreign high skilled labour with lower and less progressive direct taxes will worsen income distribution.
- As a small open economy tends to be more dependent on foreign capital and labour, the trade-off between growth and equity is likely to be greater

Inflation and unemployment

- Achieving full employment requires the AD curve to rise up along the upward sloping portion of the AS curve, thus resulting in higher prices
- A larger rightward shift of the AD curve results in lower unemployment but also higher prices, hence there is a trade-off between inflation and unemployment (illustrate with a diagram).
- Compared to larger economies, smaller ones are likely to face more serious land and labour constraints, so factor prices will likely be bid up more quickly, thus causing the trade-off to be more severe.

Suggested Mark Scheme		
L1	Identify the macroeconomic trade-offs of the Singapore economy.	1
L2	Explain the macroeconomic trade-offs but in very general terms, without consideration of a small and open economy.	2 – 5
L3	Analyse the various trade-offs in the context of a small and open economy.	6 – 10

4(b) Discuss the effectiveness of the policies currently adopted by the Singapore government to manage these trade-offs. [15]

Question interpretation

- What are policies currently adopted by Singapore to deal with the possible economic trade-offs?
- How do these policies work to avoid or reduce these trade-offs?
- How effective have these policies been in avoiding or reducing these trade-offs?

Introduction

- The existence of economic trade-offs means that governments need to either choose policies which enable such trade-offs to be avoided or if not employ additional policies to mitigate the unintended consequences
- This essay thus aims to first analyse such policies that the Singapore government has employed before evaluating their effectiveness in achieving their intended outcomes

Internal versus external stability

- While attempting to achieve external stability by managing the exchange rate, MAS has to allow domestic interest rates to follow world interest rates because Singapore needs free international capital mobility to function as an international financial centre.
- With major economies like the US, the EU and Japan all having near zero interest rates, this has caused Singapore's interest rates to also be very low, thus resulting in a property market bubble and also higher inflation because of escalating COE prices
- The Singapore government has managed the resulting internal instability with property cooling measures e.g. raising of the Buyer's Stamp Duty and implementing the Total Debt Servicing Ratio (TDSR).
- By taxing property purchases and placing tighter limits on households' ability to borrow, this has quelled the demand for mortgages and car loans, thus slowing the growth of housing and car prices.
- These policies have arguably been effective as housing prices have since fallen by about 10% from the height of the property market boom in 2013 and COE prices have also been declining since the TDSR was implemented.

Economic growth and macroeconomic instability

- While a high dependence on trade and FDI has enabled Singapore to grow strongly, this has caused Singapore to be very susceptible to external demand and supply shocks.
- The Singapore government reduces the extent of such trade-offs by diversifying the country's export and import markets through the establishment of a plethora of bilateral and multilateral FTAs
- Singapore also uses supply side policies to counter external demand shocks, which not only boosts output and employment in the short run but also promotes potential growth in the long run
- One such policy is the Wage Credit Scheme which is essentially a wage subsidy that lowers production costs, thus shifting the AS curve downwards thereby boosting output and employment during a recession
- Wage subsidies also help to improve the cash flow of firms thus minimising bankruptcy, thereby helping to preserve productive capacity so that economy recovers faster when the global markets eventually pick up

- Such supply side policies have arguably been very effective as evident by Singapore's stellar 14.5% growth in 2010, which occurred right after the 2009 recession that was caused by the global financial crisis

Long run growth versus equity

- To promote long run growth, Singapore has always relied on inflows of FDI and foreign skilled labour
- To attract such investments and labour, Singapore has one of the lowest corporate and personal income tax rates in the developed world
- However, Singapore Gini's coefficient has also increased substantially over the years, thus illustrating the trade-off between long run growth and equity
- To counter rising income inequality, the Singapore government has increased transfer payments to the low-income group in the form of larger tax rebates and direct transfers like Workfare which works like a wage subsidy that is targeted at low-wage workers.
- Unlike unemployment benefits which reduce the incentive to work, such targeted wage subsidies create the incentive for employment, hence greater equity can be achieved without jeopardising long run growth
- These policies have arguably been effective as Singapore's Gini coefficient (before transfers and taxes) has declined from 0.482 in 2007 to 0.464 in 2014.
- Singapore's Gini Coefficient after transfers and taxes is also significantly lower at 0.412 in 2014, which arguably shows that substantial redistribution of income has occurred

Conclusion

- The Singapore government has used a variety of policies to either avoid or reduce the mentioned trade-offs and the evidence so far shows that they have been largely effective in achieving their intended objectives
- Nevertheless, as a small open economy in an increasingly complex globalised environment, new trade-offs are bound to arise
- Hence the Singapore government must continue to look ahead so that it can foresee and implement appropriate policies to deal with such unintended consequences.

Suggested Mark Scheme		
L1	Identifies the relevant macroeconomic policies used by the Singapore government.	1 – 2
L2	Explain the various macroeconomic policies without considering how they help manage the trade-offs.	3 – 6
L3	Analyse the various policies in context of the macroeconomic trade-offs.	7 – 11
E	Evaluate the effectiveness of the macroeconomic policies.	+4

5. According to data from the World Bank, 2014 GDP (PPP adjusted) figures were US\$17.6 trillion and US\$17.4 trillion dollars for China and USA respectively. However if GDP statistics are not adjusted for cost of living, the U.S. economy still dwarfs China's, at US\$17.4 trillion versus US\$10.4 trillion.

(a) Explain the indicators that could be used to complement or replace GDP, when measuring the various aspects of standards of living [10]

Question interpretation

- What is meant by living standards and its various aspects?
- How does GDP measure living standards?
- How can some indicators be used to complement GDP?
- How can some indicators be used to replace GDP?

Introduction

- Living standards can be defined as the happiness and well-being of the average resident of a country and it consists of both material and non-material aspects
- GDP measures the value of final goods and services produced within the geographical boundaries of the country in a year.
- This essay aims to first explain how GDP can be used to measure living standards and before analysing why other indicators could be used to complement or replace GDP, when measuring the various aspects of living standards.

How can GDP be used to measure material living standards?

- Material living standards refer to the amount of goods and services that can be purchased and consumed by the average resident.
- Since the production of goods and services also generate income for the owners of the factors that are used for such production, GDP also measures the income that is generated by a country
- As income affects the quantity and quality of goods that can be consumed, GDP can be used as an indicator of both the economic performance and standard of living of a country.

What are the indicators than can be used to complement GDP as a measure of living standards?

- General price levels or consumer price index (CPI)
 - Prices could have risen faster than nominal GDP thus eroding the real purchasing power of the individual and living standards in the economy.
 - To account for inflation, we can divide nominal GDP over CPI so that real GDP (as compared to the base year of the CPI) can be measured
- Population
 - If population grows faster than GDP, then each person will see a fall in his living standards
 - Hence real GDP per capita which can be calculated by dividing real GDP over population, would be a better indicator of the living standard of the average resident of the country
- Gini coefficient
 - If rising income is accompanied by greater inequality in income distribution, then living standards may be overstated as income may only be rising for the minority of the richer households, rather than for majority of the poorer ones.
 - The Gini coefficient is an indicator of income inequality can be used measure how income is distributed for the whole country
 - A rise in real GDP per capital would only indicate an improvement in material living standards if the GINI were to remain unchanged or improved (a decrease in the coefficient)
- Indicators of non-material living standards

- Non-material living standards refer to other aspects affecting the quality of life like the quality of the living environments and the amount of stress faced in society.
- Including non-material welfare indicators can be used to complement real per capita GDP to provide a more holistic measurement of all aspects of standard of living.
- Specific social welfare / development indicators include
 - Health indicators: life expectancy, infant mortality, no. of doctors & nurses per unit population
 - Education indicators e.g. literacy rate (primary education), % of population with secondary & tertiary education
- A key area affecting the quality of life is the quality of the environment e.g. the air pollution in China's most populated cities is very high and such hazardous levels result in heart, lung and stroke
- Since pollution is unaccounted for in national income statistics, indicators such as the various types of pollution indexes can be used to complement real GDP per capita when assessing a country's living standards

What are the indicators than can be used to replace GDP as a measure of living standards?

- Gross National Product (GNP)
 - When measuring GDP the production process may either make use of the factors of production owned by the citizens of the country or involve the factors of production owned by foreigners.
 - Hence GNP could be a more accurate indicator as it includes net property income from abroad.
 - GNP and GDP figure can be vary significantly if the country has a large number of citizens working overseas and has large outflows of FDI.
 - In such an instance, remittances, transfers and income from overseas need to be included to get true gauge of the purchasing power and hence living standards of a country
- Composite indicators
 - Composite indicators such as HDI includes PPP adjusted GDP as well as school enrolment, adult literacy and life expectancy.
 - MEW includes national income that estimates for non-market output and deductions for 'regrettables' e.g. spending on commuting to work, national defence, law enforcement, negative externalities and initial spending on consumer goods.
 - These composite indicators can measure the various aspects of living standards more holistically since they incorporate non-material aspects as well.

L1: Recognize the meaning of living standards and the various indicators [1-2]

L2: Explain how indicators could be used to complement or replace GDP [3-8]

L3: Analyse how indicators could be used to complement or replace GDP when measuring various aspects of standards of living [9-10]

(b) Discuss the problems of using PPP adjusted GDP in making international comparisons of the various aspects of living standards between these two countries. [15]

Question interpretation

- Why do we use PPP-adjusted GDP to compare living standards between countries?
- What are the limitations of using PPP adjusted GDP?
- What are problems of using national income figures to compare living standards between countries?
- Which problems are more important in this context of US vs China?

Introduction

- Purchasing power parity (PPP) is an exchange rate that is derived by equating the price of an identical good or a common basket of goods between two different countries.
- While using PPP helps to overcome the problems with using market exchange rates when comparing national income between countries, there are also limitations to using this approach
- In addition, using national income statistics to compare living standards between different countries also involve other problems associated with calculation and interpretation.

- This essay thus aims to first explain need for PPP adjusted GDP and the limitations of using this measure before analyzing the other problems of comparing national income between US and China
- It concludes by evaluating the extent of these problems when comparing between US and China

Why do we use of PPP adjusted GDP to compare material living standards between countries?

- When comparing material living between countries, conversion of national income values to a common currency is required
- Typically, such conversions use market exchange rates which can be inaccurate because it fails to account for the difference in price levels between countries
- For example if the market exchange is £1 = \$1.50 and the GDP per capita of the UK and the US are £2000 and \$3000 respectively, then the national income and hence material livings standards in both countries will be the same at \$3000 when converted to US dollars
- However, if an item that costs £1 in UK only \$1.20 in US, then the cost of living in the US is relatively lower than what the market exchange rate suggests
- To account for this difference in the cost of living, the PPP exchange rate can be derived by equating the prices of the two items, thus resulting in a PPP derived exchange rate of £1 = \$1.20.
- By using this PPP exchange rate to convert the GDP per capita of the UK into US dollars, UK's GDP per capita will then be \$2400 which is lower than the US figure of \$3000
- Adjusting for PPP thus enables the relatively lower cost of living in the US (or conversely the higher cost of living in the UK) to be accounted for, thus providing a more accurate comparison of living standards

Limitations of using PPP adjusted GDP to compare material living standards between countries

- While the above examples use only one good to derive the PPP exchange rates, economists in reality try to calculate PPP using a common basket of goods.
- However consumption patterns may differ between countries, as the items that are consumed in one country may not be consumed to the same extent or even consumed at all in another.
- For example European countries consume winter wear, which is often not consumed at all by most Singapore households due to their tropical climate.
- Hence finding goods which are common and allocating the weights to each good that accurately represents both countries' spending pattern is subjective
- Also, for the PPP basket to provide a fair and comprehensive representation of a country's cost of living, a fairly large amount of goods and services need to be included in the basket
- Calculating PPP accurately can therefore be very resource intensive as it takes time and effort to compile and monitor the prices of a wide variety of goods

Calculation problems when using NIS to compare living standards between countries

- Calculation issues include data collection problems, non-marketed activities and underground activities
- For example, while both China and US have a very large population and land area, China is less developed than US, so data on economic activity is often not fully recorded in the more rural areas.
- Also the extent of specialisation in developing countries such as China tend to be lower so they are likely to have more subsistence activities and hence a larger non-marketed sector
- China could have weaker law enforcement and may therefore have more underground activities as the incentive to un-declare their income to avoid paying income taxes is higher
- With a greater prevalence of unrecorded economic activity, China's true GDP per capita and hence material living standards is likely to be understated as compared to the US.

Interpretation problems of using NIS to compare material living standards between countries

- Differences in composition of output causes inaccuracy when comparing living standards between countries as it is consumption rather than other GDP components, which contribute to material welfare
- As China is still developing, its need for capital accumulation is much greater than the US, hence China's investment as a percentage of GDP is much higher

- Furthermore, being much more export oriented, China's exports as a percentage of GDP is also much higher than the US
- Hence using GDP per capita to compare living standards between China and the US is likely to be overstate China's material welfare
- On another note, compared to the US, China lacks unemployment and retirement benefits
- Also China's regulations on household registrations causes its migrant workers to be ineligible for social welfare benefits outside their home villages
- Hence, relatively lower welfare spending in China causes its government consumption as a proportion to GDP to be lower than that of the US, which also leads to China's living standards to be overstated

Interpretation problems of using NIS to compare non-material living standards between countries

- Due to weak environmental and labour laws, widespread pollution, illegal child workers, long working hours and harsh working environments tend to be more prevalent in China than in the US, hence China's non-material welfare tends to be relatively lower
- Since GDP per capita does not account for such non-material aspects, using such figures to compare the overall living standards between the US and China will overstate China's overall living standards.
- This inaccuracy is further compounded since higher work-related stress leads to more expenditure on healthcare while greater environmental damage results in more expenditure on environmental remedies, which causes GDP to be higher although living standards has not really improved.

Conclusion

- Although estimating PPP in a holistic manner is subjective and resource intensive, there are other reasonably accurate but easier ways to estimate PPP (e.g. the Economist Magazine's Big Mac Index)
- Also as China is already an advanced developing economy, calculation problems arising from unrecorded economic activity though present, are not overwhelming
- In contrast, the interpretation problems that come from using GDP per capita to compare living standards between China and US remain intractable
- Hence I would argue that interpretation problems are the most serious set of problems among the 3 set of problems discussed in this essay.

L1: Recognize the meaning of PPP adjusted GDP [1]

L2: Explain the reasons for using PPP adjusted GDP and various problems of comparing living standards between countries [2-7]

L3: Analyze the problems of using PPP adjusted GDP when comparing living standards between US & China [8-11]

E: Evaluate the extent of problems in the given context [+4]

6. The US's massive and sustained trade deficit is long term macroeconomic problem that is caused primarily by China's currency manipulation. Hence, imposing protectionist measures against Chinese imports is not only fair but also effective and beneficial. Do you agree? [25]

Question interpretation

- What is meant by trade deficit and protectionism?
- Why is a large and sustained trade deficit a long term macroeconomic problem?
- How can China's currency manipulation cause the US to face large and sustained trade deficits?
- What are the other possible causes of US's large and sustained trade deficits?
- How can protectionism improve US's trade deficit and what are the limitations?
- How fair, effective and beneficial is it for the US to impose protectionism against China?

Introduction

- A trade deficit occurs when a country's import spending exceeds its export revenue
- Protectionism refers to the act of protecting domestic firms and workers from foreign competition and can be used as a form of expenditure switching to help correct a trade deficit
- The essay thus aims to explain why a trade deficit could be a long term macroeconomic problem and how the US deficit may be caused by China undervaluing the yuan against the US\$
- This is followed by an analysis of other possible causes of US's trade deficit, and the usefulness of protectionist measures in reducing such deficits
- It concludes by evaluating whether US protectionism against China is fair, effective and beneficial

Why is a large and sustained trade deficit a long term macroeconomic problem?

- A trade deficit means that the country is not earning enough from its exports to pay for its imports.
- Under a flexible exchange rate, this means that the country is financing some of its imports from either foreign borrowing or from selling of its domestic assets to foreigners.
- With greater foreign debt and foreign ownership of domestic assets, more of the country's future income flows out to foreigners in the form of interests, rents, dividends and profits
- Hence, a country that is facing a trade deficit is enjoying higher current consumption but at the expense of future welfare.
- A large and sustained trade deficit means that this sacrifice in future welfare is prolonged and substantial

How can China's currency manipulation cause the US to experience large and sustained trade deficits?

- China manages the yuan against the US\$, thus keeping the exchange rate stable in order facilitate trade and foreign investment
- To make its exports more competitive and also to accumulate foreign reserves which can be used to defend the peg if the need arise, China generally undervalues the yuan by selling it for US\$ in the foreign exchange market, thus keeping the value of the yuan below its free market equilibrium
- China's large BOP surpluses and continued accumulation foreign currency reserves are evidence of such currency manipulation
- From the US perspective, the undervalued yuan results in cheap imports from China which causes the quantity demanded for such imports to be high, while costly exports to China causes the demand for such exports to be low.
- As a result, US's import spending significantly exceeds its export revenue, thus giving rise to a large trade deficit
- As long as the yuan is significantly undervalued, the large trade deficit remains, which explains why the deficit is sustained

What are some other possible causes of the US's large and sustained trade deficit?

- US industries could be uncompetitive for a variety of other reasons
- Firstly, being much less developed and more populous, China is more labour abundant so labour costs tend to be much lower in China than in the US
- In addition, firms in the US may be facing significantly higher labour costs than China because it has stronger trade unions or higher minimum wages
- Secondly, the US could have under-invested in training and education, thus making it slow to adapt to changes in comparative advantage due the resulting lack of skills and labour mobility
- As a result, US is unable to export enough goods in which they have comparative advantage in, hence causing its export earnings to be insufficient to cover its import spending
- The US trade deficit can also be due to its savings and budget deficits
- Income (Y) is either spent on consumption (C), saved (S) or used to pay taxes (T) while AE consists of investment (I) government spending (G) and the trade balance (X – M)

At equilibrium, $Y = AE$

$$\Rightarrow C + S + T = C + I + G + (X - M)$$

$$\Rightarrow (S - I) + (T - G) = (X - M)$$

- A country that is facing a trade deficit i.e. ($X < M$), must hence be experiencing a savings deficit ($S < I$) and/or a government budget deficit ($T < G$), indicating that the households and/or the government are being too spendthrift and 'living beyond their means'.
- The US is known to have a culture of consumerism, resulting in excessive spending by households, thus leading to a savings deficit
- The US government has also been running large budget deficits for decades possibly caused by excessive spending on welfare programs and on fighting costly foreign wars

How can protectionism improve US's trade deficit and what are the limitations?

- Protectionism is a form of expenditure switching policy which work primarily by restricting imports
- By imposing tariffs and quotas on Chinese imports, this induces US firms and households to buy less imports from China so import volumes, expenditure and hence the trade deficit is reduced
- There are however various limitations of imposing protectionism
- China might retaliate by restricting imports from the US, thus causing the latter's exports and hence its trade balance to worsen
- Even if China does not retaliate, there are still beggar-thy neighbour effects as the decline in China's exports to the US leads to a decline in China's AD, output and income, thus causing China to import less from the US
- As China is probably quite a large export market for the US, the resulting reduction in US's exports arising from retaliation and beggar thy neighbour effects can be quite substantial
- Protectionism fosters inefficiency and hampers innovation as the reduction in foreign competition causes US firms to be complacent, which reduces the motivation to keep costs down and to developed new or improved products
- As protectionism raises the price of imports from China, cost push inflation arises
- Finally, protectionism can cause demand-pull inflation if it causes AD to rise when the US economy is near or at full employment

Conclusion

- The analysis has shown that there could be many other valid causes of the US's trade deficit besides China's currency manipulation, hence blaming China and imposing protectionism is arguably unfair
- Furthermore, the effectiveness of protectionism are likely to be limited due to beggar-thy-neighbour effects and potential retaliation by China
- Finally as imposing protectionism has large trade-offs in terms of fostering inefficiencies and causing inflation, the cost of such measures could arguably outweigh the benefits
- Hence my final opinion is that the imposition of protectionism by the US against China is neither fair, effective nor beneficial
- To manage its trade deficit, my view is that US should first clean up its own backyard by boosting its own competitiveness, savings and by balancing its budget, before pointing fingers at others.

L1: Define trade deficit and protectionism [1-3]

L2: Explain why a large and sustained trade deficit is a macroeconomic problem and the possible causes of such deficits in the US context [4-13]

L3: Analyze how protectionism can be used by the US to reduce its trade deficit and the limitations of doing so [14-21]

E: Evaluate the fairness, effectiveness and benefits of US imposing protectionism against China [+4]

VICTORIA JUNIOR COLLEGE

2015 JC2 PRELIMINARY EXAM

H1 ECONOMICS – PAPER NO. 8819

16 September 2015

08:00 – 11.00 am

Wednesday

3 hours

Additional Materials: Answer Paper

READ THESE INSTRUCTIONS FIRST

Write your index number and name on all the work that you hand in.

Write in dark blue or black pen on both sides of the paper.

You may use a soft pencil for any diagrams, graphs or rough working.

Do not use staples, paper clips, highlighters, glue or correction fluid.

At the end of the examination, fasten all your work securely together, by question, using the strings provided.

Start each question on a FRESH piece of paper.

Section A

Answer **all** questions.

The number of marks is given in [] at the end of each question or part question.

Section B

Answer **1** question.

The number of marks is given in [] at the end of each question or part question.

This document consists of 8 printed pages.

Section A

Answer **all** questions in this section.

Question 1

Health Care Markets

Table 1: Health care cost

Country	Health care cost as percentage of GDP	Health care cost per capita (US\$)
Singapore	4.5	2,426
Hong Kong SAR	5.3	1,944

Source: www.bloomberg.com

Extract 1: Cost of ageing population Singaporeans' top worry

The number one worry of Singaporeans is the cost linked to the growing pool of old folk, according to a global survey commissioned by global insurer Swiss Re. Singapore is projected to have one in five people aged 65 or older by 2030. As the country greys, a critical quotient is the gap between the cost of meeting people's needs in health care and what is available from government schemes to cover these costs, said Ms Marianne Gilchrist, Swiss Re's head of health solutions, Asia. While Singapore's gap is not as high as other countries', it is still a "substantial" amount which will strain public and individual finances, Ms Gilchrist said. The need for the various health care players to team up to bridge the gap cannot be overemphasised, she added. How to do it was a topic discussed at a Swiss Re closed-door symposium, attended by regional life insurers, academics and government officials. Popular solutions raised include the Government focusing on early intervention and promoting healthy living, and implementing policies that "nudge" people to change their behaviour.

Source: The Straits Times, 23rd October 2013

Extract 2: Markets don't work for health care

Health is not only a benefit to the individual, but to society as a whole. One's health makes others better off. Healthier societies are wealthier, because they take advantage of more of their human potential. Sicker societies underinvest in human capital because early death or chronic illness reduces the payoff from education. If we relied strictly on market forces to provide health care, we'd be sicker and poorer.

Source: MarketWatch, 20th August 2009

Extract 3: Singapore losing 'medical tourism to neighbours'

Singapore is finding it harder to retain its title as the region's top medical tourism hub as patients eye cheaper options elsewhere while government support for the sector wanes, a new report has warned. It also noted that the challenges will only intensify as improved standards in neighbouring cities test the high prices here, which are further exacerbated by a strong Singapore dollar. A heart bypass in Singapore costs 41 per cent more than in Thailand and 106 per cent more than in Malaysia, BMI Research found. While higher prices here have traditionally been justified by the high level of treatment offered – Singapore is

ranked sixth out of 191 countries globally and the best in Asia by the World Health Organisation – this gap in standards has begun to close. Private health care providers in Thailand are gaining international accreditation and private hospitals such as Bangkok's Bumrungrad International have rapidly expanded into specialist services – once a key competitive advantage for Singapore, said the report out yesterday.

Meanwhile, the expansion of private health care providers overseas has also lowered the need for medical tourism, while reducing these firms' own need to market their services in Singapore. Raffles Medical Group, one of the largest private operators here, has three medical centres in Hong Kong and one in Shanghai. Malaysian firm IHH Healthcare, which owns major hospitals including Mount Elizabeth Novena and Gleneagles Singapore, operates in Vietnam, Brunei and China. The report noted that the Singapore dollar has risen 24 per cent against the Indonesian rupiah over the past two years. "This has had significant ramifications as the Indonesian market accounted for 56 per cent of total medical tourism revenues in 2013," it said. Revenue from Indonesian medical tourists in 2013 was \$463 million, down 38 per cent from 2012, according to the Singapore Tourism Board's (STB) latest data. Total medical tourism receipts in 2013 fell 25 per cent from 2012.

Growth has also been limited as government support for the industry once identified as a potential driver of the economy has cooled, said the report. SingaporeMedicine – a government-industry initiative launched in 2003 to promote Singapore as a world-class health care destination – now has its online presence redirected to the STB website. In contrast, governments in competing hubs have become more "aggressive" in attracting medical tourists, said the report. Last month, the Malaysian authorities disclosed a 30 per cent discount on Malaysia Airlines airfares for Bangladeshi patients seeking treatment in the country.

Adapted from: The Straits Times, 8th May 2015

Extract 4: Impact of medical tourism in Asia

National governments anticipate many benefits from medical tourism. There are financial benefits generated from health services and associated visitor spending. Human resource benefits can be gained by using medical tourism to attract back health workers who have emigrated — reversing the 'brain drain'. Benefits may include the expansion of health-sector infrastructure and also roads and telecommunications. Equity may be improved by hospitals cross-subsidising care for domestic patients, or helping to fund capital investment. Capital investments, such as MRI scanners, can then be used by all patients in the hospital or health system.

So do these anticipated benefits occur? The truth is that we simply do not have enough data on country indicators. The involvement of transnational corporations may result in profits from medical tourism and ancillary activities being remitted overseas. While some evidence suggests medical tourism generates modest contributions to GDP, there are concerns about human resource migration to the private sector, with professionals lured by better salaries and work opportunities. It is possible resources will be taken away from the domestic population and instead invested into private hospitals, where foreign patients benefit from a high staff-to-patient ratio and expensive, state-of-the-art medical equipment. Such private activity is further supported by tax breaks and public subsidies for the training and education of health workers.

Source: East Asia Forum, 13th February 2014

Questions

- (a) i) With reference to Table 1, contrast the health care cost as a percentage of GDP and the health care cost per capita for Singapore and Hong Kong. [2]
- ii) Suggest a reason for the difference in (a)(i) [2]
- (b) Using the concept of opportunity cost, explain how rising health care expenditure caused by an ageing population will impact a country's economic growth. [3]
- (c) Explain why health care markets fail. [5]
- (d) i) What can you conclude about the price elasticity of demand of medical tourism in Singapore? [2]
- ii) Using demand-supply analysis, assess the reasons behind the fall in medical tourism receipts for Singapore. [8]
- (e) With the help of the data and your own knowledge, discuss whether the Singapore government should protect medical tourism as an export industry. [8]

[Total: 30]

Question 2

Economic Growth and Policies

Table 2: % change in real gross domestic product (GDP)

	2009	2010	2011	2012	2013
Japan	-5.5	4.7	-0.5	1.8	1.6
USA	-2.8	2.5	1.6	2.3	2.2
China	9.2	10.6	9.5	7.8	7.7
Germany	-5.6	4.1	3.6	0.4	0.1

Table 3: Unemployment (% of total labour force)

	2009	2010	2011	2012	2013
Japan	5	5	4.5	4.3	4
USA	9.4	9.7	9	8.2	7.4
China	4.4	4.2	4.3	4.5	4.6
Germany	7.7	7.1	5.9	5.4	5.3

Table 4: Government budget balance (% of GDP)

	2009	2010	2011	2012	2013
Japan	-8.8	-8.3	-8.8	-8.7	-9.3
USA	-12.8	-12.2	-10.7	-9.6	-6.4
China	-1.1	-0.7	0.1	-0.3	-0.7
Germany	-3.1	-4.2	-0.8	0.1	0

Table 5: Components of GDP in selected economies (% of total), 2013

	Exports	Domestic consumption
Japan	16.2	61.1
USA	13.5	68.5
China	23.3	36
Germany	45.6	55.9

Sources of Tables 2 to 6: OECD and World Bank

Extract 5: Japan spurs talk of currency war

The Bank of Japan has launched quantitative easing on a vast scale in an effort to revive the Japanese economy. This creation of new money has caused Japan to come under fire for deliberately weakening its currency to spur demand for its exports.

But the fact remains that a weaker yen, which makes Japanese goods more competitive in the global market, is a boon for Japan's economy. On the other hand, Germany's economy is struggling. German exporters could feel the pinch if the euro appreciates against the yen which may exacerbate the slowdown in growth. Beyond that, there's concern that other

nations could take similar steps, leading to competitive devaluation, also known as a currency war.

Officials in Korea and Thailand were the latest to voice concern over the rapid appreciation of their currencies as monetary easing in Japan and the United States boosts demand for higher yielding assets. Brazil has also complained about the flood of money unleashed by interest rate cuts in the United States and Japan.

Source: CNN, 24 January 2013

Extract 6: Governments to the rescue

In 2009 the frightening speed of economic collapse spurred many governments to roll out big packages of tax cuts and extra spending in the hope of stimulating growth. Among Barack Obama's first steps as president in 2009 was to sign the American Recovery and Reinvestment Act, a stimulus plan worth \$831 billion, or almost 6% of that year's GDP.

In normal times, central banks would try to spur growth by adjusting interest rates to discourage saving and encourage borrowing. Yet by early 2009 most central banks had reduced their main interest rates almost to zero, without the desired result. Over-indebtedness might have been preventing people from borrowing as much as they would like, whatever the interest rate. Hence, governments need to spend more and tax less, to deliver a hefty economic bang.

For some countries, the result was a spike in government debt which was made worse by slowing growth. Worries about a country's solvency will lead creditors to demand higher interest rates, which will then compound its fiscal woes.

Source: The Economist, 28 September 2013

Extract 7: China's economic growth and rebalancing

The sustainability of China's economic growth is a key element of the global outlook. There is a widespread consensus, including in China, that the export-led growth model which prevails in the country is unsustainable in the long run.

Economic imbalances are an inherent by-product of the export-led growth model. While this framework has been successful in modernising China's economy, boosting GDP per capita and gaining export market shares, it has produced domestic and external imbalances and tensions with major trading partners. Production for the export market, such as the export of carbon-intensive metal products has also led to environmental degradation in China and this has become an issue of concern to many Chinese.

Hence, China is adopting policies to "rebalance" the economy by relying more on domestic demand to drive growth. This has led to policies to increase domestic demand to address problems such as weaker global demand. Coupled with abundant rural labour supply, inward foreign direct investment into the mainland areas and increasing share of high value-added exports using imported technology from multi-national companies, this would help China move towards a path of sustainable growth.

Source: European Central Bank paper on China's Economic Growth and Rebalancing, February 2013

Extract 8: China's new growth strategy

China has made the transition to a pro-consumption growth strategy the centrepiece of its newly enacted five-year plan. It features three building blocks:

- China has the smallest services sector of any major economy in the world, yet services in China generate about 35 percent more jobs per unit of GDP than do manufacturing and construction. By shifting from capital-intensive manufacturing to labour-intensive services, China could grow more slowly and achieve more sustainable growth.
- Per capita income of urban workers in China now runs about three times that of their counterparts in the countryside. With China's urban population exceeding its rural population for the first time in history, ongoing rapid urbanisation, coupled with services-led employment opportunities, is a plus for boosting aggregate wage incomes.
- China must build a social safety net. Lacking financial security, workers will continue fear-driven precautionary saving, an impediment to a flourishing Chinese consumer culture.

Source: Stephen S. Roach, YaleGlobal, 19 July 2012

Questions:

- (a) Compare Germany's government budget balance with that of USA [2]
between 2009 and 2013.
- (b) Explain how slow growth could worsen a government's budget [3]
position.
- (c) Explain one reason why the data in Table 2 is insufficient to explain [2]
the change in living standards for a country.
- (d) (i) Explain why a weaker yen is a "boon for the Japan's economy" as [4]
stated in Extract 5.
- (ii) Explain why other countries might retaliate in response to the [3]
weakening of the Japanese yen.
- (e) Discuss the view that a government faced with the problems [8]
described in Extract 6 should opt for a policy of increased
government spending and tax cuts.
- (f) Discuss whether China should rely on her domestic market or [8]
exports to drive growth.

[Total: 30]

Section B

Answer **one** question from this section

1.
 - a) Explain how public goods and demerit goods cause markets to fail. [10]
 - b) To what extent is a ban the best way to tackle market failure associated with demerit goods? [15]

2.
 - a) Analyse the causes of inflation in Singapore. [10]
 - b) Discuss the appropriate measures that will help mitigate the effects of inflation in Singapore. [15]

---- End of paper ----

CSQ 1 Answers to 2015 H1 Economics Preliminary Exam

(a)(i) With reference to Table 1, contrast the health care cost as a percentage of GDP and the health care cost per capita for Singapore and Hong Kong. [2]

Singapore has the lower health-care cost as a percentage of GDP (1) while Hong Kong has the lower per capita health-care cost (1).

(a)(ii) Suggest a reason for the difference in (a)(i) [2]

This could be due to Singapore having a larger GDP but smaller population than Hong Kong (2).

(b) Using the concept of opportunity cost, explain how rising health care expenditure caused by an ageing population will impact a country's economic growth. [3]

An aging population will mean rising healthcare expenditure which is consumption related. (1) The opportunity cost is that less public finances can be spent on capital goods such as infrastructure. (1) Expenditure on capital goods increase capital accumulation thus expanding a country's productive capacity and allow higher GDP growth rates in the long term. (1)

(c) Explain why health care markets fail. [5]

Markets do not work for healthcare due to the presence of positive externalities [1] which result in the divergence between the MPB and the MSB [1]. As mentioned in Extract 2, healthy societies are more productive, creating more wealth for the economy [1]. [Max 2]

This spill-over benefit is ignored by consumers due to their selfishness [1] and thus they only consider their private benefits and costs in consumption [1]. On the other hand, social optimal consumption occurs at $MSB=MSC$ since society takes into account all costs and benefits [1]. [Max 2]

As a result, there is under-consumption of healthcare [1] and a deadweight loss due to the net benefit that is foregone [1].

(d)(i) What can you conclude about the price elasticity of demand of medical tourism in Singapore? [2]

Price elastic [1]

The rise of comparable options in the region as suggested by Extract 3 points to the increasing availability of close substitutes. [1]

OR

Medical tourism typically consists of specialist services which make up a large proportion of consumers' incomes. [1]

(d)(ii) Using demand-supply analysis, assess the reasons behind the fall in medical tourism receipts for Singapore. [8]

Intro: Tourism receipts = total expenditure

Demand factors:

Evidence: Expansion of private healthcare providers overseas has lowered the need for medical tourism.

Explanation: The increased availability of substitutes has resulted in the fall of demand of medical tourism in Singapore.

Evidence: Appreciation of the Singapore dollar against her neighbours such as Indonesia which accounted for 56% of total medical tourism revenues in 2013

Explanation: The appreciation of the Singapore dollar raises the price of medical services in foreign currency, thus lowering the demand for medical tourism.

Evidence: Aggressiveness of governments in competing hubs in attracting medical tourists such as offering a 30% discount on airfares

Explanation: The lowered cost of obtaining healthcare in competing countries reduces the demand for medical tourism in Singapore.

With a fall in demand, equilibrium price and quantity will fall, leading to a fall in total expenditure of medical tourists.

Supply factors:

Evidence: Reduction in healthcare providers' efforts in marketing their services in Singapore

Explanation: Fall in supply of healthcare in Singapore.

Evidence: Reduction in government support for the industry

Explanation: With reduced support, healthcare providers might have to incur greater costs in terms of marketing thus raising their unit cost of production. This decreases supply.

Price elasticity of demand of medical tourism is likely to be elastic as explained in (d)(i). Given the fall in supply, the rise in price will lead to a more than proportionate fall in quantity sold, resulting in a fall in total expenditure of medical tourists.

Coupled with the fall in demand, this explains the overall fall in tourism receipts.

Conclusion:

Based on the above analysis, supply factors are relatively minor and are unlikely to affect unit cost of production significantly. On the other hand, demand factors are likely to be more significant given their impact on key markets such as Indonesia.

Levels	Descriptors	Marks
L1	Shows some knowledge of the relevant factors.	1-2
L2	Explanation of factors using the concept of demand and supply. Some application to the case is demonstrated.	3-4
L3	Strong demand-supply analysis with factors clearly linked to the fall of total expenditure. Good use of case evidence to support analysis.	5-6
E1	Stand with weak justification.	1
E2	Stand with strong justification addressing the relative impact of demand and supply factors.	2

(d) With the help of the data and your own knowledge, discuss whether the Singapore government should protect medical tourism as an export industry. [8]

Assertion: Protecting the industry will boost national income and reduce cyclical unemployment.

Evidence: Total medical receipts fell by 25% in 2013 (Extract 3). Extract 4 highlights financial benefits from health services and associated visitor spending (Extract 4).

Concept: Subsidising the industry will increase export competitiveness of medical services and thus quantity demanded. Assuming the demand for overseas medical services to be price elastic, export revenue will increase. Together with the increase in export revenue from complementary visitor spending, the aggregate demand for Singapore will rise. Given the fall in inventory for firms, this will lead them to increase output, resulting in higher national income. The increase need for factors of production including labour will also lead to a fall in cyclical unemployment.

Evaluation: Given Singapore's small multiplier due to her high propensity to import and save, as well as the small contribution of medical tourism to her GDP (about 1%), the benefit to national income and cyclical employment is minimal.

Assertion: Protecting the industry may reduce structural unemployment.

Evidence: Extract 3 points to the loss of competitive advantage compared to neighbouring cities and the reduced government support also suggests they no longer view the industry with as much promise as before.

Concept: With the loss of comparative advantage, lower skilled workers in the industry may find themselves structurally unemployed, without the requisite skills to switch to other more competitive industries. Protection may also buy these workers time for retraining.

Evaluation: Protection of a declining industry is inefficient as resources ought to be allocated towards more competitive industries. The data indicates that the Singapore government has reduced support for the industry as well. Structurally unemployed may not be significant as Singapore's aging population has fuelled the growth of the domestic medical industry so the unemployed are likely able to find comparable jobs.

Assertion: Protecting the industry may improve balance of payment.

Concept: As mentioned earlier, protecting the industry will increase export revenue and thus the current account. The continued growth of the medical tourism sector may also attract long-term capital inflows.

Evaluation: The benefit is not significant given the generally healthy state of Singapore's balance of payment. Furthermore any improvement in the current account will also be limited by the remittance of profits out of Singapore by foreign healthcare providers such as IHH Healthcare (Extract 3).

Reasons for not protecting:

- Given the "aggressive" actions taken by foreign governments in supporting their medical tourism industry (Extract 3), it suggests that any overt form of protection will be met by retaliation, reducing potential benefits.
- Hurts Singapore's reputation as a proponent of free trade and retaliation may take place in other sectors apart from the medical tourism sector.
- The medical tourism industry is not an infant industry and the increased competitiveness of neighbouring cities suggests a genuine loss of comparative advantage. Resources can be better allocated towards new sunrise industries.

Conclusion:

Given the limited impact of the medical tourism industry to Singapore's economy, protection would be unwise as the cons clearly outweigh the pros. The highly globalised nature of our economy also means that resources are most valuable when channelled to unearthing new comparative advantages rather than supporting declining industries.

Levels	Descriptors	Marks
L1	Shows some knowledge of the relevant reasons for or against protectionism.	1-2
L2	Explanation of relevant reasons either for or against protectionism. Explanation is largely descriptive. Some application to the case is demonstrated.	3-4
L3	Relevant reasons analysed with the help of appropriate theoretical concepts and tools. Both reasons for and against protectionism must be addressed. Good use of case evidence to support analysis.	5-6
E1	Stand with weak justification.	1
E2	Stand with strong justification addressing the validity in light of the nature of Singapore's economy.	2

CSQ 2

(a) Compare Germany's government budget balance with that of USA between 2009 and 2013. [2]

Similarity: Both saw an improvement in budget balance as a % of GDP. [1]

Difference: USA's budget deficit as a % of GDP has always been higher than Germany. [1]
OR

Difference: USA experienced a budget deficit throughout the entire period while Germany experienced a budget deficit until 2011.

(b) Explain how slow growth could worsen a government's budget position. [3]

A government's budget position is worsened due to increased government spending and/or falling tax revenue.

With slow growth, there will be slowdown in the rise in income earned and firms will also see a slowdown in the rise in profits due to poor demand. Hence, the government will collect less tax revenue from individuals and businesses which will worsen its budget position. [2]

An economy is likely to experience falling unemployment due to slow growth. This would lead to a fall in the amount of unemployment benefits and transfer payments given out. However, the fall in unemployment benefits is not enough to offset the fall in tax revenue. Therefore, there would be a worsening of the government's budget position. [2]

Impact on govt spending [2] + Fall tax revenue [2] = 3

(c) Explain one reason why the data in Table 2 is insufficient to explain the change in living standards for a country. [2]

Students can highlight any other information needed (besides real GDP growth) such as population growth, distribution of income, or even data about non-material SOL such as amount of leisure time and external costs.

The data in Table 2 shows the change in real GDP and does not account for population growth. If GDP growth is slower than the increase in population, there would be less goods and services available for consumption per head, hence material SOL is worse off. Therefore, data about real GDP per capita is needed to determine whether income per person has increased.

(d)(i) Explain why a weaker yen is a “boon for the Japan’s economy” as stated in Extract 5. [4]

A weaker yen would lead to Japan’s exports becoming cheaper in terms of foreign currency. [1] Foreign consumers in other countries would switch to consuming Japan’s exports, leading to higher export revenue. [1]

A weaker yen would lead to imports becoming more expensive in local currency [1], and this would lead to a fall in quantity demanded for imports. [1]

Assuming Marshall-Lerner condition (sum of PED for exports and imports is >1), a weaker yen would lead to an overall improvement of the current account.

Impact on exports [2] and impact on imports [2]
Need to use elasticity concepts to earn full marks

(d)(ii) Explain why other countries might retaliate in response to the weakening of the Japanese yen. [3]

With a fall in interest rate in Japan, this would lead to an outflow of short-term capital from Japan due to lower rates of return on assets. There would be an inflow of short-term capital into countries like Korea, Thailand and the US as this would “boost demand for higher yielding assets” (Extract 5). [1]

This would lead to an increase in demand for Korean Won and Thai Baht in the forex market, leading to a shortage of currency at the current market exchange rate. This would lead to an appreciation of Korean Won and Thai Baht. [1]

With an appreciation of the Korean Won and Thai Baht, this would lead to a fall in export competitiveness for Korea and Thailand. [1]

OR

With greater inflow of short-term capital into Korea and Thailand, this would lead to a higher supply of loanable funds [1]. If the excess funds are channelled to purchase of assets such as properties, this would lead to over-investment in the property market [1], causing demand-pull inflation [1].

(e) Discuss the view that a government faced with the problems described in Extract 6 should opt for a policy of increased government spending and tax cuts. [8]

Intro

The global recession in 2009 which resulted in slower or negative growth and unemployment led governments to implement expansionary fiscal policy to revive their ailing economies. However, for some countries, this policy resulted in massive government debt for some countries which hurt growth and unemployment further

Body

Thesis: A policy of government spending and tax cuts resolves the problems

1. Expansionary fiscal policy boosts growth and reduces unemployment

Expansionary fiscal policy involves increasing government expenditure (G) and reducing direct taxes to stimulate consumption (C) and investment expenditure (I). As such, an expansionary fiscal policy would lead to an increase in AD. This would then lead to a multiple increase in national income (could include the AD/AS diagram showing a rightward shift in the AD curve) which in turn would increase production and hence increase the demand for labour which would reduce unemployment.

Evaluation: The increase in C to boost growth and employment would be more significant for countries where domestic consumption was a large proportion of GDP such as the USA and Japan (>60% from Table 5).

2. The need for fiscal policy due to the limitations of monetary policy via interest rates

Monetary policy seems to be ineffective as interest rates are almost zero (Extract 6). This means that countries are experiencing a liquidity trap, which is a situation which occurs when the market interest rate in the country has already reached its lowest possible level and cannot fall any further. As the market interest rate will not fall any lower, C and I will not increase.

In addition, some households are heavily in debt and are unable to borrow as much due to the inability to repay their debts. This means that despite the low interest rates, these households do not borrow as much and hence do not spend as much. Hence, expansionary fiscal policy seems to be the best alternative to boost growth and employment.

Anti-thesis: A policy of government spending and tax cuts does not resolve the problems

1. Expansionary fiscal policy which involves tax cuts and increased government spending resulted in huge government deficit for countries such as the USA (-12.8% of GDP from Table 4). This led to creditors demanding higher interest rates due to fears that the governments could not repay their loans (Extract 6). This may lead to higher interest rates in the private sector as well and overall result in a fall in C and I. Overall there will be a fall in AD which will worsen growth and unemployment.

2. Crowding out effect

In addition, for countries which have accumulated high amounts of government debt due to persistent budget deficits like the USA and Japan, these governments can only finance government expenditure through borrowing. This will result in an increase in the demand for loanable funds, which will lead to an increase in interest rates. Higher interest rates would increase the cost of borrowing. In addition, households will have more incentive to save (and hence lower C) as the interest rate earnings they get from banks are higher. Firms will cut back on I as the rate of returns to investment is lower. The initial increase in government spending will simply be offset by lower C and I.

Conclusion

Overall, whether or not a country should opt for expansionary fiscal policy to address its macroeconomic problems depends on the availability of alternative policies and the size of the government deficit. For countries like Japan where lowering of interest rates is rendered ineffective, expansionary fiscal policy does provide a solution to its ailing economy. On the other hand, it also needs to consider how its significant government deficit as a result of expansionary fiscal policy will worsen its macroeconomic problems.

L1	A very brief explanation of the impact of expansionary fiscal policy on the problems mentioned in Extract 6.	1-2
L2	- A well-developed but one-sided explanation of how expansionary fiscal policy can address OR cannot address the problems mentioned in Extract 6. OR An underdeveloped two-sided discussion of how expansionary fiscal policy can address AND cannot address the problems mentioned in Extract 6. - Some reference to context	3-4
L3	- A well-developed, two-sided discussion of how expansionary fiscal policy can address AND cannot address the problems mentioned in Extract 6. - Good reference to context	5-6
E	A well-justified conclusion about how countries should consider the availability of alternative macroeconomic policies and the size of their budget deficit when considering the use of expansionary fiscal policy.	+2

(f) Discuss whether China should rely on her domestic market or exports to drive growth. [8]

Intro

Due to greater vulnerability to external shocks due to the pursuit of export-led growth as well as the global slowdown, this has led to countries switching to relying on their domestic consumption to drive growth.

Body

China should rely on her domestic market to drive growth

1. Reduce vulnerability to global shocks. Relying on domestic demand would be more stable. This would reduce the fluctuations in GDP and demand-deficient unemployment due to a fall in exports and FDI.

With China's large domestic market due to her large population, this could enable her to potentially rely on domestic consumption to drive growth. With urbanisation leading to rising incomes (Extract 8), this could lead to higher spending on domestic goods, leading to higher C and AD.

However, currently, according to Table 5, consumption in China is only 36% of GDP, which is rather low as compared to other countries such as USA (>60%) and Japan (about 60%). This could be due to the Asian thrift culture as well as "lack of financial security" (Extract 8) in China due to the lack of a social safety net. According to Extract 8, there is a need to lower personal income tax and provide more transfer payments to increase disposable income to encourage consumers to spend more, hence increasing household consumption.

Given the large population of China, this might exert a strain on the government budget and would eventually require increases in tax to fund the additional government spending.

2. Producing for the domestic market would mean a move towards less energy-intensive industries. Reliance on energy-intensive heavy industry for the production of exports has led to pollution and negative externalities for China (Extract 7). This would lead to lower pollution and hence less adverse impact on environment through a fall in carbon emissions, for example. This would lead to an improvement in the non-material standard of living as would present a more sustainable growth path as it does not exert too much pressure on the environment.

3. Producing for the domestic market would lead to improvement in external imbalances. China's large trade surpluses have led to external imbalances and "tensions with other trade partners" (Extract 7). As her trade partners would suffer from trade deficit which results in lower growth and higher demand-deficient unemployment, they may blame China and implement protectionist measures such as tariffs or quotas to protect their domestic industries. This would stifle China's exports and hence stifle growth, leading to demand-deficient unemployment. Hence, producing for the domestic market would lead to lesser likelihood of such issues.

China should rely on exports to drive growth

1. China should tap on global demand to increase demand for their exports, hence leading to an increase in AD and a multiple increase in national income. This would lead to higher growth and lower demand-deficient unemployment. This is important as China was able to achieve high growth rates in the past due to increase in exports. A shift to relying on domestic markets might lead to slower growth if the increase in C is insufficient to make up for the fall in X. The lack of government provision of welfare payments or a social safety net might lead to Chinese consumers continuing to save a high proportion of their income (Extract 8), hence limiting the increase in C.

2. When China reduces its reliance on exports, the process of rebalancing could lead to structural unemployment as workers who are unemployed in the export-oriented industries might not be able to secure jobs in the rising sectors catered at the domestic market due to a mismatch of skills. With the "shifting from capital-intensive manufacturing to labour-intensive services" (Extract 8), this would mean that those in the manufacturing sector producing for the export market might face structural unemployment if they are unable to secure jobs in the growing services sector.

3. China should specialise and trade based on the theory of comparative advantage. Based on their factor endowments, countries which incur a lower opportunity cost in producing a particular good should specialise in producing the good and hence trade with other countries. China has an abundance of labour and should specialise in goods which require labour-intensive production, such as textiles. This would lead to higher export revenue for China and enable her economy to achieve growth as well as lower unemployment. This has enabled China to achieve high rates of growth in the past, as seen in Table 2.

Conclusion

With a large domestic market, China has the potential consumer base for firms. To achieve sustainable growth in the long run, China needs to rely more on her domestic market. In the short run, this would lead to adverse effects such as higher structural unemployment but in the long run, this would enable the country to move towards a path of sustainable growth.

Whether the shift in strategy to rely on domestic consumption would work also depends on the implementation of other policies to increase consumption on domestic goods and services. There is also a need for policies to enable transition from producing for the international market to producing for the domestic market. In China, there is a need to produce more consumer goods and services rather than focus on energy-intensive heavy industry (Extract 7).

L1	- A brief description of the positive or negative impacts of relying on domestic markets	1-2
L2	- A one-sided explanation of how relying on domestic markets would lead to positive OR negative impacts for China in terms of achieving macroeconomic goals OR - A weak two-sided explanation of the positive AND negative impacts of relying on domestic markets for China - Some use of evidence from the data	3-4
L3	- A well-developed discussion of the positive AND negative impacts of relying on domestic markets for China - Good use of the evidence from the data	5-6
E	- Stand with strong justification, with reference to the likely success of China in switching to reliance on her domestic market or the issues which might hinder the success of the switch in growth strategy.	+2

Essay 1

a) Explain how public goods and demerit goods cause markets to fail. [10]

Key concepts to explain:

- Nature of public goods: non-excludable and non-rival and how they lead to market failure
- Negative externalities and ignorance explanation for why markets for demerit goods fail

Introduction

Left to market forces, the nature of public goods will lead to total market failure. For the case of demerit goods, both ignorance and the presence of negative externalities will lead to overconsumption and thus inefficient allocation of resources.

Body

Public goods such as national defence are non-excludable and non-rival. It is non-excludable as it is not possible to exclude someone from being protected by the defence team, even if the person has not paid. National defence is also non-rival because protecting one more person will not reduce the quantity of protection another receives. As such, the marginal cost of providing protection for one more person is 0. This would mean that the socially optimal output is when MB (price consumers willing and able to pay) = $MC = 0$. No firm will be willing to produce the good if price is zero. Furthermore, since the good is non-excludable, no consumer will be willing to pay for national defence, and will choose to free-ride instead. Without effective demand, there will not be price signals guiding producers on how much to produce. As such, left to the free market, there will not be production of the public good, and the market fails completely.

Consumption of demerit goods such as cigarettes generates significant negative externalities. These negative externalities are negative impacts on uncompensated third parties not involved in the production or consumption of the good, and one example include bystanders who inhale second-hand cigarette smoke and suffer health problems as a result, thus incurring healthcare costs. The presence of negative externalities leads to a divergence between marginal private costs (MPC) and marginal social costs (MSC). Individuals seeking to maximise their satisfaction will only consider private cost (e.g. cost of cigarettes) and benefits and consume the quantity Q where $MPC = MPB$ (marginal private benefit). However, society welfare is maximised at quantity Q^* where $MSC = MSB$. As such, there is overconsumption of $Q - Q^*$ units. For every unit between Q^* and Q , $MSC > MSB$, which means that each unit consumed is adding more to social cost than social benefits. Consuming $Q - Q^*$ units generates total cost represented by Area D + E while total benefit is only Area E. This leads to welfare loss of Area D. The market for cigarettes has failed because too much resources are being channelled into the market.

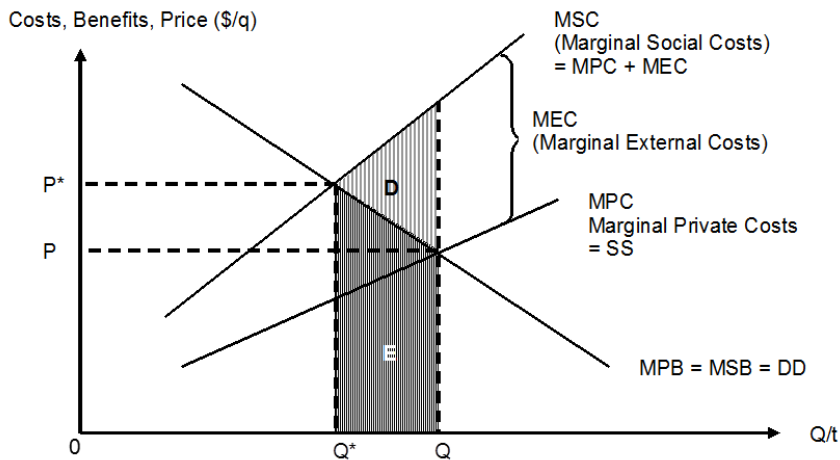


Fig. 1 shows the market for cigarettes where negative externalities are present.

At the same time, lack of information might have caused consumers to make poor choices. For example, smokers may not know the full extent of health problems that smoking can cause them. As such, their perceived benefit from smoking is higher than the true benefit received. If consumers have full information, they would consume at Q^* where true marginal value equates marginal cost. However, because of lack of information, they currently consume Q where perceived marginal value = marginal cost. There is overconsumption of cigarettes by $Q - Q^*$ units. This leads to welfare loss of Area C in Fig. 2 since $MC > MB$ for every unit between Q^* and Q . Welfare is not maximised, thus leading to market failure.

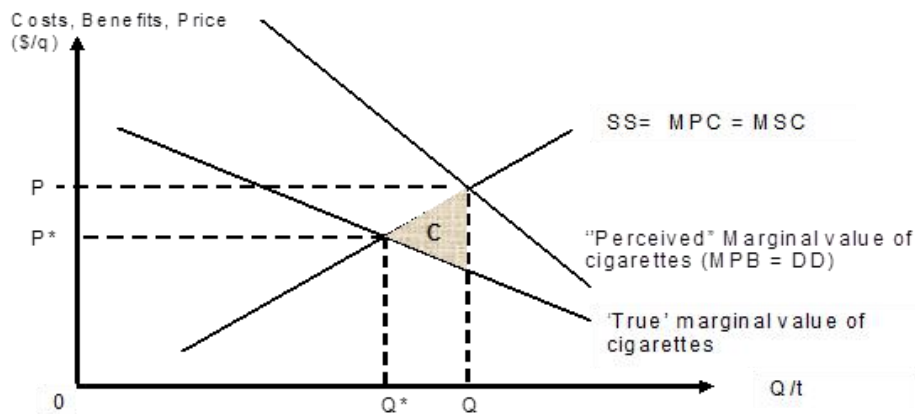


Fig. 2 shows the market for cigarettes where there is imperfect information.

	Descriptors	Marks
L3	<ul style="list-style-type: none"> • Good explanation of how public goods AND demerit goods lead to market failure. 	7-10
L2	<ul style="list-style-type: none"> • Undeveloped explanation that explains how public goods and demerit goods lead to market failure. OR • Developed explanation of either how public goods or demerit may lead to market failure. 	5-6

L1	<ul style="list-style-type: none"> Response shows some knowledge of public goods and/or demerit goods, but how they lead to market failure is not explained. 	1-4
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b) To what extent is a ban the best way to tackle market failure associated with demerit goods? [15]

Introduction

To reduce the allocative inefficiency associated with demerit goods such as cigarettes, various measures including a ban on consumption can be implemented. Whether a ban is the best measure will depend on its effectiveness in improving allocative efficiency and other outcomes from its implementation.

Body

Thesis: A ban is the best way to tackle market failure associated with demerit goods.

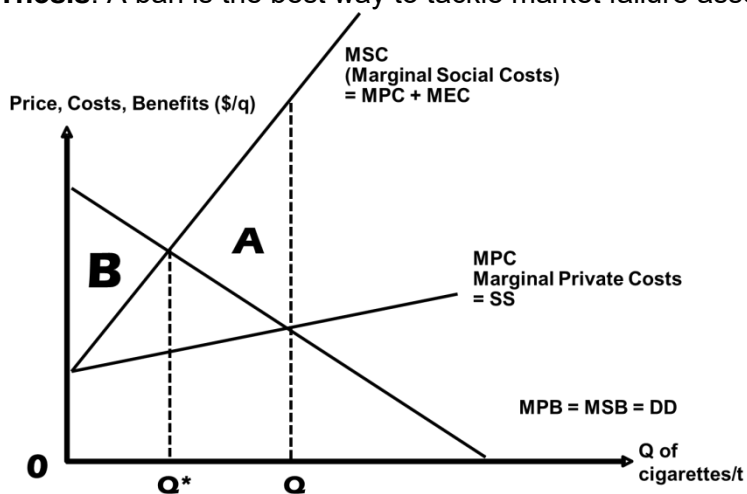


Fig. 3 shows the welfare loss before and after a ban is implemented.

A ban leads to zero consumption of the good, such that net benefit to society would be 0. Although this leads to a loss of welfare from an elimination of satisfaction smokers get from smoking, it may lead to a more allocatively efficient outcome than the free market case. Left to the free market, net benefit of consuming Q units of cigarettes would be Area B (welfare from consuming Q* units of cigarettes) – Area A (welfare loss). In cases where negative externalities are significant, e.g. in enclosed spaces where bystanders breathe in more second hand smoke, or crowded places with a large number of such affected bystanders, Area A may be greater than Area B. For such cases, net benefit of consuming Q units of cigarettes would be negative. A ban would thus result in higher net benefits to society, thus reducing the extent of market failure in the cigarettes market.

[Alternatively, the case where $MSC > MSB$ for all units of output can be explained. In such a scenario, the socially optimal level of output is 0, which a ban will result in.]

Furthermore, a ban is relatively easy to implement and understand (for consumers). Should the ban be enforced, outcomes will also be certain. However, strict monitoring and enforcement of the ban may be necessary, and in large countries the monitoring costs can be significant.

Anti-thesis: A ban is not the best way to tackle market failure associated with demerit goods.

1. In the case where negative externalities are not so significant, Area B may be smaller than Area B. As such, a ban may result in a lower net benefit to society than if the market was left to free market forces.
2. A tax i.e. on cigarettes will be a more precise tool to implement for correcting market failure here, resulting in socially optimal output and the maximisation of society's welfare.

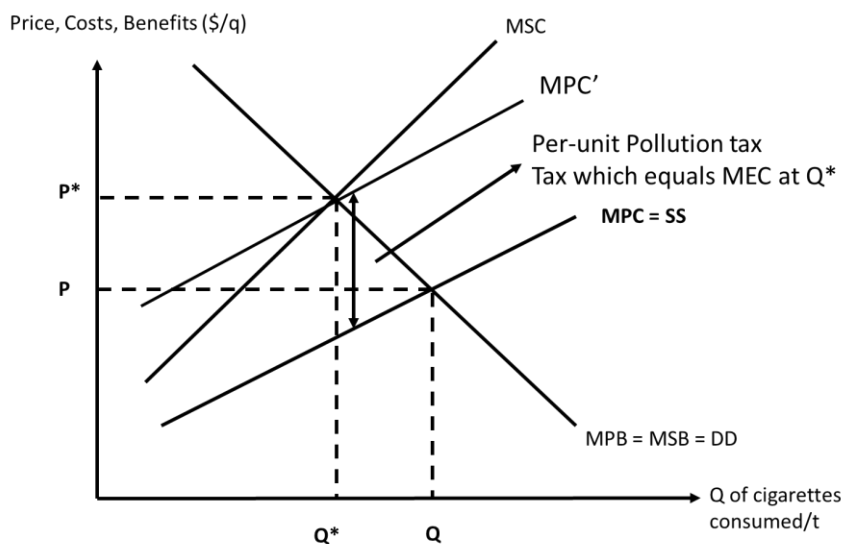


Fig. 4 shows the effects of a per-unit tax on cigarettes.

A tax will increase the marginal private cost of consuming a cigarette from MPC to MPC'. If tax implemented is equal to the MEC at socially optimal output Q^* , the new market equilibrium $MPB = MPC'$ will coincide with socially optimal equilibrium where $MSB = MSC$. Consumers internalise the negative externality, and welfare for society is maximised at Q^* . Compared to bans which lead to a net benefit of 0, a tax can lead to a more allocatively efficient outcome. However this requires the government to implement the correct level of tax, which in reality may not be likely since the government lacks perfect information on MEC.

3. Education may be a better way to tackle the market failure here, since it targets one of the root causes of market failure associated with demerit goods, i.e. ignorance. Education through public campaigns would give consumers a better understanding of the health risks associated with smoking, thus reducing the gap between perceived and true marginal benefits (Fig. 2). Demand falls, and new market equilibrium will be where true marginal benefits equates marginal cost at Q^* . This maximises society's welfare, though the process may be a long one as people slowly adjust their behaviour with the information they receive. Compared to bans, educating targets a root cause of the market failure, and can lead to socially optimal output without the need to constantly incur monitoring costs. However, outcomes of education are not certain since it depends on how consumers react to the education campaign, unlike the use of a ban.

Conclusion

Unless the extent of welfare loss is high (e.g. due to significant negative externalities or high levels of ignorance), a ban is not the best way to tackle market failure associated with demerit goods because the outcome does not maximise societal welfare. A two-pronged approach of taxing and education can target the two causes of market failure here more directly, and lead to outcomes that maximise societal welfare. However, a ban can lead to more certain outcomes, and when the extent of welfare loss is high and the government is in a hurry to reduce it, bans may be the best method to eliminate the issue of overconsumption in the short term e.g. Beijing implementing smoking bans in public places, since these places tend to be crowded.

	Descriptors	Marks
L3	For a balanced analytical discussion on whether a ban is the best way to tackle market failure associated with demerit goods.	9 – 11
L2	For an <i>undeveloped two-sided</i> explanation on whether a ban is the best way to tackle market failure for demerit goods market. OR A developed <i>one-sided</i> explanation of whether a ban is the best way to tackle market failure for demerit goods market.	6 – 8
L1	Response shows some understanding of bans and other policies that can be adopted to tackle the market failure associated with demerit goods, but is mostly descriptive or contains glaring conceptual errors.	1 – 5
E2	For an evaluative assessment of whether a ban is the best way to tackle market failure associated with demerit goods.	3 – 4
E1	For an unexplained assessment of whether a ban is the best way to tackle market failure associated with demerit goods, or one that is not supported by analysis.	1 – 2

Essay 2

a) Analyse the causes of inflation in Singapore. [10]

Suggested outline:

Students are required to explain 3 sources of inflation in Singapore that could be due to a continuous rise in AD (demand pull inflation) or AS (cost push inflation)

Introduction

Inflation is a sustained increase in the general price level of goods and services in an economy. Inflation in Singapore can be caused by both domestic and external demand-pull and cost push factors.

Body

1. Demand-pull inflation

Singapore suffers from demand-pull inflation, which may occur when increases in aggregate demand (AD) persistently exceeds that of aggregate supply (AS), causing excess demand when the economy is near or at full employment.

Inflation due to the rise in AD (AD_1 to AD_2 in diagram 1), which can come from a rise in C, I, G and (X-M), thereby causing upward pressure on the general price level.

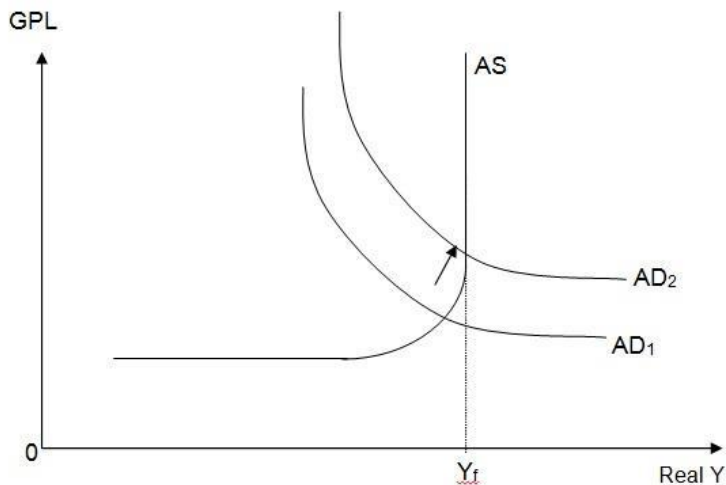


Diagram 1

In the case of Singapore, the major source of demand-pull inflation would be a rise in income of her trading partners, which leads to an increase in the purchasing power of households. This in turn, causes greater an increase in demand for Singapore's exports. When there is a rise in Singapore net exports, her AD rises, leading to a rise in the general price level, assuming the economy is already at/near full employment. This was evident when countries like USA recovered after the 2008 global financial crisis. As USA one of Singapore's largest export market, and when the latter's national income rises, the demand for Singapore's exports rose. Since the value of Singapore's exports is more than twice the size of her domestic economy, this will have a significant impact on AD, hence GPL, especially when the economy already near full employment.

In addition, there might also be an increase in FDI given a higher expected rate of return of investing in Singapore when external demand rises, given that MNCs which produce in Singapore tend to be export-oriented.

An increase in FDI will lead to a rise in AD, and should the economy have limited spare capacity, a persistent increase in AD is likely to lead to upward pressure on prices on the general price level.

Singapore can also face demand-pull inflation from domestic sources. For example, with the recovery of the Singapore economy after the financial crisis, the purchasing power of households rose. Together with the influx of foreign workers coming into Singapore, this also increased the domestic C and AD. The higher demand for housing due to a rise in population growth increased the average price of the basket of goods and services used to calculate the country's CPI.

Cost-push inflation

Cost-push inflation occurs when prices are forced upwards by increases in costs of production which are not caused by excess aggregate demand. If firms face a rise in unit costs, they will respond partly by raising prices, partly by passing the costs on to the consumer, and partly by cutting back on production. This is illustrated by a continuous upward shift in the aggregate supply curve (AS1 to AS2), as shown in Diagram 2. The causes of cost-push inflation are from the supply side. The rise in costs may originate from a number of different sources for example wage-push, imported inflation and depreciating exchange rates.

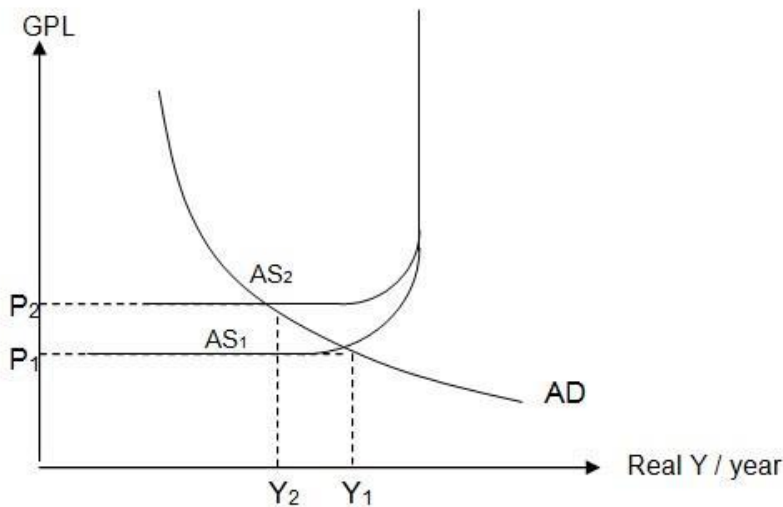


Diagram 2

A source of cost push inflation in Singapore would be the increase in global demand for raw materials or commodities such as food and oil.

This increases the unit cost of production as these raw materials are an important factor of production, causing the AS to rise up wards thereby raising the GPL in Singapore, leading to cost-push inflation. The average crude oil prices in 2012 were at historically high levels because OPEC restricted their oil production. This was an important contributing factor to Singapore's high inflation rates that year, since demand for her imports is price inelastic, and with little or no substitutes to the imported raw materials like oil, the GPL in SG rises.

Another cause of Singapore's cost push inflation would be the government's efforts to reduce the inflow of foreign workers. Tightening of foreign labour policies (e.g. reducing the ease of qualifying for employment passes, foreign worker levy) have led to the overall labour force rising slower than the demand for labour, thus resulting in labour shortage. With the rise in wage rate and productivity growth lagging behind, unit cost rises. Hence AS shifts upwards, giving rise to cost-push inflation.

Level	Descriptor	Marks
L3	Able to explain at least 3 sources of inflation (covers both demand pull and cost push) where explanation is underpinned with accurate use of theory and relevant examples.	7-10
L2	Incomplete explanation of the causes of inflation (i.e. there are gaps in the explanation). Limited use of examples	5-6
L1	Briefly explained the sources of inflation or answers were mainly descriptive	1-4

- b) Discuss the appropriate measures that will help mitigate the effects of inflation in Singapore. [15]

Approach:

Students are required to explain the relevant the macro policies to address the root cause of the inflation problem in Singapore. The effectiveness of the policies needs to be evaluated in terms of whether they address the root cause of the problem, the sustainability of the policy and whether there are trade-offs in terms of other macro goals, amongst others. Students need to examine the relevance of these policies in the context of Singapore.

Introduction:

Singapore government could consider exchange rate, supply side and trade policies to better cope with strong inflationary pressures as Singapore. The criteria to consider when deciding between policies are 1) effectiveness in addressing the root cause of inflation and 2) minimal conflicts with other macro goals/government objectives, bearing in mind the nature of Singapore's economy who has no natural resources and highly dependent on trade. The most appropriate policy would be the ones that address the main underlying reasons for inflation in Singapore.

Body:

- 1) **Exchange rate policy** is the main policy tool to mitigate the rise in prices of imported factor inputs leading to cost push inflation.

In this case, MAS should adopt a slow and gradual appreciation of the Sing dollar so that the price of imports in *domestic currency* falls. Imported inflation falls due to a fall in price of raw materials and intermediate goods. Unit cost of production falls leading to a down wards shift in AS. We would expect the GPL to fall as well.

This is useful in the context of Singapore since we are dependent on imported raw materials and by maintaining a strong Sing dollar will be effective in curbing high imported inflation.

If Singapore experiences demand pull inflation due to a strong demand for her exports, a **gradual appreciation of the Sing dollar** may address this type of inflation. The strong Sing dollar will lead to a fall in demand for Singapore's exports and export revenue decreases. At the same time, imports become cheaper in domestic currency, and this increases quantity demanded of imports. Assuming that Marshall-Lerner condition holds, the fall in net exports revenue causes AD to fall, reducing demand-pull inflationary pressure.

A strong S\$ would reduce the price competitiveness of Singapore's exports. However, since it also causes the price of imported inputs and goods to be cheaper, this may off-set some the adverse effect of the strong Sing dollar on the price competitiveness of the exports. Net exports revenue decreases but by a small extent and therefore exchange rate policy may not be able to curb demand pull inflation.

The government should also ensure that the appreciation is gradual and domestic cost pressures (e.g. the rise in wages) are contained, or else the erosion of exports

competitiveness may be severe, and the fall in AD may be large which will result in negative impact on actual growth and employment.

- 2) If the cost push inflation is caused by domestic cost pressures due to a rise in wages, then the Singapore government can implement **supply side policies**. The policies should focus to raise productivity of workers and firms so that growth in productivity is greater than the growth in wages. This would help to lower unit cost of production, AS will shift downwards and this causes a fall in general price level.

Growth in productivity can be achieved through R&D and the use of better technology to create more efficient production processes. One policy that has been introduced to encourage this is the Productivity and Innovation credit (PIC) scheme. Low skilled workers are also encouraged to upgrade their skills so that they can be more productive at the workplace. The SkillsFuture programme is a new scheme that provides all Singaporeans with the opportunities to acquire greater skills proficiency, knowledge and expertise.

In the last few years, the government has also curbed the growth of foreign workers with the aim of getting firms to switch to utilize more technology in their production and encourage the retraining of low skilled local workers.

These supply side policies not only curb cost push inflation but it helps to increase the productivity capacity of the economy, and this helps to reduce the effect of demand pull inflation in the long run as well.

Despite the fact that Singapore government has been actively promoting policies to raise workers' and firms' productivity, the growth in productivity in some sectors are lagging behind e.g. construction and services, as the scope for increasing productivity in certain sectors may be limited (R&D efforts may not succeed). Also, newly acquired skills can become obsolete quickly due to rapid advancement in technology.

The reduction in the inflow of foreign workers have caused a shortage of workers, especially in sectors such as F&B and manufacturing, supply of labour rises slower than the demand, thus resulting in labour shortage, causing wages to rise. Thus in the short run, these productivity driven policies may cause cost push inflation. Structural unemployment may also rise as the economy restructure to a more productivity-based economy.

- 3) The government may choose to sign **Free Trade Agreements (FTAs)** with countries that are an important source of imported raw materials and food products e.g. ASEAN, Australia, Brazil. Through these trade partnerships, Singapore is able to diversify its sources of imports. Should there be disruptions in the supply of these raw materials or commodities in a particular foreign market, e.g. steel, food products, Singapore is able to import them from other countries instead and this helps to minimise imported inflation. As the fall in price of imported raw materials affect cost of production of firms, AS curve shifts upwards.

Conclusion

In conclusion, the government has to diagnose and ascertain the type of inflation that the countries and implement policies that address the root cause of the inflation problem. In times when there is a high level of imported inflation and external demand is strong, a strengthening of the S\$ would be an appropriate policy since the alleviation of inflation via this method will not compromise economic growth that much. In times when there is high cost-push domestic inflation with weak external demand, the government would have to rely more on supply-side policies that address the rising domestic costs. Singapore government has to consider the combination of policies in order to alleviate inflationary pressure while keeping in mind the other macroeconomic goals. In the last few years, Singapore's inflation rate has been caused mainly by domestic reasons, namely due to the slow growth in productivity. Therefore supply side policies which reduce structural rigidities in the labour market and certain production markets should be the priority of the government.

L3	9 - 11	Accurate and complete conceptual/ theoretical evaluation of 2 policies that will address both demand pull and cost push inflation. A good reference made to Singapore's economy
L2	6 - 8	Explanation of 2 policies that address both demand pull and cost push inflation, with relevant theoretical concepts but there are gaps in explanation. Limited reference was made to Singapore's economy
L1	1 - 5	Answers are mainly descriptive, limited analysis

E2	+ 3-4	Makes a stand supported by good synthesis of the arguments in the body and stand is also linked to varying contexts.
E1	+ 1-2	Makes a stand but substantiation is weak – can't really link arguments in body to the stand taken – i.e. weak synthesis. Reasoning to support stand seems more memorised than understood.

VICTORIA JUNIOR COLLEGE
2015 JC2 PRELIMINARY EXAM

H2 ECONOMICS – PAPER NO. 9732/01

16 September 2015

8:00 – 10:15 am

Wednesday

2 hours 15 mins

Additional Materials: Answer Paper

READ THESE INSTRUCTIONS FIRST

Write your name and class on all the work you hand in.
Write in dark blue or black pen on both sides of the paper.
You may use a soft pencil for any diagram, graphs or rough working.
Do not use staples, paper clips, highlighters, glue or correction fluid.

Answer **all** questions.

At the end of the examination, fasten your work securely, by question, using the strings provided.

The number of marks is given in [] at the end of each question or part question.

This document consists of **7** printed pages.

Answer all questions.

Question 1

Health Care Systems

Table 1: Health expenditure, 2013

Country	Total (% of GDP)	Government (% of total health expenditure)
Singapore	4.6	39.8
United Kingdom	9.1	83.5
United States	17.1	47.1

Source: World Bank

Table 2: Health indicators, 2013

Country	Life expectancy at birth (years)	Infant mortality rate (per 1,000 live births)
Singapore	82	2.2
United Kingdom	81	4.0
United States	79	5.9

Source: World Bank

Extract 1: Health care systems

The single payer national health service model

In this system, health care is provided and financed by the government through tax payments, just like the police force or the public library. Many, but not all, hospitals and clinics are owned by the government. Patients never get a doctor bill. These systems tend to have low costs per capita, because the government, as the sole payer, controls what doctors can do and what they can charge. Countries using this model include the United Kingdom (UK), Spain, most of Scandinavia and New Zealand.

The single payer national health insurance model

This system uses private-sector providers, but payment comes from a government-run insurance program that every citizen pays into. Since there's no need for marketing, no financial motive to deny claims and no profit, these universal government-run insurance programs tend to be cheaper and much simpler administratively than private American-style for-profit insurance. National health insurance plans also control production costs by limiting the medical services they will pay for. This system is found in Canada.

The "market driven" health care model

Only the developed, industrialised countries have established health care systems. In poor countries, the basic rule is that the rich get medical care; the poor stay sick or die. In rural regions of Africa, India, China and South America, hundreds of millions of people go their whole lives without ever seeing a doctor.

The United States (US) is unlike every other country because it maintains separate systems for separate classes of people. When it comes to treating war veterans, it is like Britain. For Americans over the age of 65 on Medicare, the system is like in Canada. For the 15 percent of the population who have no health insurance, the US is like rural India.

Source: Physicians for a National Health Program, <http://www.pnhp.org>.

Accessed on 6 June 2015

Extract 2: Why Is American health care so ridiculously expensive?

The US medical system is absurdly expensive. The average routine office visit in the US is three-times more expensive than in Canada. The average CT scan is five-times more expensive than in Canada.

In *The Healing of America*, T. D. Reid explored why American medicine in general falls behind other countries in quality while it races far ahead in cost of care. One reason offered by Reid is that unlike other countries, the US government doesn't manage prices. While some developed countries have one health care insurance plan for everybody - where the government either sets prices or oversees price negotiations - the US is unique in its reliance on private for-profit insurance companies to pay for both essential and elective care.

However, it's not like all this money buys the US nothing. American health care is the world's envy in some categories, especially in cancer care, wait times, and access to new technologies for affluent and insured families.

Source: The Atlantic, <http://www.theatlantic.com>, published on March 27 2013.
Accessed on 6 June 2015

Extract 3: Cost of ageing population Singaporeans' top worry

The number one worry of Singaporeans is the cost linked to the growing pool of old folk, according to a global survey commissioned by global insurer Swiss Re. Singapore is projected to have one in five people aged 65 or older by 2030. As the country greys, a critical quotient is the gap between the cost of meeting people's needs in health care and what is available from government schemes to cover these costs. A Swiss Re study found that if government health care expenditure remains at the same proportion of GDP as in 2010, the gap in Singapore will grow from US\$100 million (S\$124 million) to US\$600 million by 2020. How to reduce this gap was a topic discussed at a Swiss Re closed-door symposium, attended by regional life insurers, academics and government officials. Popular solutions raised include the government focusing on early intervention and promoting healthy living.

Source: The Straits Times, 23 Oct 2013

Extract 4: Health care financing in Singapore

The Singapore government's philosophy on healthcare and, more generally, social welfare financing has largely been shaped by the country's first Prime Minister, Lee Kuan Yew, who often stressed that a welfare state was not viable for Singapore because it bred dependency on the government, and led to wastage and over-consumption. The government's approach is that the individual, and not the state, is expected to bear the main responsibility for meeting his/her needs in healthcare.

Health care financing in Singapore is commonly known as the 'Subsidies plus 3M framework'. It comprises 1) government subsidies for health services obtained at public healthcare institutions, 2) a mandatory savings account (Medisave) that induces individuals to save for their hospitalisation expenses, including those that will be incurred during retirement, 3) a catastrophic medical insurance scheme (MediShield) designed to address medical episodes that are infrequent in nature, but impose high financial impacts, and 4) a means-tested financial assistance scheme (Medifund) which serves as a safety net of last resort for patients who can't afford subsidised care even after using Medisave, MediShield and seeking help from their families.

Source: Lee Kwan Yew School of Public Policy, http://lkyspp.nus.edu.sg/wp-content/.../csu_healthcare-financing-final_2207.pdf
Accessed on 6 June 2015

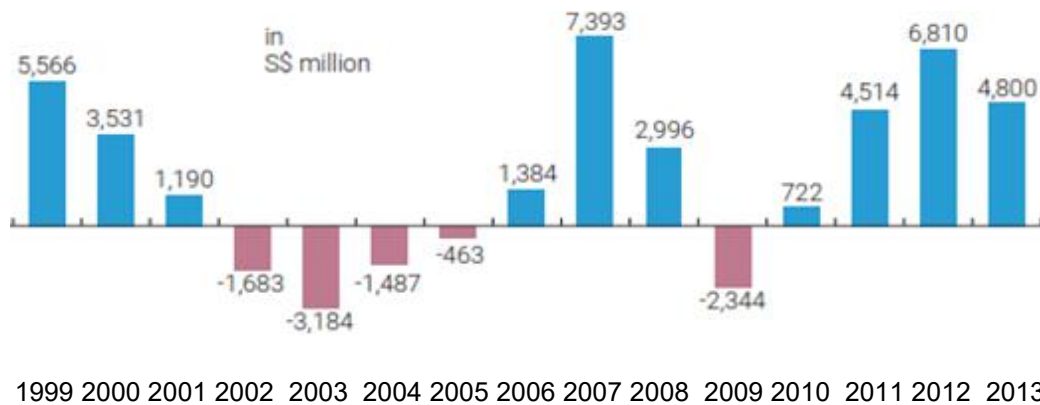
Extract 5: Key policy shifts to alleviate medical costs

Following the announcement by the Finance and Health Ministers of Singapore in early 2013 that the government was reviewing the country's health care financing framework with a view to having the State shoulder a larger share of healthcare costs, the Health Minister has shared that the government's initiatives on healthcare affordability include:

1. Making outpatient costs more affordable by expanding government subsidies and Medisave use, to reduce cash outlay for patients.
2. Enhancing MediShield to better cover large bills and provide life-long coverage for all Singaporeans and permanent residents. The scheme will be renamed MediShield Life. The government will provide subsidies to ensure that the premiums for MediShield Life are affordable by all.

Source: Singapore Ministry of Health, 29 Aug 2013

Figure 1: Singapore government's budget position (surplus and deficit)



Source: Straits Times Graphics, <http://graphics.straitstimes.com>
 Accessed on 15 August 2015

Questions

- (a) Explain what could be inferred from Figure 1 about the change in the Singapore government's reserves from 1999 to 2013. [2]
- (b) Using Table 1, compare health expenditure as a percentage of GDP by the US and UK governments. Justify your answer. [2]
- (c) "The average CT scan is five-times more expensive (in US) than in Canada." (Extract 2) Justify if this difference in price is due to price discrimination. [5]
- (d) Using the concept of opportunity cost, explain how rising health care expenditure caused by an ageing population will impact a country's economic growth. [3]
- (e) With reference to the data, discuss whether the single payer national health service model is superior to the market driven model of health care system. [8]
- (f) In view of the public's concern with health care affordability, assess the Singapore government's move to bear a larger share of total health care spending. [10]

[Total: 30]

Question 2

Economic Growth and Policies**Table 3: % change in real gross domestic product (GDP)**

	2009	2010	2011	2012	2013
Japan	-5.5	4.7	-0.5	1.8	1.6
USA	-2.8	2.5	1.6	2.3	2.2
China	9.2	10.6	9.5	7.8	7.7
Germany	-5.6	4.1	3.6	0.4	0.1

Table 4: Unemployment (% of total labour force)

	2009	2010	2011	2012	2013
Japan	5	5	4.5	4.3	4
USA	9.4	9.7	9	8.2	7.4
China	4.4	4.2	4.3	4.5	4.6
Germany	7.7	7.1	5.9	5.4	5.3

Table 5: Government budget balance (% of GDP)

	2009	2010	2011	2012	2013
Japan	-8.8	-8.3	-8.8	-8.7	-9.3
USA	-12.8	-12.2	-10.7	-9.6	-6.4
China	-1.1	-0.7	0.1	-0.3	-0.7
Germany	-3.1	-4.2	-0.8	0.1	0

Table 6: Components of GDP in selected economies (% of total), 2013

	Exports	Domestic Consumption
Japan	16.2	61.1
USA	13.5	68.5
China	23.3	36
Germany	45.6	55.9

Sources of Tables 3 to 6: OECD and World Bank

Extract 6: Japan spurs talk of currency war

The Bank of Japan has launched quantitative easing on a vast scale in an effort to revive the Japanese economy. This creation of new money has caused Japan to come under fire for deliberately weakening its currency to spur demand for its exports.

But the fact remains that a weaker yen, which makes Japanese goods more competitive in the global market, is a boon for Japan's economy. On the other hand, Germany's economy is struggling. German exporters could feel the pinch if the euro appreciates against the yen which may exacerbate the slowdown in growth. Beyond that, there's concern that other nations could take similar steps, leading to competitive devaluation, also known as a currency war.

Officials in Korea and Thailand were the latest to voice concern over the rapid appreciation of their currencies as monetary easing in Japan and the United States boosts demand for higher yielding assets. Brazil has also complained about the flood of money unleashed by interest rate cuts in the United States and Japan.

Source: CNN, 24 January 2013

Extract 7: A time for austerity

In 2009 the frightening speed of economic collapse spurred many governments to roll out big packages of tax cuts and extra spending in the hope of stimulating growth. Among Barack Obama's first steps as president in 2009 was to sign the American Recovery and Reinvestment Act, a stimulus plan worth \$831 billion, or almost 6% of that year's GDP.

For some countries, the result was a spike in government debt, made worse by slowing growth. The question about how much debt governments could take on without harming the economy loomed. Typically, lenders will demand ever higher rates of interest from spendthrift governments as public debts grow.

As growth returned, some leaders argued that it was time to reverse fiscal policy to trim public spending. Others worried that the recovery was too fragile to permit any hint of austerity. Fiscal consolidation, in short, still has its place. But what sort? Some economists recommend spending cuts, others argue that higher taxes can also work. Both approaches have costs. Taxing pay can distort labour markets while cutting spending is more unpopular and can exacerbate inequality.

Source: The Economist, 28 September 2013

Extract 8: China's economic growth and rebalancing

The sustainability of China's economic growth is a key element of the global outlook. There is a widespread consensus, including in China, that the export-led growth model which prevails in the country is unsustainable in the long run.

Economic imbalances are an inherent by-product of the export-led growth model. While this framework has been successful in modernising China's economy, boosting GDP per capita and gaining export market shares, it has produced domestic and external imbalances and tensions with major trading partners. Production for the export market, such as the export of carbon-intensive metal products has also led to environmental degradation in China and this has become an issue of concern to many Chinese.

Hence, China is adopting policies to "rebalance" the economy by relying more on domestic demand to drive growth. This has led to policies to increase domestic demand to address problems such as weaker global demand. Coupled with abundant rural labour supply, inward foreign direct investment into the mainland areas and increasing share of high value-added exports using imported technology from multi-national companies, this would help China move towards a path of sustainable growth.

Source: European Central Bank paper on China's Economic Growth and Rebalancing, Feb 2013

Extract 9: China's new growth strategy

China has made the transition to a pro-consumption growth strategy the centrepiece of its newly enacted five-year plan. It features three building blocks:

- China has the smallest services sector of any major economy in the world, yet services in China generate about 35 percent more jobs per unit of GDP than do manufacturing and construction. By shifting from capital-intensive manufacturing to labour-intensive services, China could grow more slowly and achieve more sustainable growth.
- Per capita income of urban workers in China now runs about three times that of their counterparts in the countryside. With China's urban population exceeding its rural population for the first time in history, ongoing rapid urbanisation, coupled with services-led employment opportunities, is a plus for boosting aggregate wage incomes.
- China must build a social safety net. Lacking financial security, workers will continue fear-driven precautionary saving, an impediment to a flourishing Chinese consumer culture.

Source: Stephen S. Roach, YaleGlobal, 19 July 2012

Questions

- (a) Compare Germany's government budget balance with that of USA between 2009 and 2013. [2]
- (b) Explain how slow growth could worsen a government's budget position. [3]
- (c) With the aid of a diagram, explain how quantitative easing by the Bank of Japan would result in the weakening of the yen. [4]
- (d) Explain why officials in Korea and Thailand are concerned about the quantitative easing in countries like Japan. [3]
- (e) In light of the problems described in Extract 7, discuss the view that USA and Germany should adopt fiscal consolidation. [8]
- (f) Discuss whether China should rely on her domestic market or exports to drive growth. [10]

[Total: 30]

---End of paper---

Answers to 2015 H2 Economics Preliminary Exam Paper 1

CSQ1

(a)	<p>Explain what could be inferred from Figure 1 about the change in the Singapore government's reserves from 1999 to 2013.</p> <p>Rising [1]</p> <p>Reason: It ran budget surpluses in more years than it ran deficits and the surpluses tended to exceed the deficits during this period. [1]</p>	[2]
(b)	<p>Using Table 1, compare health expenditure as a percentage of GDP by the US and UK governments. Justify your answer.</p> <p>In terms of govt health spending <u>as % of GDP</u>, US government spent more than UK. [1m for comparison]</p> <p>Although the US government's share out of total health spending is much smaller, the total spending in US as % of GDP on health care is much higher. [1m for justification]</p> <p>Calculation for US: $0.471 \times 17.1\% \text{ of GDP} = 8.037\% \text{ of GDP}$</p> <p>Calculation for UK: $0.835 \times 9.1\% \text{ of GDP} = 7.5985\% \text{ of GDP}$</p> <p>Note: The calculation is not necessary.</p>	[2]
(c)	<p>"The average CT scan is five-times more expensive (in US) than in Canada." (Extract 2)</p> <p>Justify if this difference in price is due to price discrimination.</p> <p>3rd degree price discrimination (PD) is the charging of different prices to different consumers for the same product for reasons not due to differences in marginal costs.</p> <p>No</p> <ul style="list-style-type: none"> - PD applies to the same service produced by the same producer. Based on the data, the service is likely to be different such that the higher price in US could be due to a higher quality service, given extract 2's reference to US clinics offering health care that involves new technologies. Moreover, it is likely to be produced by different producers. - Average GDP per head in the two countries is rather comparable, given that both are developed countries. This implies that the price elasticity of demand is rather similar. So the prices shouldn't be that different (5-fold difference) even if 3rd degree PD is taking place. - The price difference is likely due to different health care systems. In US, demand is driven up by 'for-profit insurance' (Extract 2) because the insurance enhances patients' ability to pay. Higher demand results in higher level of scarcity giving rise to high prices. In contrast, in Canada, the national health insurance model help to control costs by limiting the medical services that the national health insurance plan will cover. This could have moderated the demand for CT scans, resulting in lower price. <p>L1: 1-2: Explains the conditions of PD but no consideration of context.</p> <p>L2: 3-5: Explanation that the phenomenon is not PD is supported by theory of PD And consideration of the context. [2 application points that show understanding of the conditions of PD, with analytical explanation]</p>	[5]

(d)	<p>Using the concept of opportunity cost, explain how rising health care expenditure caused by an ageing population will impact a country's economic growth.</p> <p>Given scarcity of resources, with increased spending on health care, a consumption good, the opportunity cost would be less spending in capital goods. [1]</p> <p>With less spending on capital goods, the country's capital stock will grow more slowly [1], causing the country's productive capacity to grow more slowly, thus reducing GDP growth. [1]</p>	[3]
(e)	<p>With reference to the data, discuss whether the single payer national health service model is superior to the market driven model of health care system.</p> <p><u>Explain the systems</u></p> <p>In the market driven model (e.g. US, developing countries with no government-established health care systems), price is determined by market forces. Health care demand is supported by 'for-profit' health insurance for those who can afford such insurance.</p> <p>In the single payer national health service model (e.g. UK), the government provides free health care, treating it like as though it is a public good (police) or semi-public good (library) when it is not. Health service providers are mainly govt-owned.</p> <p><u>Comparison</u></p> <p>Pros of single payer national health service system</p> <ol style="list-style-type: none"> 1. It ensures that everyone, including the poor has access to this necessity good. <p>In contrast, in developing countries and in the US, those with no/inadequate purchasing power go without health care (Extract 1, para 3). This is because in such a system, profit-motivated firms sell only to those who are willing and able to pay.</p> <p>As such, there is higher standard of living compared to countries that use the market driven model. This is seen in higher life expectancy and lower infant mortality in UK compared to US (Refer to table 1)</p> <ol style="list-style-type: none"> 2. It has resulted in lower spending on health (refer to table 1), since the government controls price and quantity of services offered by doctors (refer to extract 1). <p>In contrast, in US, demand is driven up by 'for profit insurance' because the insurance enhances patients' ability to pay which could result in over-consumption and high prices (Extract 2). (Note: Could also apply 'moral hazard' and 'asymmetric information' concepts to explain the problem of over-consumption.)</p> <p><i>Better outcome (higher life expectancy and lower infant mortality) with lower overall spending on health means that the single-payer system is more cost efficient.</i></p> <ol style="list-style-type: none"> 3. It corrects market failure <p>In the market driven model, the market equilibrium quantity is not socially optimal. Consumers disregard positive externalities of health care (e.g. better health means less loss of man hours for employers and less covering of work by colleagues) and they may not be fully aware of the benefits of consuming health care. As such, they undervalue health services. The resulting low</p>	[8]

demand causes market equilibrium to be lower than the socially optimal level.

The single payer health model is an attempt to correct this market failure and could lead to smaller welfare loss for society.

Cons of single payer national health service system

1. Free provision results in allocative inefficiency because free provision results in **over-consumption** (Could also apply 'moral hazard' concept). That is, consumption reaches the point where $MSB < MSC$, resulting in **welfare loss**. (i.e. Government Failure).

Unlike public goods and semi-public goods, health care is rival in consumption. This mean that the service should not be provided free since MC of providing for the additional user is not zero given that it is rival.

However, this problem of over-consumption is reduced to some extent by the government controlling the quantity of treatment (Refer to extract 1)

2. Moreover, the resultant over-consumption will correspond with **long waiting times, leading to loss of man hours**, thus **reducing productive capacity** of economy.

In contrast in US, for the affluent and insured patients who consumed health care based on market prices, wait time is short (Extract 2, 3rd para).

3. Without profit motive, government hospitals have **lower incentive for R&D**. The govt as health care provider and custodian of society's interest is likely be engaging in it but rate of innovation should be lower than in rich countries like the US where profit-motive promotes technological advancement.

In contrast, in the US, where prices are determined by market forces, the high price incentivises hospitals to innovate so as to provide improved services (e.g. advanced cancer treatment, Extract 2) for which the affluent and those with insurance are willing and able to pay.

But in the single payer national system, the govt, who looks after society's interest and not profit, is likely to spend on basic research and hence could do better in this type of research.

4. By providing free health care, **the government spending on health will be high** and it will have significantly **lesser funds to spend on other areas like education** which can adversely affect the potential rate of economic growth. E.g. less spending on education result in lower rate of technological advancement.

But in US the government, even though it doesn't provide free health care for all, also ends up spending a lot, even more (refer to calculation for (a).)

Conclusion

Stand: The single payer national health system is superior to the free market system for equitable access and cost efficiency (better outcome with less overall spending) but for allocative efficiency, both systems have their limitations.

While the govt controls the amount of treatment provided, free provision is likely to result in some over-consumption and hence allocative efficiency. As for which systems results in greater degree of over-consumption, the data doesn't provide enough information to make a judgment. With regards to the criteria of dynamic efficiency, one disadvantage is that it leads to slower rate of innovation in medical science due to the lack of profit motive.

	L1 1-2	Cut and paste relevant points – no explanation Only able to define the 2 systems	
	L2 3-4	2 sided but descriptive explanation with use of some data Or 2 sided analytical explanation with no use of data – max 4 only Or 1 sided but analytical explanation with use of data	
	L3 5-6	2 sided with analytical explanation and use of data.	
	+1 only	Overall judgement Stand based only on theoretical conventional thinking: Not superior for all criteria – superior for equitable access but not for efficiency.	
	+2	Stand based on theory and data: Superior for equitable access and cost efficiency (better outcome with less overall spending) but for allocative efficiency, both systems have their limitations. As for dynamic efficiency, it is likely to give rise to slower rate of applied research due to lack of profit motive. [At least 2 evaluative comment that are substantiated with theory and data]	
(f)	<p>In view of the public’s concern with health care affordability, assess the Singapore government’s move to bear a larger share of total health care spending.</p> <p><u>Explain ‘bear larger sharer’</u> Up to 2012, the Singapore gov’t stand is that the individual should bear the main responsibility of meeting healthcare needs.</p> <p>In 213, the gov’t changed its approach – it sought to bear larger share by providing more subsidies and paying for insurance for those who can’t afford.</p> <p><u>Yes, it is a good move</u></p> <ol style="list-style-type: none"> Healthcare is a necessity. Increase in level of subsidies plus creation of Medishield Life (an enhancement) will enable all, including the poor to afford. The need is rising due to ageing population with 20% of the population being age 65 or older by 2030 and research indicate that Singaporeans are increasing worried about health care affordability (Extract 3). Without adequate funds and hence lack of ability to pay, some Singaporeans will not have any access to health care in their old age. <p>Increase in subsidies will lead to lowering of MC. This lowers supply and lead to a fall in market prices.</p> <ol style="list-style-type: none"> Healthcare is a merit good. Currently, the Singapore government may not have subsidised enough and the market equilibrium is still not at the socially optimal level. [Students could back up this assertion by referring to table 1 that shows that the Singapore gov’t spends very little on health care relative to other DCs]. With adequate subsidies, the MPC is lowered enough for the supply curve to cut the demand curve at the socially optimal level. <p><u>No, it is not a good move</u></p> <ol style="list-style-type: none"> It will increase gov’t’s overall spending leading to possibility of running persistent budget deficits and rising gov’t indebtedness – this can have adverse macro implications E.g. Rising public debt => less able to spend on skills upgrading & infrastructure in the future, MNCs lose confidence in country’s LT growth potential and may relocate. To avoid debt, the government will have to 		[10]

increases taxes and this can discourage work effort and discourage FDI. Increasing indirect taxes will have adverse effects on equity.

It could be argued that the Singapore government has amassed a high level of savings due to prudent fiscal policies – In figure 1, it can be seen that the government runs budget surpluses in most years. However, with an ageing population, the labour force will eventually shrink and this will reduce the taxable income base. Thus the problem of rising govt indebtedness is a valid counter argument.

2. Increase provision of subsidies at polyclinics & transfer payment to aid the poor to afford premiums for life-long healthcare cover under Medishield Life health care will discourage work effort which will lower potential growth.

However, this effect shouldn't be that bad since the govt is not subsidising to the point that it is free. Moreover, the govt is opting for something like the single payer national health insurance model (though not exactly – in this model, the health service provider is private but in Singapore, govt is the provider and to a rather large extent) rather than UK national health service model. Even with the changes, the consumer would still need to co-pay treatment.

3. Increase spending on subsidies could lead to allocative inefficiency. Basic health care is a merit good that tends to be under-produced/consumed in the free market due to under-valuation by consumers about its MB, possibly due to ignorance – e.g. not bothering to undergo health checks and undertake early intervention. Thus, the government should provide production subsidies to bring consumption level up to the social optimal level. However, when the government increases its subsidies, there is the possibility of over-subsidisation resulting in over-consumption.

However, the government is not subsidising up to the point where it is free which means that the over-consumption arising from subsidies should not be excessive and may think it worth the while if society values equity of distribution over efficiency of resource allocation.

Conclusion:

Whether the govt should bear a larger burden is dependent on whether it values equity over efficiency and the manner of the government's increased spending on health care.

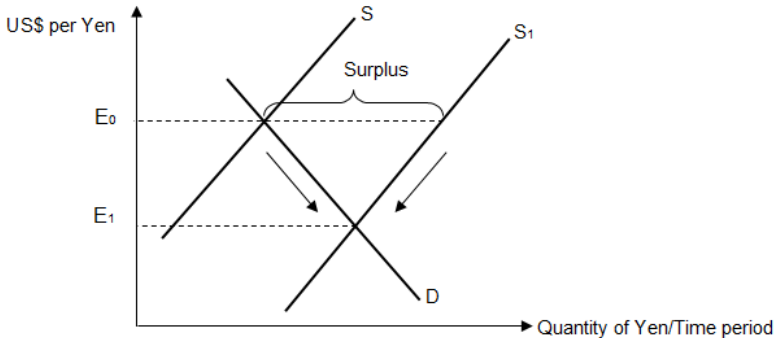
Stand with substantiation: With an ageing population, it is unavoidable that it needs to bear a bigger burden if the government increasingly values equity. But given its manner of increased spending, it should not result in too much trade off with efficiency. Moreover, its move can be said to be appropriate as long as it takes additional steps to avoid excessive rising expenditure and hence debt problems and the consequent trade-off with LT growth potential. E.g. it could adopt measures to help contain its rising spending on health care – E.g. 1) promote healthy life style (e.g. public education – healthy eating habits; subsidies exercise programmes) to reduce frequency of illnesses as mentioned in extract 3, 2) build in measures that limit the medical services that the govt-subsidised insurance can pay for (like in Canada); 3) continue to pursue policies grow the economy to obtain rising revenue from rising income to finance the rising expenditure on health.

L1 1-3	Cut and paste relevant points – no explanation
L2 4-6	2 sided but descriptive explanation or 1 sided analytical explanation with use of data

L3 7-8	2 sided with analytical explanation and use of data. Shows awareness that stand is dependent on whether efforts at improving equity is at expense of some other goal (efficiency or growth) and/or nature of the increased spending on health by the govt but does not actually make a stand based on the context.
+(E1-2)	Overall judgement Makes qualified judgement on whether the move is likely to be positive or adverse with regards to trade off with efficiency and macro goals based on context (e.g. nature of the increased spending by govt on health, likelihood of debt problem). [At least 2 evaluative comments that are substantiated with theory and data]

CSQ 2

(a)	Compare Germany's government budget balance with that of USA between 2009 and 2013.	[2]
	<p>Similarity: Both saw an improvement in budget balance as a % of GDP. [1]</p> <p>Differences:</p> <ul style="list-style-type: none"> • USA's budget deficit as a % of GDP has always been higher than Germany. [1] • USA experienced a budget deficit throughout the entire period while Germany experienced a budget deficit until 2011. <p>Any 2 points.</p>	
(b)	Explain how slow growth could worsen a government's budget position.	[3]
	<p>A government's budget position is worsened due to increased government spending and/or falling / slower increase in tax revenue.</p> <p>With slow growth, there will be slowdown in the rise in income earned and firms will also see a slowdown in the rise in profits due to poor demand. Hence, the government's tax revenue from individuals and businesses will rise slowly which will worsen its budget position if the growth in tax revenue can't keep up with rising government spending. [2]</p> <p>An economy is likely to experience falling unemployment in times of slow growth since the economy is still growing. This would lead to a fall in the amount of unemployment benefits and transfer payments given out. However, the fall in unemployment benefits spending may not be enough to offset the fall in tax revenue growth. Therefore, there would be a worsening of the government's budget position. [2]</p> <p>An economy may be experiencing rising unemployment when growth slows because the slowing growth could be due to certain sectors suffering a contraction of demand causing affected firms to lay-off workers. This means the government will have to spend more on unemployment benefits. [2]</p> <p>When growth slows, the government may engage in expansionary fiscal policy in the form of increasing government expenditure or cutting direct taxes to stimulate C/I to prevent growth from slowing to the point of become negative. [2]</p> <p>Impact on govt spending [2] + Fall in growth of tax revenue [2] = 3</p>	

<p>(c)</p>	<p>With the aid of a diagram, explain how quantitative easing by the Bank of Japan would result in the weakening of the yen.</p> <p>With the increase in money supply in Japan, interest rate falls. This leads to an outflow of hot money due to lower rate of return on deposits. [2] Hence, there will be a rise in the supply of yen in the foreign exchange market which resulted in the weakening of the yen. [1]</p> <p>OR</p> <p>With the increase in money supply in Japan, people with excess money will buy more foreign assets or purchase more imported consumer goods. [2] Hence, there will be a rise in the supply of yen in the foreign exchange market which resulted in the weakening of the yen. [1]</p> <p>OR</p> <p>With the increase in money supply in Japan, interest rate falls. This leads to less inflow of hot money due to lower rate of return on deposits. [2] Hence, there will be a fall in the demand for yen in the foreign exchange market which resulted in the weakening of the yen. [1]</p> <p>+ Diagram [1]</p> 	<p>[4]</p>
<p>(d)</p>	<p>Explain why officials in Korea and Thailand are concerned about the quantitative easing in countries like Japan.</p> <p><u>Option 1</u> With a fall in interest rate in Japan leads to an inflow of short-term capital inflow into countries like Korea, Thailand and the US due to the “demand for higher yielding assets” (Extract 1).</p> <p>The appreciation of the Korean Won and Thai Bhat in the forex market leads to a fall in export price competitiveness for Korea and Thailand. Exports become more expensive in foreign currency while imports from Japan become cheaper in domestic currency. Assuming Marshal-Lerner condition holds, the value of net exports will fall causing the current account to deteriorate and GDP to fall as the AD contracts. [3]</p> <p>OR</p> <p>With greater inflow of short-term capital into Korea and Thailand, this would lead to a higher supply of loanable funds. If the excess funds are channelled to purchase of assets such as properties, this would lead to over-investment in the property market, causing asset inflation. [3]</p> <p><u>Option 2</u> Due to the weakening of the Japanese yen, Japanese goods and services are relatively cheaper. Countries will switch to buying Japanese goods and services instead of Korean and Thai goods and services. This leads to a fall in export revenue for Korea and Thailand and the value of net exports will fall causing the current account to deteriorate and GDP to fall as the AD</p>	<p>[3]</p>

	<p>contracts. [3] OR Due to the weakening of the Japanese yen, Japanese goods and services are relatively cheaper. Korea and Thailand will see a rise in import expenditure as their domestic goods will be relatively more expensive. Assuming Marshal-Lerner condition holds, the value of net exports will fall causing the current account to deteriorate and GDP to fall as the AD contracts. [3]</p> <p>Explanation of 1 macro effect, with links, can get max 3m.</p>	
(e)	<p>In light of the problems described in Extract 7, discuss the view that USA and Germany should adopt fiscal consolidation.</p>	[8]
	<p><u>Intro</u> The global recession in 2009 which resulted in slower or negative growth and unemployment led governments to implement expansionary fiscal policy to revive their ailing economies. However, Extract 7 discusses how budget debt in countries is hurting growth and unemployment. Hence, some leaders felt that there was a need for fiscal consolidation which refers to austerity measures which include reducing government spending and raising taxes such as personal income tax and corporate tax. However, others were arguing against fiscal consolidation as the economic recovery was still slow.</p> <p><u>Body</u> Thesis: Fiscal consolidation should be adopted 1. To boost consumption (C) and investment spending (I) Expansionary fiscal policy which involves tax cuts and increased government spending resulted in huge government deficit for countries such as the USA (-12.8% of GDP from Table 3). This led to creditors demanding higher interest rates due to fears that the governments could not repay their loans (Extract 7). Hence, fiscal consolidation is necessary to reduce government debt to boost households and firms' confidence in the economy and to encourage lower interest rates. This is to stimulate C and I and hence AD. An increase in AD would lead to a multiple increase in national income (could include the AD/AS diagram showing a rightward shift in the AD curve) which in turn would increase production and hence increase the demand for labour which would reduce unemployment. Evaluation: The ability for governments to encourage C to boost growth and employment would be significant for USA and Germany where domestic consumption was a large proportion of GDP (>55% from Table 6).</p> <p>2. To allow for more policy options in the future The large amount of debt will hinder the governments' ability to exercise expansionary fiscal policy when there is recession in the future due to a lack of government reserves. This will cripple the governments' ability to reduce problems of growth and unemployment in a recession.</p> <p>Overall evaluation: Overall, USA's budget deficit is large and consistently greater as a % of GDP as compared to Germany (Table 5). Hence there is a greater reason for USA to carry out fiscal consolidation.</p> <p>Anti-thesis: Fiscal consolidation should not be adopted 1. Fiscal consolidation reduces G, C and I Decreasing government expenditure and raising taxes would lead to a fall in AD. Higher personal income tax rates means that households will have lower disposable income and hence likely to spend on consumer goods to satisfy their wants. Higher corporate tax rates also reduce the post-tax expected rate of returns for firms. With lower returns from their investment, firms are less likely to demand more capital goods. The overall fall in G, C and I will lead to a fall in AD and a multiple fall in national income. In addition, there will be a fall in production which reduces the</p>	

demand for factors of production like labour which worsens unemployment.
 Evaluation: USA would be more cautious about the impact of fiscal consolidation on unemployment as her unemployment rates are high and steadily greater than that of Germany's (Table 4).

2. Inability to rely on export-led growth

In times of a global recession, these countries cannot rely on exports to boost growth. Fiscal consolidation should not be adopted as it will exacerbate the country's growth and unemployment problems. This is especially so for Germany who would suffer significant negative effects of a global recession as its exports take up 45.6% of its GDP. Hence, it would have to rely on expansionary fiscal policy instead to boost its economy.

3. Reducing government spending results in greater inequity

Cuts in government spending will mean less unemployment benefits or handouts for the lower income households. This means that they may not be able to afford basic goods and services due to a fall in purchasing power.

4. Negative effects of higher taxes

An increase in personal income tax may cause a disincentive to work as the marginal returns from work effort is reduced. Such taxes may even cause highly paid skilled labour to relocate to countries with lower income taxes. In addition, high corporate taxes create a disincentive to invest and accumulate capital due to lower after-tax profits and may even cause capital flight as firms relocate to countries with lower corporate tax rates. This reduces a country's productive capacity and hence lowers potential growth.

Conclusion

Fiscal consolidation could worsen or improve a country's macroeconomic problems. Whether or not a country should pursue fiscal consolidation depends on the severity of the budget deficit and the state of the economy.

Evaluation: The USA should consider fiscal consolidation more seriously due to a large budget deficit which could continue to hurt its economy. However, both countries still face low growth and unemployment, hence, they need to reconsider the need for fiscal consolidation.

L1	A very brief explanation of the impact of fiscal consolidation on the problems mentioned in Extract 7.	1-2
L2	- A well-developed but one-sided explanation of how fiscal consolidation can address OR worsens the problems mentioned in Extract 7. OR An underdeveloped two-sided discussion of how fiscal consolidation can address AND worsens the problems mentioned in Extract 7. - Some reference to context	3-4
L3	- A well-developed, two-sided discussion of how fiscal consolidation can address AND worsens the problems mentioned in Extract 7. - Good reference to context.	5-6
E	A well-justified judgment about whether fiscal consolidation should be considered based on	+2

	<ol style="list-style-type: none"> 1. Government budget deficit and 2. State of the economy (i.e. growth rates, unemployment rates) 		
(f)	<p>Discuss whether China should rely on her domestic market or exports to drive growth.</p>		[10]
	<p><u>Intro</u> Due to greater vulnerability to external shocks due to the pursuit of export-led growth as well as the global slowdown, this has led to countries switching to relying on their domestic consumption to drive growth.</p> <p><u>Body</u> China should rely on their domestic markets to drive growth 1. Reduce vulnerability to global shocks. Relying on domestic demand would be more stable. This would reduce the fluctuations in GDP and demand-deficient unemployment due to a fall in exports and FDI. With China's large domestic market due to her large population, this could enable her to potentially rely on domestic consumption to drive growth. With urbanisation leading to rising incomes (Extract 9), this could lead to higher spending on domestic goods, leading to higher C and AD.</p> <p>However, currently, according to Table 6, consumption in China is only 36% of GDP, which is rather low as compared to other countries such as USA (>60%) and Japan (about 60%). This could be due to the Asian thrift culture as well as "lack of financial security" (Extract 9) in China due to the lack of a social safety net. According to Extract 9, there is a need to lower personal income tax and provide more transfer payments to increase disposable income to encourage consumers to spend more, hence increasing household consumption. Given the large population of China, this might exert a strain on the government budget and would eventually require increases in tax to fund the additional government spending.</p> <p>2. Producing for the domestic market would mean a move towards less energy-intensive industries. Reliance on energy-intensive heavy industry for the production of exports has led to pollution and negative externalities for China (Extract 8). The switch to less energy-intensive industries would lead to lower pollution and hence less adverse impact on environment through a fall in carbon emissions, for example. This would lead to an improvement in the non-material standard of living as would present a more sustainable growth path as it does not exert too much pressure on the environment.</p> <p>3. Producing for the domestic market would lead to improvement in external imbalances. China's large trade surpluses have led to external imbalances and "tensions with other trade partners" (Extract 8). As her trade partners would suffer from trade deficit which results in lower growth and higher demand-deficient unemployment, they may blame China and implement protectionist measures such as tariffs or quotas to protect their domestic industries. This would stifle China's exports and hence stifle growth, leading to demand-deficient unemployment. Hence, producing for the domestic market would lead to lesser likelihood of such issues.</p> <p>China should rely on exports to drive growth 1. China should tap on global demand to increase demand for their exports, hence leading to an increase in AD and a multiple increase in national income. This would lead to higher growth and lower demand-deficient unemployment. This is important as China was able to achieve high growth rates in the past due to increase in exports. A shift to relying on domestic markets might lead to slower growth if the increase in C is insufficient to make up for the fall in X. The lack of government provision of welfare payments or a social safety net might lead to Chinese consumers continuing to save a high proportion of their income (Extract 9), hence limiting the increase in C.</p>		

2. When China reduces its reliance on exports, the process of rebalancing could lead to structural unemployment as workers who are unemployed in the export-oriented industries might not be able to secure jobs in the rising sectors catered at the domestic market due to a mismatch of skills. With the “shifting from capital-intensive manufacturing to labour-intensive services” (Extract 9), this would mean that those in the manufacturing sector producing for the export market might face structural unemployment if they are unable to secure jobs in the growing services sector.

Conclusion

With a large domestic market, China has the potential consumer base which means that switching to **rely on her domestic market is a viable option** to export-led growth.

The transition from export-led to domestic driven growth will lead to challenges such as higher structural unemployment hence the government needs to implement policies to enable transition from producing for the international market to producing for the domestic market. In addition, there is a need to produce more consumer goods and services rather than focus on energy-intensive heavy industry (Extract 8) to reduce the negative impact on the environment.

L1	- A brief description of the positive or negative impacts of relying on domestic markets	1-3
L2	- A one-sided explanation of how relying on domestic markets would lead to positive OR negative impacts for China in terms of achieving macroeconomic goals OR - A weak two-sided explanation of the positive AND negative impacts of relying on domestic markets for China - Some use of evidence from the data	4-6
L3	- A well-developed discussion of the positive AND negative impacts of relying on domestic markets for China - Good use of the evidence from the data	7-8
E	- Stand with strong justification, with reference to the potential of switching to reliance on China’s domestic market and its success or the issues which might hinder the success of the switch in growth strategy.	+2

VICTORIA JUNIOR COLLEGE
2015 JC2 PRELIMINARY EXAM

H2 ECONOMICS – PAPER NO. 9732/02

3 September 2015

8:00 – 10:15 am

Thursday

2 hours 15 mins

Additional Materials: Answer Paper

READ THESE INSTRUCTIONS FIRST

Write your name and class on all the work you hand in.
Write in dark blue or black pen on both sides of the paper.
You may use a soft pencil for any diagram, graphs or rough working.
Do not use staples, paper clips, highlighters, glue or correction fluid.

Answer **three** questions in total, of which **one** must be from Section A, **one** from Section B and **one** from **either** Section A or section B.

Start each question on a FRESH piece of paper.

At the end of the examination, fasten your work securely, by question, using the strings provided.

The number of marks is given in [] at the end of each question or part question.

This document consists of **3** printed pages.

Answer **three** questions in total

Section A

One or **two** of your three questions must be from this section.

1. In the developed world, the trend away from direct tax towards indirect tax has been hastened by the global financial crisis.

<http://www.taxation.co.uk/taxation/Articles/2011/06/03/25122/shift-indirect-taxes-rise-globally>

Accessed on 24th August 2015

Discuss the combined effect of increases in indirect taxes and decreases in personal income tax on consumers in different markets. [25]

2. Starbucks Coffee Company today announced it is opening its first store in Brunei – the company’s 64th global market – and its 100th store in Singapore, which will give people with autism the opportunity for meaningful employment and new lifelong skills.

<http://www.marketwatch.com/story/starbucks-southeast-asia-growth-momentum-continues-with-significant-milestones-in-brunei-and-singapore-2014-02-14>

Accessed on 2nd August 2015

(a) Explain how globalisation could increase a firm’s profits. [10]

(b) Discuss whether price competition should be the primary business strategy for a coffee café chain like Starbucks in Singapore. [15]

3. Governments often subsidise training programmes and intervene in markets where there is possible abuse of market power.

(a) Explain why immobility of factors of production and market dominance may lead to market failure. [10]

(b) Evaluate current policies adopted by the Singapore government to correct for these types of market failure. [15]

Section B

One or two of your three questions must be from this section.

4. "A current account deficit has a more adverse impact on the economy than a capital account deficit". Discuss. [25]
5. Unlike most other countries, Singapore has adopted the use of the exchange rate rather than the interest rate as the instrument of monetary policy.
- (a) Explain the key factors that may limit the effectiveness of interest rate policy for an economy. [10]
- (b) Discuss the extent to which conflicts in macroeconomic objectives may arise for Singapore when it adopts exchange rate policy. [15]
6. (a) Explain the possible challenges that can arise from a country's openness to trade with the rest of the world. [10]
- (b) Assess the appropriateness of using protectionism to help a small country tackle those challenges relative to a large country. [15]

----End of paper-----

Answers to 2015 H2 Economics Preliminary Exam Paper 2

Question 1

In the developed world, the trend away from direct tax towards indirect tax has been hastened by the global financial crisis.

<http://www.taxation.co.uk/taxation/Articles/2011/06/03/25122/shift-indirect-taxes-rise-globally>

Accessed on 24th August 2015

Discuss the combined effect of increases in indirect taxes and decreases in personal income tax on consumers in different markets. [25]

Introduction

To analyse the combined effect of increases in indirect taxes and decreases in personal come tax on consumers in different markets, demand and supply analysis and the concepts of price elasticity of demand and supply and income elasticity of demand will be used.

Body

Rise in indirect taxes

An indirect tax is a compulsory levy imposed on the sale of goods and services. The producer or retailer has the *legal responsibility* to pay the tax to the government. E.g. GST and excise taxes on tobacco.

An increase in indirect taxation will effectively add on to the marginal costs of production of firms. The increased marginal cost of production will reduce the profits of producers, leading to a fall in the supply of the good. The supply curve shifts up by the full amount of the tax.

Cut in personal income taxes

Direct taxes are taxes levied by the government directly on the income and wealth of individuals and firms. Personal income tax is on households' income. When income taxes are cut, households' disposable income rises.

A fall in income tax will have different impacts on demand - it depends on the income elasticity value of the demand for the good concerned. A rise in disposable incomes due to a fall in income tax will cause demand for normal goods to rise as these goods have positive income elasticity, for which demand will increase when income rises and demand decreases when income falls. Normal goods can be classified as luxury goods and basic necessities.

Case 1: $E_p < 1 + 0 < E_y < 1$

A product with a demand that is price inelastic has few close substitutes or price takes up small percentage of income. For instance, the demand for cooking oil tends to be price inelastic, as there are no close substitutes for it, hence its $E_p < 1$.

As explained earlier, an increase in indirect tax will shift the supply curve leftwards.

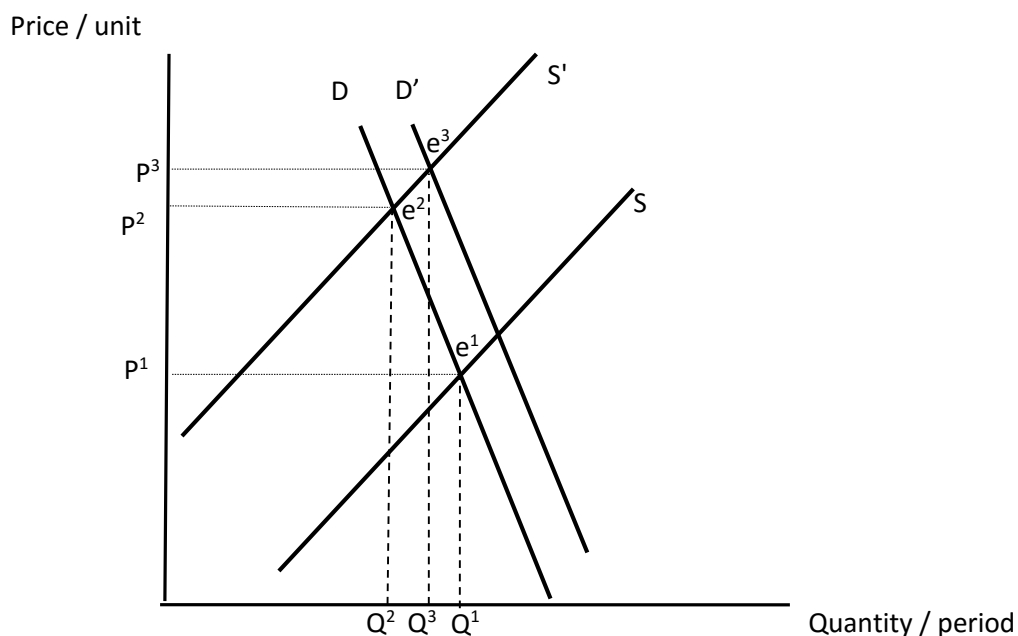
An increase in disposable income caused by cuts in personal income taxes will cause a less than proportionate increase in the demand for basic necessities. The demand for basic necessities such as cooking oil is income inelastic, $0 < E_y < 1$, and is illustrated by an small rightward shift of the demand curve when disposable income increases due to a reduction in personal income tax.

With a fall in supply and a rise in demand, the effect on the market equilibrium price of cooking oil will rise unambiguously, as shown below. This is because decrease in supply together with increases in demand creates a shortage. Those who can't get the good will bid up the price. However, if the effect of the rise in indirect taxation outweighs the effect of the increase in disposable income, i.e. the fall in

supply outstrips the rise in demand, the combined effect will be a reduction in the equilibrium quantity for cooking oil. Similarly, if the effect of the increase in disposable income outweighs the effect of the rise in indirect taxation, the combined effect will be an increase in the equilibrium quantity of basic necessities. Therefore, the combined effect on the equilibrium quantity is indeterminate as it may reduce, remains unchanged or increase, depending on the relative shifts of the demand and supply curves.

Evaluation:

It is more likely that the fall in supply for cooking will outweigh its rise in demand as the good is a basic necessity for everyday cooking; the effect of a rise in disposable income as a result of a fall in income tax has very little on its demand. Since the rise in equilibrium price has exceeded the fall in the quantity, total expenditure by consumers rises.



First, holding demand constant, the fall in supply would have caused TE to rise when the equilibrium point changes from e¹ to e². This is because given a price inelastic demand, the fall in quantity demanded would have been less than in proportion to the rise in price such that the increase in spending from having to pay a higher price would have more than offset the decrease in spending from buying fewer units. Then, letting demand rise as well, both price and quantity increases, thus resulting in further increases in TE.

Case 2: $E_p > 1 + E_y > 1$

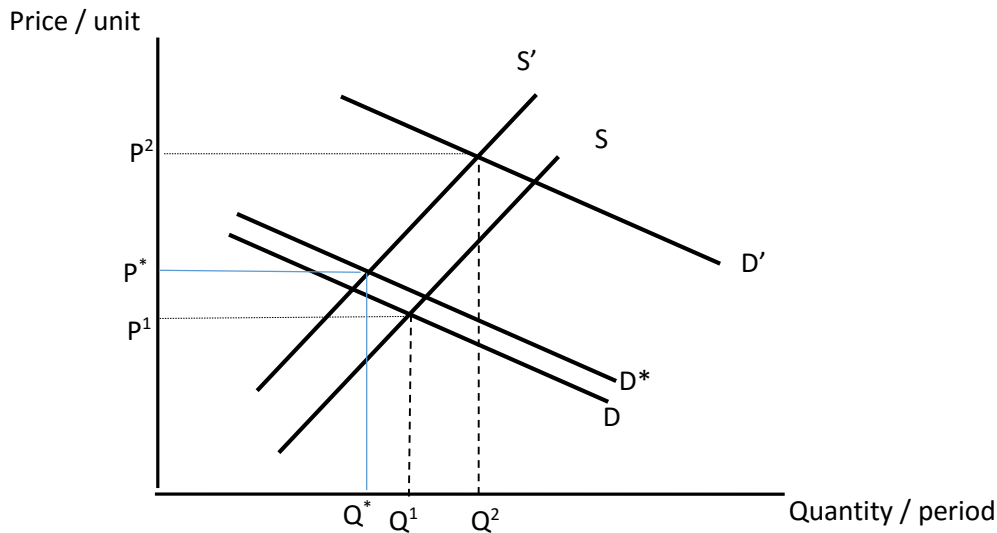
A good with a demand that is price elastic has close substitutes or price takes up a big % of income, $E_p > 1$. For example, the demand for a BMW cars tends to be price elastic, as there are other brands of cars widely available, on top of the public transportation that exist as substitutes.

Luxuries such as cars and overseas holidays have a high income elasticity of demand, $E_y > 1$. Demand rises more than proportionately to a rise in income. Hence, the demand for luxury goods such as a BMW car is income elastic and its demand will significantly shift rightwards when disposable income increases due to the reduction in personal income tax.

Again, the market equilibrium price of BMW cars will rise unambiguously, since there will be a shortage, as shown below.

Evaluation:

If the fall in income tax was substantial enough, the rise in demand will outstrip the fall in supply, as the demand for a BMW car is extremely income elastic, given that it is a luxury good. This causes a rise in quantity sold. This means that consumers ultimately face a rise in their total expenditure on BMW cars since both the equilibrium price and quantity rose.



However, with income taxes being reduced in times of a recession, the rise in demand may not be much since households are uncertain of their future income stream. This means that with demand rising by only a little (e.g. to D^* and the final equilibrium being at P^*), total expenditure by consumers could well be lowered or unchanged or at most increase slightly.

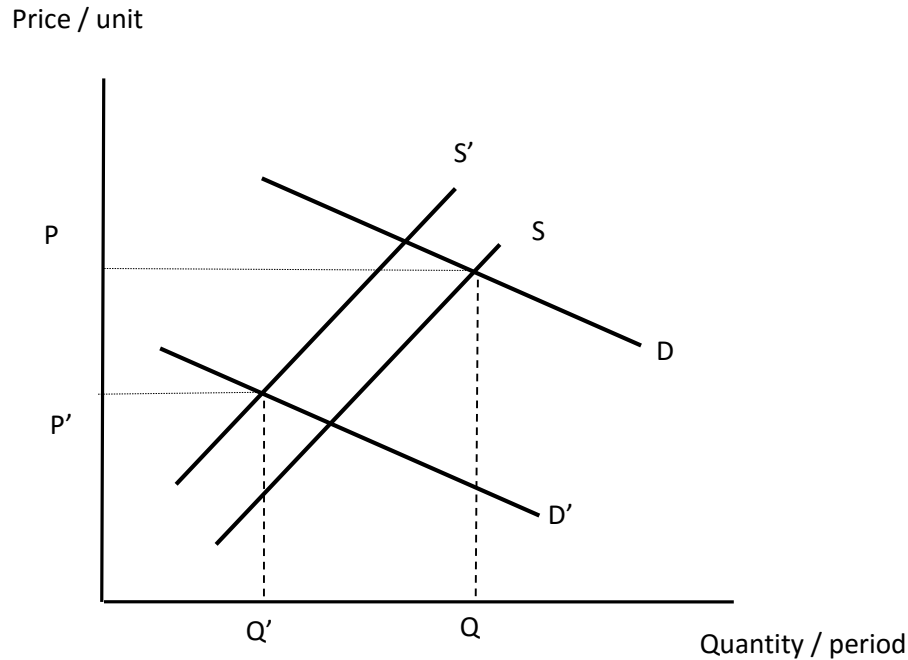
Case 3: $E_p > 1 + E_y < 0$

Inferior goods are goods where demand falls when income rises and demand rises when income falls. The income elasticity of demand has a negatively value. An example of an inferior good is non-smart mobile phone. An increase in disposable income will reduce the demand for these inferior goods, shifting the demand curve to the left. As explained, an increase in indirect taxation shifts the supply curve to the left.

If the fall in demand is relatively greater than the fall in supply, equilibrium price reduces since there would be a surplus. However, if the fall in supply is greater, causing a shortage, then the price of non-smart mobile phones will rise. As both demand and supply curve shift to the left, the combined effect of the rise in indirect taxation and reduction in personal income tax will be an unambiguous fall in the equilibrium quantity of non-smart phones.

Evaluation:

The fall in demand is likely to be bigger as non-smart mobile phones are highly income elastic, due to availability and accessibility of smart phones, especially in Singapore where income levels are relatively high. This results in a fall in the equilibrium price and output, as shown below, and hence, a fall in total expenditure on non-smart phones by consumers.



Conclusion

Stand: The combined effect of the rise in indirect taxation and reduction in personal income tax will increase the equilibrium price of normal goods, with impact on TE dependent on the relative extent of shifts in the demand and supply curves. The combined effect of the rise in indirect taxation and reduction in personal income tax will reduce the equilibrium quantity of inferior goods.

In addition, the extent of the increase in indirect taxation and reduction in personal income tax will have an influence on the relative shifts of the supply and demand curves respectively.

Something special: Although a reduction in personal income tax will increase disposable income and tends to increase demand for normal goods, the extent of the increase in demand is also dependent on the prospect of the economy and the level of consumer confidence. In addition, the fall in income taxes would not affect the lower income households much, as they may not even be taxed in the first place. In such a case, impact on consumers would be adverse since indirect taxes are regressive.

Knowledge, Application, Understanding and Analysis		
L3	For an answer that analyses 3 markets. The explanation is well developed. Examples are relevant the analysis. <u>Considers impact on consumers in terms of their TE, and not just about equilibrium price and quantity.</u>	18-21
	For an answer that uses analysis to underpin the discussion of the combined effect on the equilibrium price, equilibrium quantity of goods with different income elasticity of demand, in at least 2 markets.	15-17
L2	Answer is more relevant to the Q (e.g. links to impact on consumers) but the theory is incompletely explained.	12 - 14
	For an answer with limited economic concepts that gives an underdeveloped explanation of the combined effect on the equilibrium price and equilibrium quantity of goods with different	10-11

	income elasticity of demand. Mid L2 for an answer that only discusses 1 market	
L1	For an answer that shows a descriptive knowledge of the combined effect on the equilibrium price and equilibrium quantity. Answer is mostly irrelevant except for a few valid but unexplained points.	6-9 1-5
Evaluation		
E2	For an evaluative assessment based on economic analysis, e.g., extent of increase in indirect taxation and reduction in personal income tax, consumer confidence etc.	3 - 4
E1	For an unexplained assessment or one that is not supported by economic analysis.	1 - 2

Question 2

Starbucks Coffee Company today announced that it is opening its first store in Brunei – the company’s 64th global market - and its 100th store in Singapore, which will give people with autism the opportunity for meaningful employment and new lifelong skills.

<http://www.marketwatch.com/story/starbucks-southeast-asia-growth-momentum-continues-with-significant-milestones-in-brunei-and-singapore-2014-02-14> Accessed on 2nd August 2015

- (a) Explain how globalisation could increase a firm’s profits. [10]
 (b) Discuss whether price competition should be the primary business strategy for a coffee café chain like Starbucks in Singapore. [15]

Part (a)

Introduction

- Globalisation is the increased *integration* of economies around the world, through the movement of goods, services, capital, labour and knowledge across international borders.
- Based on traditional economic theory, all firms seek to maximise total profits, which is attained at the output level at which $MC=MR$. Total profit is the difference between total revenue (TR) and Total Cost (TC).
- Firms could make use of globalisation to increase its total profits by increasing AR and reducing AC.

Body

Profit-maximisation

A profit maximising firm produces where $MR=MC$ This is because as long as $MR>MC$, total profits can still increase by producing more. On the other hand, if $MR<MC$, the increase in production will lower total profits.

Increase in AR as demand increases

When trade barriers are reduced/abolished, local firms gain greater access to foreign markets providing an opportunity for domestic firms to increase their exports. This increases demand for their products and hence their revenue, as they get to sell to a bigger market. As in fig 1, the DD(AR) curve shifts to DD'(AR').

Decrease in AC through iEOS

When a firm is able to sell its output in global markets, its scale of production increases. This enables it to more fully exploit economies of scale. Internal economies of scale (EOS) refers to the reduction of unit costs (average costs) as output level of a firm expands. The cost savings could come from technical improvements achieved in their production process due to the increase in their plant size. For example, a small steel manufacturing plant cannot install half an open hearth furnace, since capital is indivisible. However, when the firm decides to expand globally, it is able to produce larger volumes of output and hence, the costs of these machines are distributed over a larger output level, bringing its unit cost down.

Another example how firms are able to reap lower cost when they expand globally is when they are able to practice bulk buying; these larger firms also enjoy greater market power over their suppliers. They usually get bulk discounts from suppliers because they place large orders and this leads to lower unit costs, increasing their profits, *ceteris paribus*.

Decreases in AC through access to cheaper factors of production

- Via importing raw materials / components from countries with comparative advantage

When a country reduces/abolishes trade barriers or transports costs reduced, local firms might be able to obtain some of its inputs more cheaply by importing them from countries which can produce them at lower opportunity costs, instead of buying them from other local firms.

- Via off-shore outsourcing of part of the production process

With globalisation, firms may gain access to cheaper foreign inputs such as labour, such as outsourcing production to India and China where wages are much lower compared to their home country. For example, the tech giant Apple only designs its products in the USA, but outsources their manufacturing jobs to various countries like China and Mongolia. Foxconn is the company that is contracted by Apple to assemble iPhones in a southern Chinese city. Wages earned by a Chinese factory worker is at least 17 times cheaper than that of a US citizen, enabling Apple to lower its marginal cost and average cost of production drastically, reaping higher profits.

Some firms also outsource their production elsewhere to tap on the existing expertise and technology that the foreign country has to offer. For example, Silicon Valley in the USA is a hotbed for start-ups looking for greater network and diffusion of technology.

Decreases in AC through Improvement in productive and dynamic efficiency due to greater competition

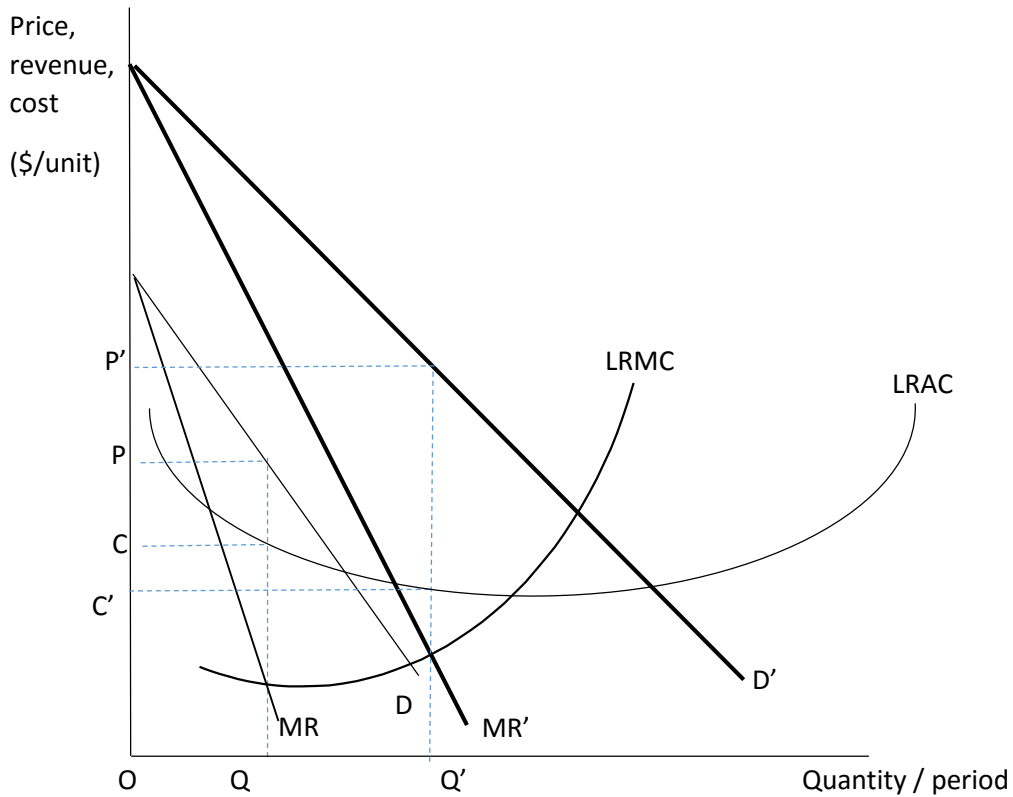
In addition, the threat of competition from other firms in the global market would spur the domestic firms to invest more in R&D. The improvement in dynamic efficiency would result in a range of benefits to both consumers (including better quality and a wider range of products) as well as producers. This is because if the investment leads to more efficient production methods, this may also lead to a fall in average cost of production for firms, thereby increasing their profits. Also, given the increase in competition from foreign competitors, domestic firms are likely to become less complacent and more cost efficient. The reduction in X-inefficiency would help to lower AC and MC, and hence improve profits.

Impact on profits

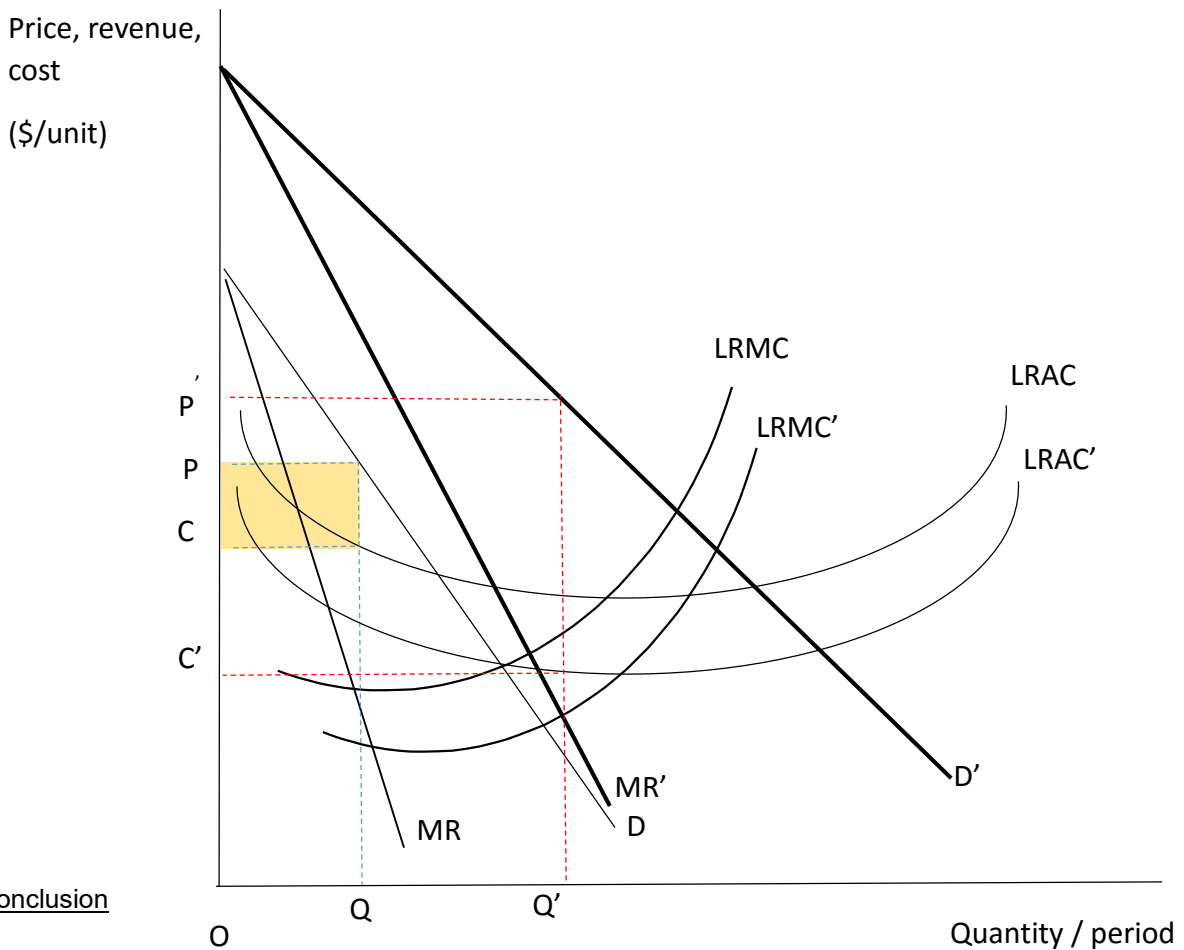
With increase in AR and decrease in AC (MC curve and AC curve shifts down when a bigger plant is used or AC shifts down due to access to cheaper inputs) and increases in quantity sold, total profits rises from $[P-C] \times Q$ to $[P'-C'] \times Q'$.

Figure 1

Note: if LRAC is drawn and the point about decreases in AC is only about greater exploitation of internal EOS, then the diagram looks as follows –



Note: Note: if LRAC is drawn and the point about decreases in AC is about ability to obtain cheaper factor inputs, then the diagram looks as follows –



Conclusion

Hence, if firms are able to harness these opportunities by increasing demand and cutting cost as they expand globally, they would be able to increase their overall profits.

L3	For a complete analytical explanation on how globalisation can increase a firm's average revenue and lower average cost of production via EOS and acquiring cheaper factor inputs (or any other 2 ways to lowering AC, attributed to globalisation).	7 - 10
L2	For an inadequate explanation on how globalisation can increase a firm's profits. Considers impact on either AR or AC only.	5 - 6
L1	For an answer that shows some theoretical knowledge of how expansion into global markets can help a firm increase profits. Answer is mostly descriptive. Contains conceptual errors.	1 - 4

Part (b)

Introduction

The speciality coffee café industry is an oligopoly with a few dominant firms, namely, Starbucks, The Coffee Bean, TCC etc. There are few close substitutes and there are relatively high barriers to entry due to branding.

To analyse whether price competition ought to be the key strategy, the type of market structure and the objective of the firm needs to be considered.

Note: Explanation of this industry as a monopolistically competitive industry is accepted as well but the analysis and evaluative comments must match the market structure.

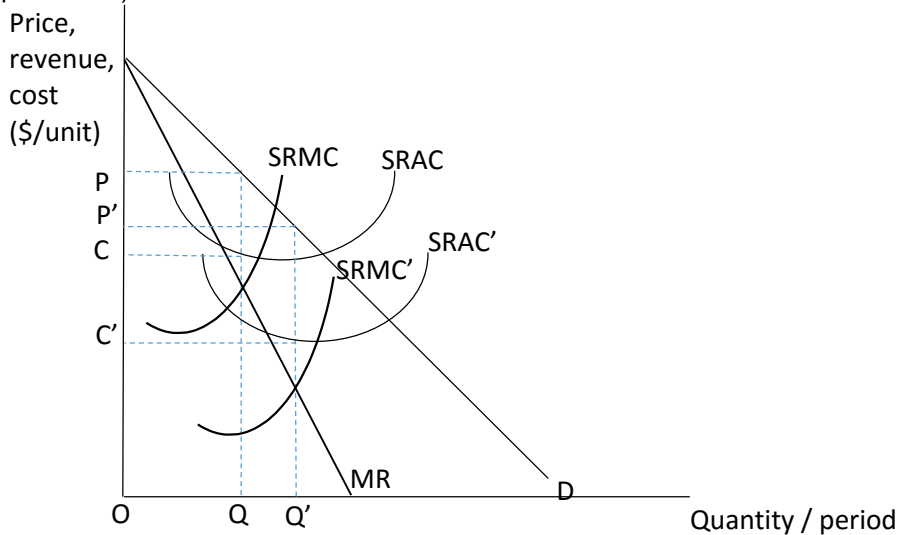
Body

Thesis: explain how price competition works to increase profits

Starbucks could give discounts to encourage consumers to buy more of their products. This lower price relative to its rival firms increases the quantity demanded of its products as consumers switch away from these other brands to patronise Starbucks. With price inelastic demand, a cut in price would actually lead to a less than proportionate rise in quantity demanded causing TR to fall. But if consumers grow to like this product, over time, demand rises due to change in taste. The firm can then revert to charging the profit-maximising price.

or

[If the argument is that there are close substitutes giving rise to price elastic demand] To engage in price competition to increase profits, the firm must lower its MC and AC first, e.g. by making the production process more efficient or by sourcing for cheaper raw materials. Assuming it is able to do so, the firm is then able to lower price (to P'), sell a bigger volume (Q') by winning over customers from its rivals and earn more profits (draw diagram with MC / AC shifting down resulting in a bigger profit area).



[Note: Another argument to explain why price competition is a possible key business strategy for an oligopolist is the strategy of limit pricing – i.e. temporarily lowering price (i.e. moving away from profit maximising price) but still being able to break even due to iEOS) to discourage entry of new firms. The aim here is to preserve market share. A counter argument to this point would be to question the usefulness of the strategy for the case of the café business as the EOS, though present, may not be very substantial]

Anti-thesis: explain why price competition may not be the better primary strategy for coffee café chains.

The above analysis assumes ceteris paribus. I.e. when price is cut, rival firms do not change their price. However, due to the interdependence of the firms in the speciality coffee café market, a fall in prices of Starbucks products will cause the rival firms to follow suit. Because there are only a few firms in this oligopolistic market, there will be a very high degree of rival consciousness. Applying the kinked demand model, if Starbucks were to lower its prices below the prevailing price, rival firms may interpret this price cut as an aggressive attack and so match the price cut. This inevitably results in a price war in which all firms lose, as they will all have lower total revenue. Hence, due to the element of interdependency, there is generally price stability in an oligopoly and *price competition may not be a good strategy for the coffee café chains to earn higher profits in the long term.*

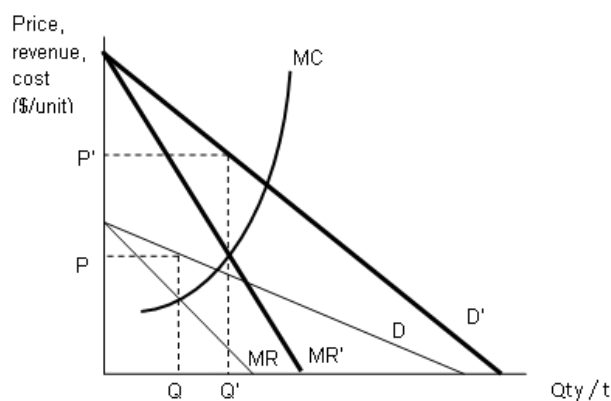
Hence, firms in an oligopolistic market would rather compete on the basis of non-price competition like advertising, branding and product differentiation.

Explain why non price competition could gain larger market share and earn more profits

As a result, these coffee cafes often use more non-price competition strategies to gain a larger market share and earn more profits by creating real differences to their products and service.

1. Advertising

Coffee café chains often advertise their brands and project different image to consumers. Starbucks products are usually already very well-known and established in the minds of the consumers but they continually try to compete with advertising. Advertising will create brand loyalty and generate a higher and more price inelastic demand as shown below. Demand shifts to the right to D' from D. Starbucks now maximizes its profits by producing Q' where MC=MR' and is able to charge a higher price of P'. Assuming the increased total revenue it generates more than offsets the advertising costs, its profits will increase. In addition, advertising will raise market penetration costs to create a barrier to entry for prospective firms, thereby allowing Starbucks to retain its market share.



2. Social entrepreneurship

Starbucks also prides itself in taking on social issues, such as helping people with autism get employment to support themselves. As part of their corporate social responsibility efforts, they advertise for these campaigns but by doing so, they too benefit as people who relate and are equally passionate about these movements will patronise their products. For example, its TR increased by 9% when the company took on controversial movements such as the issue of gun possession in USA.

3. Loyalty programs

Coffee café chains may give rebates and loyalty points to encourage consumers to keep buying their coffee. For example, Starbucks loyalty card enables members to enjoy special birthday treats and free food and drinks after accumulating a certain level of points/stars. These coffee chains can also tie up with other credit card companies to offer more rebates and loyalty points. The Coffee Bean & Tree Leaf has tied up with UOB; customers who use their UOB credit cards to purchase their products get rebates on the spot.

Conclusion

Stand: *It should not be its primary strategy.*

Substantiation: *Price competition is not a good strategy for profit maximising firms like Starbucks, given the interdependence nature of oligopoly. At best, it could practice price competition in the short term to increase sales and win customers' over.*

To avoid price wars, profit maximising coffee café chains should rely more on non-price competition to increase profits.

Something special: If it wishes to start a price war to win market share, then it should adopt cost reducing strategies to ensure that it can win the war. These include sourcing for cheaper suppliers for their coffee beans and increasing the number of outlets in Singapore. Expansion enables these coffee chains to enjoy economies of scale, as discussed in part (a). *However, given that this is not a capital-intensive business which means that the MES is not that high, the scope for EOS is not that substantial and so it might not be that easy to win a price war even though Starbucks is a big firm. Non-price competition would thus be preferred. This would invite counter non-price measures by rival firms but it may not be that easy to replicate.*

It should also be noted that a firm like Starbucks may have other objectives besides profits maximisation for which price competition will not even be relevant and thus will be the primary strategy.

L3	For an excellent, balanced answer on why price competition could be the primary strategy and why it could not, with good application to the coffee café chain industry.	9 - 11
L2	For an inadequate (i.e. there are gaps in the explanation) balanced answer analysing why price competition should and should not be primary strategy with some application to coffee café chain industry. 1-sided answer with analytical explanation and contextual relevance – max 7m	6 – 8
L1	For an answer that shows very limited theoretical knowledge of how price and non-price competition helps a firm increase profits with no application to the coffee café chain industry. Explanation is descriptive. Contains conceptual errors	1 – 5
E2	<ul style="list-style-type: none"> Reasoned and argued evaluative statements 	3 - 4
E1	<ul style="list-style-type: none"> Evaluative statements without reasoning or justification 	1 – 2

Question 3

Governments often subsidise training programmes and intervene in markets where there is possible abuse of market power.

- (a) Explain why immobility of factors of production and market dominance may lead to market failure. [10]
- (b) Evaluate current policies adopted by the Singapore government to correct for these types of market failure. [15]
-

- (a) Explain why immobility of factors of production and market dominance may lead to market failure. [10]

Introduction

When the following assumptions hold, i.e. no externalities, private good, perfectly competitive markets, the free market will lead to efficient allocation of resources. However, when the assumptions fail, such as when resources are not perfectly mobile, or when firms have market power, the markets can fail.

Body

*Immobility of factors of production and market dominance may lead to *allocative inefficiency*.

1. Immobility of factors of production may lead to allocative inefficiency.

Labour may be geographically or occupationally immobile.

Geographical immobility may occur because of the high cost of moving house from one state to another. It can prevent unemployed labour from moving elsewhere to find work. The economy is producing within the PPC, i.e. there is unemployment. This leads to wastage of resources (productive inefficiency), and less resources are thus channelled into the production of goods and services that will lead to greater societal welfare. Thus, when there is productive inefficiency, there will be allocative inefficiency, with the former a prerequisite for the latter.

Occupational immobility occurs because of a mismatch between workers' skills and job requirements. In reality, workers tend to have job specific skill sets, and may not be able to respond easily to changing demand conditions. For example, retrenched workers from the electronics manufacturing industry in Singapore do not have the necessary skills required for them to find jobs in the growing tourism sector (structural unemployment). Labour may thus be put to inefficient use, instead of being allocated into markets where the labour is needed most. There is thus inefficient allocation of resources, with too little resources being channelled into the tourism sector in this example.

[It is possible to consider other factors of production e.g. capital instead of just labour. For example, machines specifically designed to weld electronic components together is likely unable to meet the needs of a pharmaceutical company. This prevents capital from moving from production of goods and services that society no longer values so much of, into new markets.]

2. Market dominance may lead to allocative inefficiency.

Market dominance implies that a firm is in the position of having a large market share, leading it to possess significant market power and thus price setting ability. The firm can set prices without losing all its customers, i.e. face a downward-sloping demand curve.

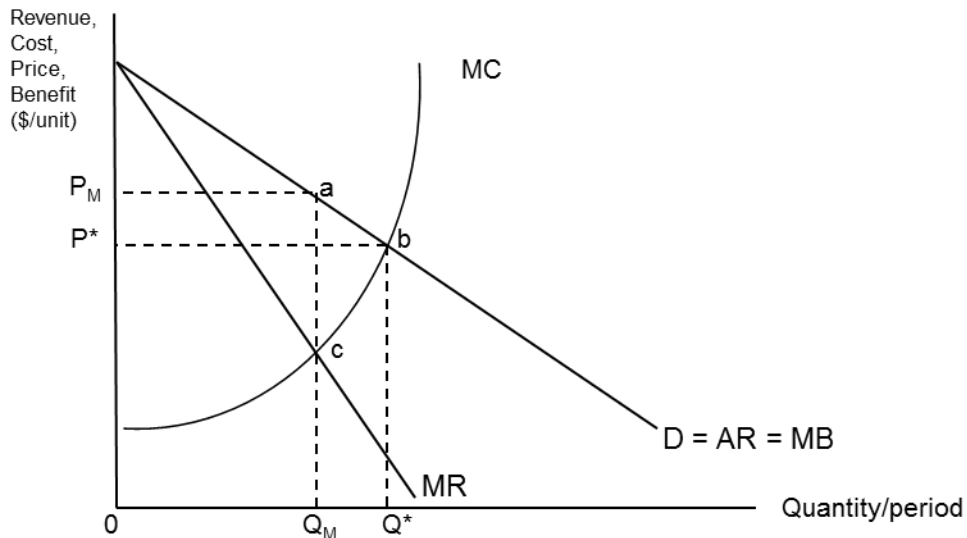


Fig. 1: Diagram showing revenue and cost curves of a firm with market power

Profit-maximising firms would produce Q_M where $MC = MR$. This is because when $MC < MR$, producing one more unit will add more to total revenue than total cost, and vice versa. The firm then charges the maximum possible price it can, P_M (indicated by DD curve).

However, in the absence of externalities, socially optimal output Q^* is where $MC = MB$. Since Q_M is less than Q^* , there is underproduction of the good by a firm with market dominance. Producing Q_M to Q^* units incurs a total benefit of Area abQ^*Q_M , and incurs a smaller total cost of Area cbQ^*Q_M . There is thus welfare loss of Area abc (net benefit not gained) as too little resources is channelled into the production of the good.

3. Immobility of factors of production and market dominance may also lead to *inequity*.

Case of factor immobility: In countries where the economy is transitioning between industries e.g. from secondary industries such as the manufacturing of machine parts to tertiary such as financial services, the income gap between workers in declining industries and growing industries is likely to grow. This is because demand for labour will be rising in the expanding industries thus driving up the wage rate while demand for labour in the contracting industries will be falling, pushing down wage rate. As long as labour is immobile, the wage gap will not be able to narrow. If workers are immobile, lacking the necessary skills or willingness to find jobs in growing industries, they may earn less and be less able to afford goods and services. This may result in a less equitable distribution of goods and services within a country.

Case of market dominance: Prices tend to be higher when firms have market power, i.e. P_M in Fig. 1 than without, i.e. P^* . For necessities, e.g. electricity, this can lead to poor households being unable to afford the good, leading to a less equitable distribution of the good.

Firms with significant market share because of high barriers to entry are also likely to earn sustained supernormal profits. This can lead to greater inequity as the firm owners receive more profit at the expense of consumers, who may be earning lower income than the firm owners.

	Descriptors	Marks
L3	<ul style="list-style-type: none"> Good explanation of how immobility of factors of production AND market dominance may lead to market failure. 	7-10
L2	<ul style="list-style-type: none"> Undeveloped explanation that explains how immobility of 	5-6

	<p>factors of production and market dominance may lead to market failure.</p> <p>OR</p> <ul style="list-style-type: none"> Developed explanation of either how immobility of factors of production <u>or</u> market dominance may lead to market failure. 	
L1	<ul style="list-style-type: none"> Response shows some knowledge of immobility of factors of production and/or market dominance, but how they lead to market failure is not explained. 	1-4

(b) Evaluate current policies adopted by the Singapore government to correct for these types of market failure. [15]

Introduction

The Singapore government has intervened in these cases of market failure, and the policies used will be evaluated in terms of how well they work to reduce inefficient allocation of resources or inequity, taking into consideration other consequences that may have resulted.

Body

To tackle market dominance:

1. Anti-competition regulations have been implemented in Singapore to prevent dominant firms from anti-competitive behaviour. This may include collusive agreements between dominant firms in an industry, or anti-competitive mergers that can lead to a substantial lessening of competition. Cartel agreements can lead to prices being fixed or output restricted to increase prices, leading to an even greater degree of underproduction and higher prices for consumers. Anti-competitive mergers can lead to even larger firms that have greater market power, allowing them to charge higher prices.

The Competition Commission Singapore (CCS) identifies firms that have violated the regulations, and have the capacity to impose fines and enforce the regulations, such as preventing Parkway Holdings from acquiring outpatient diagnostic chain RadLink Asia. This *increases the level of competition between firms in Singapore*, so that demand facing each firm will be lower and more price elastic because of substitutes. This will prevent firms from attaining higher levels of market power, which can cause markets to fail as explained in (a).

2. Besides reducing anti-competitive acts, the SG government has been encouraging competition to reduce market dominance in certain industries. This has been done through issuing more licences, e.g. Tower Transit for the provision of bus services, or possibly through reducing regulations. Another example includes deregulating the telecommunications industry and allowing Starhub and M1 to enter the industry previously dominated by Singtel.

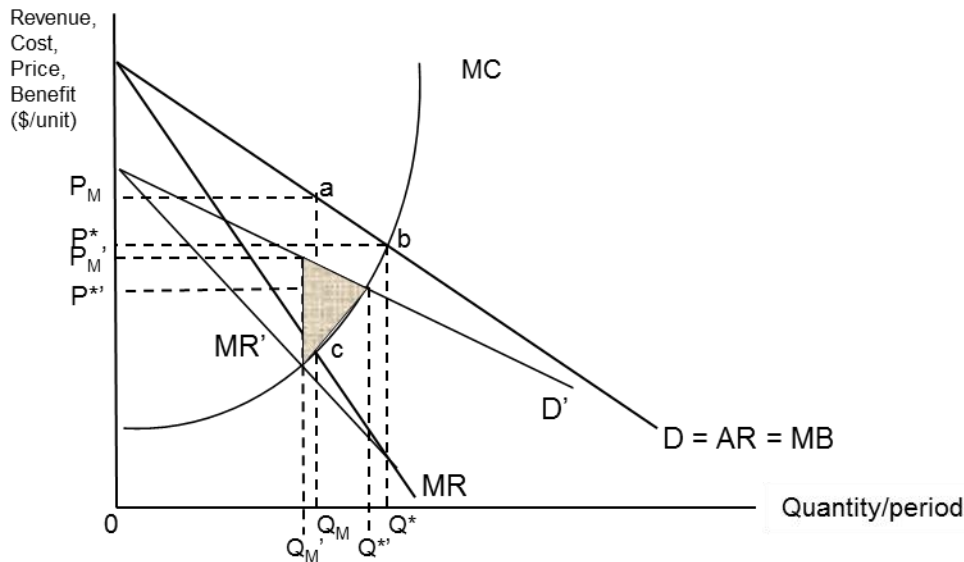


Fig. 2: Diagram showing lower and more price elastic DD firm faces with greater competition

With new entrants into the industry, incumbent firms likely face a falling demand, i.e. DD falls from D to D' in Fig. 2. Demand also becomes more price elastic with more substitutes available. The prices that incumbents can charge has fallen from P_M to P_M' , making it more affordable for households to purchase the good or service.

The firm now produces where $MC = MR'$, i.e. Q_M' , and incurs a smaller welfare loss (shaded area) compared to Area abc . There is less underproduction of the good by the incumbent firms.

However, if firms produce at a lower output, it can mean the loss of potential internal economies of scale (EoS). In particular, this applies to industries with significant internal EoS to be enjoyed, e.g. telecommunications where start-up costs are high. Spreading the high start-up cost over a larger output will lead to lower average costs. The loss of internal EoS may hinder the firms from competing with MNCs in SG, or with firms worldwide if the goods or services are exported. It may also lead to higher prices for households if the firms become less able to pass on cost savings to consumers.

E: As such, there is a need to balance between liberalising the market and making sure firms can enjoy significant internal EoS to benefit society. To that end, the SG government seems to have taken into account this need. For example, even as the government deregulated the banking industry and allowed the entry of foreign banks, it also allowed some of the local banks to grow through mergers and/or acquisitions to reap internal EoS, e.g. spreading out of advertising cost, managerial internal EoS from having one manager oversee a bigger department.

E: Both points 1 and 2 are significant to keeping the power of oligopolies in check, which is likely the predominant source of issues of market dominance in Singapore.

3. In the case of public transportation (bus, train), prices are regulated to keep them affordable for the masses. This leads to a more equitable distribution of services. However, the prospect of earning less supernormal profits may mean our public transport companies have less incentive to improve on services, which consumers are concerned about beyond issues of market failure.

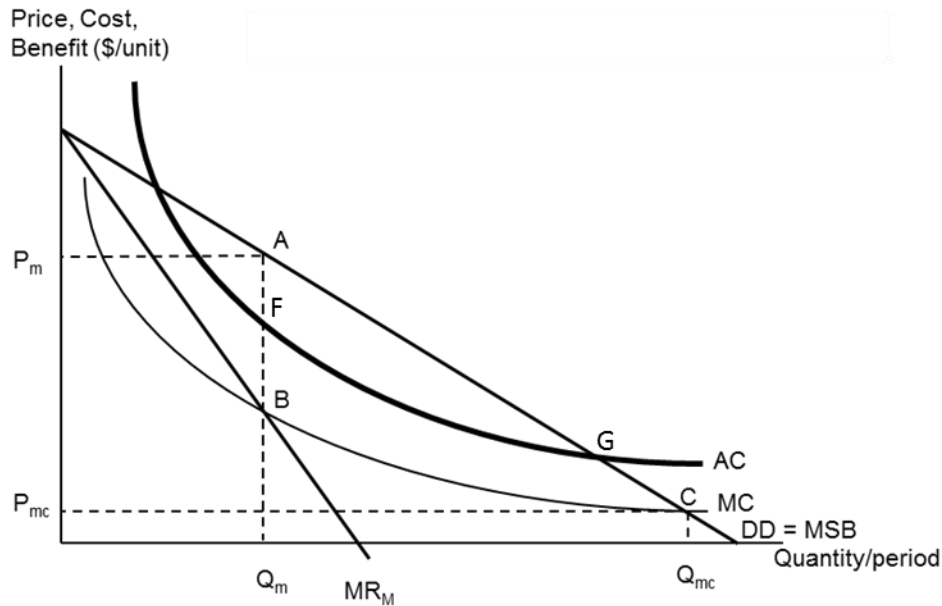


Fig. 3: Diagram showing natural monopoly e.g. rail transport in Singapore

If the industry in question is a natural monopoly, e.g. rail transport in Singapore, encouraging competition is impossible since the presence of more than one firm will lead to losses for both.

These industries have extremely high start-up cost, e.g. cost involved in the building of rail infrastructure, such that minimum efficient scale is reached at an output that is very large relative to level of market demand.

E: Given that it is a natural monopoly, the Singapore government has made an economically sound decision by issuing only 1 license per track. And since a profit-motivated firm would not fully exploit its internal EOS and instead charge the monopoly price, the government has intervened appropriately by regulating price in the industry. The government seems to have opted for AC pricing since MC pricing will lead to losses for the company.

While AC pricing means the government need not subsidise losses, the output produced is still not allocative efficient. However, the output where $P = AC$ is larger than the output where $MC = MR$, and thus the new output has still led to improvements in efficiency. Welfare loss has been reduced from Area ABC in Fig. 3 to the smaller Area AFG.

E: The cons of regulation are less significant in this industry given that licences expire, and firms can be fined in the event of breakdowns.

Note: MC pricing is a weak point here as it isn't practised by the SG government.

Transport vouchers are also given to lower income households who qualified to help them cope with affording public transport services.

- Nationalisation such as for water is one other way the government tackles the issue of market dominance. With the government being the producer of the good or service, production is likely closer to socially optimal output (i.e. produce where $P = AC$ to improve efficiency and avoid subnormal profits) since the government is not a profit-maximiser.

E: X-inefficiency due to lack of profit motive is not likely to be a significant issue for Singapore, since the government and state-owned firms are generally efficient and will seek to minimise cost.

To tackle immobility of factors of production:

E: Geographical immobility is not a significant problem in Singapore, given the small size of our island and relatively well-connected transport system.

1. The key measure implemented in Singapore to tackle occupational immobility of labour is **subsidising training programmes**, e.g. SkillsFuture, to increase the skill level of workers. Subsidising training programmes encourage workers to go for training since it is now cheaper to do so. If successful, this can reduce the mismatch between workers' skill set and job requirements. This will help them transit to jobs that is required by society, improving on efficiency in the allocation of labour resources.

However, this is dependent on workers' willingness and ability to go for the training. This may be an issue particularly for older workers.

E: In spite of this limitation, skills retraining is still the right policy that the Singapore government has chosen to adopt over the other possible policies e.g. protectionism to reduce unemployment. This is because retraining is a long term solution that tackles the root cause of the problem.

The increasing pace of globalisation may also mean that available jobs and their requirements may be changing faster than workers can train for. As such, there may still be a need for social safety nets to improve to help occupationally immobile workers cope with rising costs of living to ensure that they can still consume basic necessities.

Conclusion:

Stand: Well targeted measures have been adopted by the SG government to tackle the issues arising from factor immobility, particularly for labour, and market dominance.

Substantiation + 'something special':

Occupational immobility has become an issue of concern in recent years, as SG continues to transit into high-value knowledge based industries. The new SkillsFuture programme takes into account the age group of workers, and increases the subsidies as the workers become older to further reduce their cost of training and incentivise them to sign up for courses and upgrade themselves. This measure will be more sustainable in the longer term than simply improving on social safety nets.

The implementation of anti-competition laws and deregulation of certain markets is aimed to ensure that oligopolistic firms in Singapore cannot enjoy so much market power such that they can increase prices easily and benefit at the expense of consumers. The CCS in particular has intervened in cases when anti-competition regulations have been flouted, and its constant monitoring is likely to serve as a deterrent to firms looking to do so.

If point 3 has been brought in:

For industries whose products tend to be necessities, price regulations have been implemented to ensure products remain affordable to improve on equity. On the other hand, for goods that are not necessities, e.g. movie tickets, the government has kept its intervention to a minimal. After all,

regulated prices may reduce a firm's incentive to come up with better products, and the improvement in quality of services is something that consumers will benefit from beyond a more equitable and efficient distribution.

[Any other reasonable conclusion with a clear stand + justification will be accepted.]

	Descriptors	Marks
L3	<ul style="list-style-type: none"> For a good analytical explanation of the strengths and weaknesses of current policies Singapore adopts to tackle immobility of factors of production and market dominance. 	9 – 11
L2	<ul style="list-style-type: none"> For an undeveloped explanation of current policies to tackle the sources of market failure explained in (a), OR A developed explanation of policies adopted to tackle either immobility of factors of production or market dominance. 	6 – 8
L1	<ul style="list-style-type: none"> Response shows some understanding of policies adopt to tackle the market failure in (a), but is mostly descriptive or contains glaring conceptual errors. 	1 – 5
E2	For an evaluative assessment of whether policies are appropriate, based on economic analysis. Reference must be made to the context of Singapore.	3 – 4
E1	For an unexplained assessment of whether policies are appropriate, or one that is not supported by analysis.	1 – 2

Question 4

“A current account deficit has a more adverse impact on the economy than a capital account deficit”. Discuss. [25]

Introduction:

- Whether a current account deficit has a more adverse impact than a capital account deficit depends on the size and duration of the deficit and the method of financing this deficit. In the end, it is the overall BOP position of an economy and its impact on the other macro goals of the country that matter.

Body:

- Define current and capital account deficits. Briefly describe the components of these 2 accounts.
- Assume the current account is initially in equilibrium. Consider the causes of a current account deficit. Some causes are:
 - Higher domestic inflation relative to rest of the world such that export competitiveness is reduced
As price of exports is now relatively more expensive, quantity demanded of exports fall leading to fall in export revenue (assume demand of exports is price elastic) and hence (X-M), c.p.
 - Loss of comparative advantage
Eg: it is said that China is gradually losing its comparative advantage in low value-added manufacturing to other low-cost Asian countries. Left unchecked, this will cause China's exports to lose price competitiveness and leading to substitution towards imports. Again there is a fall in (X-M), c.p.
 - Economic development of a country (eg LDCs)
This will lead to a rise in imports of capital goods at the initial stage of the country's economic development leading to CA deficit as imports rise faster than its exports

- Consider the impact of current account deficit on the country's internal & external macro goals

Thesis

- Starting from a position of current account balance, a current account deficit implies a fall in AD and actual growth. The fall in AD would have led to unplanned rise in inventories. Firms respond by cutting production which reduces income. The fall in income further induces cut in consumption resulting in further contraction of output and hence income via the multiplier.

However, if the economy originally had an inflationary gap, then the current account deficit would have been desirable since it lowers AD. *The state of the internal economy thus matters.*

- In a floating exchange rate system, since the current account is the flipside of capital account, this means that the current account deficit is financed by borrowing and the country is a net borrower. Such borrowing is unsustainable in the long term and these countries will be burdened with high interest payments and possible capital flight due to loss of confidence by foreign investors when the current account deficit is persistent. Countries with large interest payments also have little left over to spend on investment and hence have an adverse impact on potential growth

Eg: Asian crisis of 1997 where countries like Thailand and Indonesia had run up large current account deficits by attracting hot money flows to finance the deficit. But when confidence fell, these hot money flows dried up, leading to a rapid devaluation and crisis of confidence.

- A current account deficit (especially a rising deficit) means that foreigners have an increasing claim on that country's assets hence reducing its long term income for residents.

Anti-thesis

- However, a current account deficit may be desirable, especially for LDCs. In general, LDCs tend to export low valued agricultural goods. However, if they also import capital goods which are often higher valued than the agricultural goods, the deficit that arise may not be a concern. This is because these capital goods not only lead to more investment opportunities and job creation, they may also enable these countries to produce and export goods of a higher value in the future and possibly reversing the initial current account deficit. In addition, there is higher actual and potential growth and the country may be able to pay its debts back. However, there will be a fall in current material SOL.

Whether current account deficit has an adverse impact on the economy depends on whether the borrowing will finance investment that will yield a return that is higher than the interest rate the country has to pay on its foreign liabilities.

- A country that spends increasingly on imports of consumer goods may just indicate a strong economy, which is growing rapidly. This means that it will have higher current material SOL but possibly lower SOL in the future if capital accumulation lags behind.

- Assume the capital account is initially in equilibrium. Consider the causes of a capital account deficit due to short / long term capital flows

(eg capital account deficit which means a net outflow of investment capital as domestic institutions and individuals increase their holdings of assets valued in foreign exchange):

- If the deficit is persistent, speculators may expect a further fall in exchange rate. This can lead to short term capital flight as people prefer to put their money in countries where the monetary situation is more stable. This is also bad for doing businesses and so, owners of

- capital in countries anticipating or experiencing such risks will often move assets to other countries that are more stable. This further worsens the capital deficit problem.
- Political instability will cause capital flight as there is no guarantee that assets currently owned by foreigners or even locals would not be taken over by, say, a new government.
 - Weak business expectation of that economy will deter FDI as expected return on investment will fall and lead to an increase in long-term capital outflow from that country.
- Consider the impact of capital account deficit on the country's internal & external macro goals
- Thesis
- A capital account deficit will mean a net outflow of investment funds. Such investment away from the domestic economy towards countries that offer lower labour costs or better investment opportunities will lead to a fall in the national output and employment of workers in the domestic economy. However, this means the country is building up a portfolio of overseas investments, which may lead to future returns of interest, profit and dividends. This may be beneficial in the medium-term.
- Anti-thesis
- A capital account deficit is likely to correspond with a current account surplus in a floating exchange rate system. Starting from a position of current account balance, a current account surplus will lead to rise in AD and hence rise in GDP via the multiplier. This is desirable if there existed a deflationary gap. But if the economy initially was in internal balance (at Y_f with no inflation), the current account surplus will open up an inflationary gap, causing demand pull inflation. *Thus the desirability of capital account deficit depends on the state of the economy.*
 - Capital account deficit due to short term speculative outflows of funds may have disastrous effects on an economy in terms of the depreciation of the exchange rate, loss of confidence, impact on investment, output and jobs. Several countries in recent years, e.g. Thailand, Indonesia, Russia and Brazil have been badly affected by these speculative outflows of funds. The depreciation of the exchange rate led to cost-push inflation in these countries.
- Synthesis: Comparison of CA vs KA deficit
Whether current / capital account deficit has more adverse impact on an economy depends on the factors giving rise to that imbalance.
- The source of the deficit is an important factor to consider. If the deficit reflects an excess of imports over exports, it may be indicative of price competitiveness or quality problems. In addition, if the deficit reflects low savings rather than high investment, it could be caused by reckless fiscal policy or a high consumption by households. But a current account deficit can equally be due to a highly productive and growing economy if investment has been rising. In the case of a capital account deficit, it may not be a concern if it is part of a government's effort to encourage firms to invest overseas. Eg: the Chinese government has been encouraging domestic companies to play a bigger role in the global economy by investing overseas. But if the capital account deficit is due to LT capital outflow due to fundamental problems with the internal economy – e.g. rising unit cost due to labour shortages, then the capital account deficit will be a cause for concern.
 - The method of financing a current account deficit. If a country is borrowing from abroad to finance consumption, this is damaging in the long-term. If it is financing the current account deficit through attracting long-term capital investment, this could have positive benefits on the domestic economy as FDI brings about long term potential growth
 - The time period of the deficit. If a deficit is due to a shock that temporarily depresses the economy's ability to access productive capacity or short term capital flows in search of higher returns, then this may not be a concern for the economy.
- For countries on a fixed or managed float system, overall, what matters is the BOP position. Both its current and capital accounts could be in deficit. If a country has a persistent BOP deficit and

is on a fixed or managed float exchange rate regime, a persistent deficit will mean that the central bank will have to use its foreign reserves to maintain its overvalued currency by buying its own currency. This reduces the domestic money supply causing a contractionary effect of AD and hence GDP. Once it runs out of foreign reserves and is unable to borrow foreign currencies (from IMF or from other countries' central banks), it will be forced to devalue its currency. This may lead to speculative outflows and an adverse impact on the economy.

Conclusion

Stand: Disagree that current account deficit has a more adverse impact on the macro economy than capital account deficit.

Substantiation: Both can have equally adverse effects on the economy by creating or worsening internal imbalance. It depends on the state of the macro economy. If a country is in recession, a current account deficit will worsen the recession. If a country is booming, a current account surplus (i.e. capital account deficit) will create more inflation since it causes AD to rise, creating demand-pull pressure.

In addition, it will also depend on the source of the deficit, method of financing the deficit and its duration. However, it also depends on the country in question. For example, the US probably has less reason to be concerned about a current account deficit as it can attract a lot of capital flows to buy its dollar securities. However, a developing economy may be more vulnerable to a current account deficit. This is because investors may be quicker to fear an economic downturn and hence remove their capital. Overall, it is the BOP position and the other macro indicators of the health of an economy that are important considerations.

Levels	Descriptors	Marks
1	<ul style="list-style-type: none"> Contain a few valid points made incidentally in an irrelevant context 	1-5
	<ul style="list-style-type: none"> Provide definitions of current / capital account deficits and shows the ability to either list factors leading to the deficits or some consequences on the economy. 	6-9
2	<ul style="list-style-type: none"> Explanation of the effects of deficits in the 2 accounts is rather descriptive. Ideas are poorly organised. 	10 – 11
	<ul style="list-style-type: none"> Rather analytical but under-developed explanation of the consequences of the deficits in the 2 accounts but 1-sided or 2-sided discussion but explanation tends to be descriptive rather than analytical - e.g. Limited explanation linking the causes of the deficits to consequences on the economy. 	12 - 14
3	<ul style="list-style-type: none"> 2-sided discussion with analytical and well-developed explanation of the effects of deficits in the 2 accounts, with links to their causes, but narrow in scope. 	15 - 17
	<ul style="list-style-type: none"> Comparison of current account vs capital account deficits Well-reasoned arguments and analysis linking the causes of the deficits to the consequences on the economy, considering the wide-ranging impact on both internal and external macro goals (ie inflation, unemployment, standard of living, exchange rate) AND taking into account the initial state of the internal economy Effective use of contrasting real world examples and AD/ AS diagram/s to support the arguments Evidence of critical comment and clear conclusion that addresses the question 	18 - 21
E1	Mainly unexplained judgement	1-2
E2	Judgement based on analysis <ul style="list-style-type: none"> Critically evaluates alternative theories, contemporary issues, 	3-4

	<p>perspectives and policy choices</p> <ul style="list-style-type: none"> • Evaluates relevance of unstated assumptions • Synthesises economic arguments to arrive at well-reasoned judgements and decisions such as in a good summative conclusion 	
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Question 5

Unlike most other countries, Singapore has adopted the use of the exchange rate rather than interest rate as the instrument of monetary policy.

- (a) Explain the factors that may limit the effectiveness of interest rate policy for an economy [10]
 (b) Discuss the extent to which conflicts in macroeconomic objectives may arise for Singapore when it adopts exchange rate policy [15]

Suggested outline for part a)

Approach:

Students are required to explain 3 factors that may limit the effectiveness of monetary policy.

Introduction:

Interest rate policy refers to a policy where the monetary authority of the country changes the level of interest rates to influence the level of economic activity and the general price level of the country. The factors that may limit the effectiveness of monetary policy are consumers' and investors' confidence, the exchange rate system of the country, the size of domestic sector and multiplier.

1) Consumers and investors sentiments during a recession/economic boom (Interest rate elasticity of demand for loans)

It is impossible to use monetary policy as a precise means of controlling aggregate demand. It is especially weak when it is pulling against the expectations of firms and consumers. If the economy is in recession, Central Bank will lower interest rates to achieve economic growth and full employment but no matter how low interest rates are driven, households cannot be forced to borrow if they expect their future income level to decrease. Thus consumption will not rise significantly. Firms will not borrow to invest if they predict a continuing recession and they expect their profitability on their investments to decrease, so the rise in investments may also be limited. Overall, there may not be a large rise in AD and national income, rendering the interest rate policy ineffective.

On the other hand, when there is an economic boom and inflationary pressures, the central bank may raise interest rates. If investors think the economy is going to grow faster, firms will continue to borrow to invest if they expect their rates of returns on investments to increase. Due to strong household's confidence in the economy, the increase in interest rates may not deter spending.

2) The exchange rate system of the country

[Assertion] If the country has a fixed exchange rate system (managed float), in order to maintain the exchange rate, Central Bank loses control of its money supply. **[Concept]** For example, if the country has demand-pull inflation and Central Bank raises interest rates (hence attracting short-term capital inflows), this will put upward pressure on the exchange rate. To prevent the currency from appreciating, the Central Bank has to sell the domestic currency in the foreign exchange market. This will eventually increase the money supply in the domestic economy and lower interest rates, negating the effects of the original rise in interest rates. e.g. Singapore's choice to adopt a managed float exchange rate system means that it loses control of its money supply and interest rates.

3) Size of domestic sector

Size of domestic market (domestic C + I) out of GDP affects the extent of impact of interest rate policy. If consumption and domestic investments are small relative to the export sector, interest rate policy aimed at increasing these components might not have much impact for the country. For example, Singapore has a small domestic consumption and investment as % of

GDP. If Singapore uses expansionary monetary policy to boost AD to increase national income, the extent of rise in AD may not be significant. Singapore has a small population size, thus her C and I out of her GDP are small. This limits the effectiveness of interest rate policy to achieve full employment.

4) Size of the multiplier

The size of the multiplier would also determine the effectiveness of interest rate policy in achieving full employment and economic growth.

The size of the multiplier depends on the marginal propensity to withdraw (MPW) MPW, which is the percentage of additional income that households save, spend on imports and pay taxes. This in turns depends on the marginal propensity to save (MPS), marginal propensity to tax (MPT) and marginal propensity to import (MPM). A country like Singapore with a small multiplier due to a large MPM (small country with very few resources) and MPS (compulsory CPF scheme) would experience a much smaller increase in national income if MAS lowers interest rate.

L3	7 - 10	Able to explain at least 3 factors where explanation is underpinned with accurate use of theory and relevant examples. Max 7 only if considered only 2 factors.
L2	5 - 6	Incomplete explanation of factors (i.e. there are gaps in the explanation). Limited use of examples Max 5 only if only 1 factor is considered.
L1	1 - 4	Answers are mainly descriptive, wrong analysis

b) Discuss the extent to which conflicts in macroeconomic objectives may arise for Singapore when it adopts exchange rate policy [15]

Approach for part b)

Students must explain that the use of exchange rate policy to achieve a certain macroeconomic goal may conflict with another. Students should show understanding that the extent of the macroeconomic conflicts is affected by the nature of Singapore's economy, its manufacturing sectors and government policies to address these conflicts. Students then need to explain that by adopting exchange rate policy, under certain circumstances, macroeconomic conflicts may not arise.

Suggested outline for part b)

Introduction:

Given that interest rates in Singapore are largely determined by the rest of the world as well as the importance of capital mobility and exchange rate stability, monetary policy with interest rates variable is not very useful as a policy tool in Singapore. Instead, the use of exchange rates is a more significant tool to help Singapore achieve her economic goals. Through exchange rate policy, the Singapore government is able to control its inflation, which in turn will make her exports competitive and attract FDIs. However, the use of exchange rate policy needs to be complemented with supply side and trade policies to ensure that Singapore's maintain her economic growth and remains resilient.

Body

Thesis: the use of exchange rate policy may result in conflicts in macroeconomic objectives

1. The use of exchange rate policy to achieve price stability conflicts with economic growth and full employment

[Concept] If Singapore's demand-pull inflation is caused by a strong demand for her exports, the central bank may implement exchange rate policy to dampen AD. A stronger currency may erode Singapore's exports competitiveness in foreign currency and export revenue decreases. Imports on the other hand, become cheaper in Sing Dollars, and imports expenditure rises.

Assuming that Marshall Lerner condition holds, net exports revenue decreases and since trade as proportion AD is very large, when $(X-M)$ falls, AD falls significantly and causes a fall in the general price level.

However the fall in AD instead will cause GDP to fall via the multiplier. As national output decreases, firms will hire fewer workers and this results in demand deficient unemployment.

The extent of the impact on employment is dependent on the fall in net exports revenue. When the Sing dollar is allowed to appreciate, imported factor inputs become cheaper in Sing dollars. As Singapore is reliant on these imported raw materials and Singapore's exports have high import content, the loss in exports competitiveness caused by the stronger currency is partially offset by the fall in the cost of production. A stronger currency only causes a fall in exports competitiveness by a small extent, assuming that the global economy demand is strong. Thus there may only be a slight fall in AD and the negative impact on actual growth and employment may be limited.

2. The use of exchange rate policy to achieve a healthy BOP (ensures export competitiveness) conflicts with price stability

When faced with a deteriorating BOP due to her current account, Singapore may adopt a weaker currency that will increase her exports competitiveness whilst her imports become more expensive. Exports revenue rises whilst import expenditure falls, assuming Marshall-Lerner condition holds. This will improve her current account and BOP, assuming ceteris paribus.

Since net export increases, AD rises and cause a rise in the general price levels. This is more significant if Singapore's equilibrium is closer towards full employment. Also, when MAS intervenes to sell Sing dollar in the foreign exchange market, the increase in supply of Sing dollars in the forex market will eventually cause a rise in the domestic money supply. This would then cause an increase in consumption and investments that would further fuel the rise in AD and cause a further rise in the general price level.

The devaluation could also result in cost-push inflation as the price of imported raw materials increase in Sing dollars. Since Singapore has no natural resources and is highly dependent on imported finished goods and raw materials, this may cause an increase in cost of production of the firms. The horizontal portion of the AS curve shifts up wards and the general price level rises resulting in cost push inflation. Thus a healthy BOP is achieved at the expense of price stability.

How significant the impact on cost-push inflation is dependent on the state of the global economy. If there is a slowdown in the global economy (and this may have caused the deterioration in the current account in the first place), this could result in a fall in global demand for raw materials and commodities as major economies cut back on production. The price of commodities decreases and the devaluation would not result in cost-push inflation. E.g. in March 2015, MAS allowed the Sing dollar to depreciate against the US dollar as the economy was afflicted by a slump in manufacturing and exports that was also hurting the rest of the region whilst Singapore's inflation was weak (due to low oil prices)

3. The use of exchange rate policy to achieve sustained growth conflicts with equity

If the aim of the Singapore government is to achieve long-term growth, MAS should maintain a gradual appreciation of the Sing dollar. This would ensure a strong demand for her exports as the strong currency helps to maintain exports competitiveness, which will boost her AD. The strong Sing dollar is also important for investors who need to import imported factor inputs for their production. Foreign investors are willing to invest in Singapore as the exports competitiveness raises their expected rates of return. There will be net inflow of FDI into Singapore and this causes Singapore's AD and AS to shift to the right, achieving actual and potential growth.

However, by allowing the external sectors to drive Singapore's growth may result in unequal income distribution between high skilled and low skilled workers. High skilled workers working in sectors in which Singapore has comparative advantage e.g. legal and financial services, high tech manufacturing, will see a faster rise in their wages as the service or final products (exporting sectors) that they produce can be sold in the global market. There is a greater rise in

the demand for such goods resulting in a greater demand for these workers. Furthermore, as the economy restructures and companies find ways to innovate and enhance productivity, the demand for higher-skilled workers will also increase.

Low skilled workers or those who are working in sectors where Singapore does not have CA in e.g. sectors that cater only to the domestic market e.g construction, cleaning services, will see a slower rise in their wages. This results in widening income gap between these two groups of workers.

This trade-off with equity of income distribution occurs when exchange rate policy is pursued alone. If there is another policy that could be implemented as well to address the income inequality, the trade-off won't be severe. For example, with the objective to help the low income workers, Singapore government has ensured that workers are able to upgrade themselves and increase their occupational mobility through numerous manpower skills upgrading programmes. The SkillsFuture programme is one of them, it was introduced in 2015 by the Ministry of Manpower, to provide all Singaporeans with the enhanced opportunities to acquire greater skills proficiency, knowledge and expertise. For continuing education and training, workers can sign up for programmes and courses under the Singapore Workforce Qualifications System to enhance their employability. These manpower policies help to stabilise the income gap in Singapore. E.g. cumulatively in the last 5 years, the bottom 10% of household's income see a rise in income of about 17% whereas the top 10% see a rise of about 15%.

Anti-thesis: the use of exchange rate policy does not result in conflict in macroeconomic objectives

1. The use of exchange rate policy to achieve economic growth does not conflict with the macroeconomic objective of full employment

If the Singapore economy is operating far below its full employment level on the horizontal section of the AS curve, output and employment can be raised through exchange rate policy. AD will rise through a rise in net exports revenue if the currency is devalued (assuming M-L condition) and there will be an increase in national income via the multiplier. Real GDP rises, firms will employ more workers resulting in a fall in demand deficient unemployment.

2. The use of exchange rate policy to achieve price stability does not conflict with the macroeconomic objective of healthy BOP

If Singapore experiences cost push inflation due to higher price of imported raw materials, a revaluation will help to lower the price of imported raw materials in Sing dollars. The horizontal portion of AS curve shifts down wards and the general price level decreases resulting in cost push inflation.

Since the strong Sing dollar is important for investors who need to import ~~imported~~ factor inputs for their production which will make the goods that they export to be competitive in the long term. Foreign investors are more attracted to invest in Singapore as most of these firms are export oriented and the competitiveness ensures a high demand for their goods in the global market. There will be net inflow of FDI into Singapore and this improves Singapore's capital account -> improvement in BOP, assuming ceteris paribus.

Stability of a country's currency is just one consideration for investors to invest in a country. There are many other factors that affect investors' decision and their expected rates of returns on their investments. The emergence of many newly industrialised economies that have a pool of productive workforce together with their governments offering incentives, create competition for Singapore as an investment destination. Singapore's needs to continue with its effort to raise productivity growth to be able to lower the cost of production further to attract these foreign firms.

Conclusion:

The use of exchange rate policy may result in trade-offs between certain macroeconomic objectives, for example in order to achieve economic growth, the Singapore government may devalue the currency and this impacts price stability. But these trade-offs do not always occur

as it depends on the state of the domestic and global economy. The trade-off between growth and price stability, for example, is more apparent when the economy is growing rapidly and has limited excess capacity. Also, a devaluation may not necessarily result in imported inflation if there is a slowdown in the global demand for imported raw materials. The nature of Singapore's manufacturing production where her exports contain a high percentage of imported inputs also affects the significance of these trade-offs. Nevertheless, in order to minimise conflicts in government's objectives, the use of supply side and trade policies should be implemented to ensure that the demand for her exports remains strong with a larger export market and greater improvement in the quality of her exports. The focus on raising productivity is also important to maintain Singapore's competitiveness. These policies will be able to offset further some of the loss in exports competitiveness when Singapore adopts a strong exchange rate policy.

L3	9 - 11	Accurate and complete conceptual/ theoretical (analytical) explanation of the arguments for and against the view as to whether conflicts in macroeconomic objectives may arise due to the use of exchange rate policy. Reference was made to the nature of Singapore's economy throughout.
L2	6 - 8	There is analytical explanation of the arguments for and against by applying relevant theoretical concepts but there are gaps in explanation as to whether conflicts in macroeconomic objectives may arise due to the use of exchange rate policy. Limited reference was made to Singapore's economy Max 7 if there is analytical and contextual explanation but 1 sided.
L1	1 - 5	Answers are mainly descriptive, limited analysis
E2	+ 3-4	Makes a stand supported by good synthesis of the arguments in the body and stand is also linked to varying contexts.
E1	+ 1-2	Makes a stand but substantiation is weak – can't really link arguments in body to the stand taken – i.e. weak synthesis. Reasoning to support stand seems more memorised than understood.

Question 6

- a. **Explain the possible challenges that can arise from a country's openness to trade with the rest of the world. [10]**
- b. **Assess the appropriateness of using protectionism to help a small country tackle those challenges relative to a large country. [15]**

a.

Intro

Many countries are becoming increasingly interconnected as a result of increased openness to trade. While this brings many benefits to a country, there are possible challenges to attainment of macro goals and welfare maximisation.

Body

- Difficulty in developing higher value added infant industries that can earn more income
Openness to trade implies that it may be difficult to develop a country's domestic / infant industries which could have a potential comparative advantage. This is especially true in developing countries. These industries are too small yet to have gained economies of scale and will not survive against competition from abroad.
- Macro instability due to dependence on other economies

- Openness to trade implies that it may be difficult to develop a country's domestic / infant industries which could have a potential comparative advantage. This is especially true in developing countries. These industries are too small yet to have gained economies of scale and will not survive against competition from abroad.
 - Openness to trade encourages a country to depend on others for imports. However, in unforeseen circumstances such as war or natural disasters, a country which depends on others for imports of essential products like oil, food and important raw materials can experience severe economic set-back in such circumstances. Supply shocks will result in cost-push inflation which is accompanied by rising unemployment.
 - Economies which are dependent on external demand for growth are more vulnerable to external shocks. A country that is overly dependent on exports will face adverse effects on its GDP performance if external demand falls due to recession in other countries. The growth of the exporting country will slow down and even become negative (i.e. recession) resulting in cyclical unemployment. Eg: fall in global demand for Singapore's exports due to the 2008 financial crisis which resulted in job losses and slower economic growth.
- Structural unemployment
 - Openness to trade can led to structural unemployment. Eg in US, ageing industries have lost their comparative advantage (e.g. shoes, textiles, steel and automobiles) to developing countries like China who are moving up the value chain.
 - With advancement in technology that has enabled firms in developed countries to outsource certain production processes overseas, openness to trade has also led to unemployment of white-collar workers in developed countries. For example banks make use of the services of call centres located in India for their provision of customer-support services.
 - Exposure to unfair competition
 - When a country allows imports into the domestic market, it will be opening up its domestic market to foreign competition. Dumping occurs when foreign producers sell their products at prices below their marginal production cost by making losses so that the prices of these foreign imports will be lower than those of the domestic products. In some instances, firms are able to sell at below marginal costs overseas because of government assistance in the form of subsidies. One reason for such an act is to try to force the domestic firms out in order to gain monopoly power. Once monopoly power is established, the foreign firms will then charge high monopoly prices to reap supernormal profits. Although the consumers may enjoy lower prices in the short run, they will suffer from higher prices and lower output in the long run. Society will suffer a welfare loss.
 - Eg: US cotton producers get subsidies from the federal government with each additional bushel they produce, this encourages overproduction with the surplus dumped on the foreign market. Such dumping lowers prices and creates not only unfair competition to foreign producers, but it also undercuts the livelihoods of many poor farmers especially those in LDCs

Levels	Descriptors	Marks
1	<ul style="list-style-type: none"> ● Contain a few valid points made incidentally in an irrelevant context ● Able to list or describe the challenges with minimal use of economic 	1-4

	concepts	
2	<ul style="list-style-type: none"> • Narrow in scope • Explanation of challenges lack rigor or use of relevant examples • May show recognition of unstated assumptions 	5-6
3	<ul style="list-style-type: none"> • Analytical explanation of challenges with good use of relevant concepts/theories and examples • Shows ability to comment on unstated assumptions 	7- 10

Markers' comments

Skills:

- The term “challenges” also highlights that the minimum breadth needed would be 2 challenges thus students ought to keep to 2-3 main points rather than sacrificing depth for breadth.
- Question is specifically about openness to trade so students should not treat it as a globalisation question which would require a wider scope and discuss capital and labour flows.

Content:

- Students ought to carefully select their points in light of the term “challenges”. For example, rather than highlighting the loss of comparative advantage as a challenge, they should pinpoint the negative consequences associated with it such as structural unemployment.
- In order to ensure more rigour, avoid dropping terms like “comparative advantage” or “multiplier” without at least some explanation of the concept in relation to the point they are making.
- Some students associate structural unemployment with export industries, it would be more accurate to discuss structural unemployment in the context of domestic industries that cannot cope with cheaper imports.
- Imported inflation due to a supply shock leads to a shift in horizontal AS since it affects unit cost of production. Some students explained it as a shift in AD when they link to a fall in export competitiveness due to more expensive imported inputs. However this is inaccurate as the fall in AD is actually a movement along the AD given the shift in the horizontal AS.
- Students should make an effort to delineate their points to ensure clarity. Many students mixed the infant industry challenge with that of structural unemployment when the latter ought is more accurately associated with declining industries.
- There is some confusion between cyclical and structural unemployment. When comparatively disadvantaged domestic industries decline as they fail to compete with cheaper imports, what results is structural rather than cyclical unemployment. The reason is that there are jobs available but the unemployed cannot fill them due to the lack of necessary skills. Cyclical unemployment results when there are insufficient jobs due to a lack of **aggregate** demand.

- b. Assess the appropriateness of using protectionism to help a small country tackle those challenges relative to a large country. [15]**

Introduction:

Protectionism refers to the partial or complete protection of domestic industries from foreign competition in domestic markets. These include both tariff and non-tariff barriers. To assess the

appropriateness of protectionism in tackling the challenges of free trade, the following criteria should be considered i) effectiveness in solving the problem and ii) solving the problem at minimal trade-off of another objective. While protectionism can address the challenges mentioned in (a), it tackles them better in the context of a large / less open economy than a small / open country.

Body:

- Protectionism to develop infant industries with potential CA
Protectionism makes imported goods relatively more expensive causing residents to turn towards domestic substitutes produced by the infant industry. In this way, the domestic infant industry is able to produce on a big scale and enjoy EOS. Once it has reached this stage, protectionism can be removed and the infant industry can compete and survive foreign competition on its own.
This argument is more applicable to large countries like India rather than small countries since the former as a large enough market for the domestic infant industry to enjoy EOS. It will not work for small countries. Even then, it may also not work for large countries because protectionism tends to promote inefficiency and the infant industry never grows up.
- Protectionism promotes macro stability by enabling a country to rely less on trade partners.
 - When protectionism is practiced, trade will be reduced. This reduces the country's exposure to AD shocks from falling X due to recession in trade partners' countries or AS shocks caused by rise in prices of imported raw materials.
 - This advantage will likely benefit large countries like US / Australia more due to the large domestic market where Cd takes up a large proportion of the GDP. This provides a viable alternative growth engine to these countries and insulates them from the volatility of world markets to a certain extent. However, it will be difficult for a small country like Sg to do the same given its small domestic market. Cd will not be enough to replace X as a driver of actual growth it will have to depend on trade partners for its export markets as long as it desires high economic growth.
 - Moreover, protectionism will also come at the expense of current society's welfare due to the deadweight loss incurred (explain using the tariff diagram). *While this applies to both large and small countries, this trade off will be very high for a small economy with no natural resources.* These countries will have to weigh between adopting an open trade policy which enables them to increase welfare plus tap on the world market for export and subjecting themselves to the volatility. Rather than suffer welfare loss and decreases in growth rate, the problem of volatility can be better addressed by diversifying and forming FTAs with different countries.
- Protectionism can slow down structural unemployment brought about by trade
 - Protectionism slows down the decline of import-competing industries and those that have lost their comparative advantage. It provides time for these workers to be retrained and reallocated to other growing industries. How long this takes will in turn depends on the cost and extent of retraining that is required and the mind sets of both employers / workers.
 - In reality, protectionism may tend to slow down a country's restructuring process, depriving growing industries of resources that can be reallocated to them. *This will have a more significant adverse impact on a small, resource-poor and open country like Sg.* With these workers structurally unemployed, growing industries will face resource constraint leading to rise in factor prices (e.g. wages) and possible cost-push inflation. Export competitiveness of these industries will also be compromised and hence growth. While the same can be said of large countries, however, these countries can rely on other engines of growth. In addition, the resource constraint due to slowing down of restructuring may also be less severe.
 - Instead of using protectionism to overcome the structural unemployment brought about by trade, government should adopt supply –side policies targeted at provision of training and upgrading of skills.

- Protectionism reduces a country's exposure to unfair competition like dumping
 - Protectionism ensures that import competing industries are not subject to unfair competition and the foreign firms will not gain a foothold in the country.
 - If indeed foreign countries dump their products, such protectionism is justifiable. *However, regardless of small / large economies, protectionism itself leads to a fall in total trade volume and hence national income and growth of countries.*

Conclusion:

Protectionism is likely to benefit a large country more since its size enables the country to have an alternative internal engine of growth. However, as protectionism can be hard to prove, this is often used as a disguise to protect inefficient industries. The usefulness of protectionism to a small country tends to be limited as its economic growth and welfare may be too greatly sacrificed. While protectionism may be able to address the challenges that arise from openness to trade in the short-term, the welfare of countries (whether big or small) using it will be reduced due to the possible deadweight loss incurred. Hence, both big and small countries should consider adopting supply side policies. This will ensure that it exports goods that it has comparative advantage in and that new niche areas of growth are identified and developed and a nimble and quality workforce can be developed. Beyond trade, the government can also put in place policies to attract FDI to overcome the restraints faced by a small country.

Levels	Descriptors	Marks
1	<ul style="list-style-type: none"> • Answer shows some knowledge of what protectionism is and asserts some relevant points about its usefulness but does not indicate that the meaning of the question has been properly grasped • Explanation, if present, tends to be descriptive. 	1-5
2	<ul style="list-style-type: none"> • Shows ability to link protectionism to the challenges in (a) but the arguments are undeveloped • Some faint attempts to compare the benefits of protectionism between the small / big countries • Some use of relevant e.g.s but they may be undeveloped 	6 - 8
3	<ul style="list-style-type: none"> • Evidence of depth of analysis in comparing the benefits of protectionism between the small / big countries • Good use of relevant examples • Clear links are made to the macro goals and shows understanding of the resultant welfare loss 	9 - 11
E1	Mainly unexplained judgement	1-2
E2	Judgement based on analysis	3-4

YISHUN JUNIOR COLLEGE
JC2 PRELIMINARY EXAMINATIONS 2015

ECONOMICS
Higher 1

8819/01

14 AUGUST 2015
1400h – 1700h

Additional materials:
Writing paper
Cover page

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TIME 3 hours

INSTRUCTIONS TO CANDIDATES

Write your name, CTG and index number in the spaces provided on the cover page and on all sheets of writing paper handed in.

Write in dark blue or black pen.

You may use a soft pencil for any diagrams, graphs or rough working.

Do not use highlighters, glue or correction fluid.

Answer questions **1**, **2**, and **either 3 or 4**.

At the end of the examination, tie a cover page to **three** separate questions:

1. Case Study Question 1,
2. Case Study Question 2, and
3. Either Essay Question 3 or 4.

INFORMATION FOR CANDIDATES

Including this cover page, there are **8** pages in this question booklet.

The number of marks is given in brackets [] at the end of each question or part question.

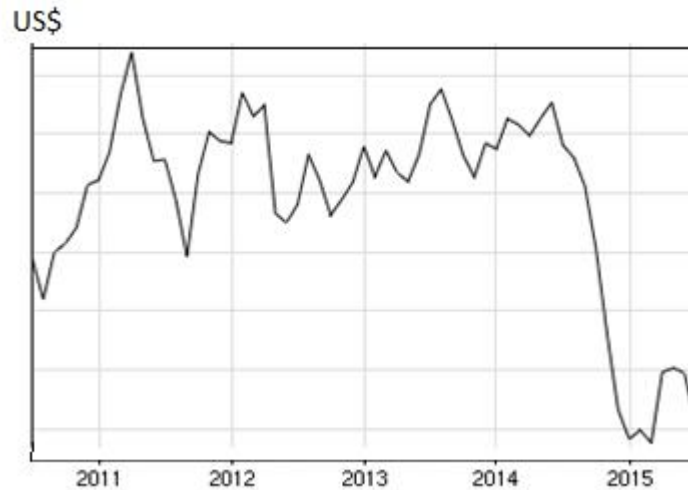
You are reminded of the need for good English and clear presentation in your answers.

Section A

Answer **all** questions in this section.

Question 1 The oil market

Figure 1: Crude oil prices (in US\$ per barrel) from 2011 to 2015



Source: NASDAQ, July 2015

Extract 1: Economy speeds up, pollution stalls

Global emissions of carbon dioxide in 2014 was comparable to that in 2013, according to the International Energy Association, marking the first time in four decades that economic growth has not resulted in more emission of greenhouse gases.

The halt in emissions growth reflected changing patterns of energy consumption in China, the world's biggest polluter, as it now uses less oil. Instead, China is increasing its use of renewable sources, such as hydropower, solar and wind to generate electricity.

Source: CNN, 13 March 2015

Extract 2: OPEC sees oil price below \$100 a barrel in the next decade

OPEC has been grappling with how to respond to a historic price crash caused in part by a surge in American supplies, thanks to hydraulic fracturing of shale formations deep underground. The 41 fracking companies operating in the US add about 1 million barrels of oil a day in 2014.

Normally, the cartel cuts its own production to reduce supplies, and thereby pump up prices, in times of market turbulence, but last year the group decided that would not work. Instead, some OPEC nations, notably Saudi Arabia, have flooded the market with more crude and cut prices in hopes of keeping customers.

Source: The Wall Street Journal, 12 May 2015

Extract 3: Impact of fuel prices on US

The drop in fuel prices has helped consumers in developed countries such as the U.S. heading into the holiday shopping season. Lower prices at the pump and on heating bills give consumers more money for discretionary items such as restaurant meals, electronics and haircuts. This has helped lift consumer confidence to a seven-year high and has led economists to predict a more dramatic spending impact ahead.

Falling fuel prices also reduce production and shipping costs for an array of U.S. manufacturers, farmers and businesses.

Source: The Wall Street Journal, 27 November 2014

Extract 4: The economic case for scrapping fossil-fuel subsidies is getting stronger

Governments with high fuel subsidies are more exposed to external shocks if they borrow to finance their deficits. Holding down prices causes their budget deficits to explode, making them vulnerable to rising global interest rates. Cutting subsidies now would leave more money for growth-boosting policies, such as infrastructure investment.

Subsidy cuts are widely associated with higher inflation: energy costs rise. But in a world of falling inflation the risks this poses are lower. The IMF forecasts that subsidy cuts in various countries will have a small impact on their respective inflation rates.

Source: The Economist, 11 January 2014

Extract 5: A good scrap- as Jokowi abandons wasteful fuel subsidies, fiscal prospects brighten

Indonesia's president, Joko Widodo, began the new year knowing that he will now have trillions of fresh rupiah to spend that his predecessors have lacked. Having trimmed petrol subsidies in November, Mr Joko, who is universally known as Jokowi, scrapped them entirely from January 1st.

The president's broad aims are already clear: he wants to boost spending on health, education and infrastructure, and he wants to bring down the budget deficit from about 3% to under 2% of GDP. The president has also been clear about his desire to see Indonesia return to growth of 7% a year, a rate that it has not reached since the mid-1990s. The World Bank forecasts Indonesia's economic growth of 5.2% this year. In the longer term, Indonesia's prospects are brighter. Better infrastructure should lower transport costs and attract more business investment—including from foreigners. With a healthier and better-educated workforce, Indonesia would rely less on extractive industries. Instead, more people could find work in services and higher-value manufacturing—semiconductors and smartphones rather than T-shirts and trainers. And having got fuel subsidies out of the way, Jokowi can move on to thornier problems of streamlining regulatory tools and government bureaucracy. His year has got off to a good start.

Source: The Economist, 10 January 2015

Extract 6: US and their fight against carbon emissions

The use of tradable permits to cut carbon emissions was based on a simple economic insight. If firms facing high costs to cut emissions could buy allowances to pollute from those who could cut emissions at lower costs, reducing overall pollution

would be much cheaper. This means that instead of determining the exact pollution quota for each of the millions of households, factories, farms, cars, trucks etc. – all of whom face very different costs of reducing pollution – the tradable permit system lets the market do the job. This means it is also more efficient.

However, as tradable permits are in essence a hybrid of a regulation and a tax, it could still suffer from the same limitations of some of these individual measures.

Robert N. Stavins, who heads the Harvard Environmental Economics Program, points out, that using regulation to set quotas of carbon emissions to limit greenhouse gas emissions is an implausibly complex task. Any government faces a similarly complex task in determining the cap for tradable permits.

A carbon tax, while effective, is almost always too low to encourage sufficient reductions in carbon emissions. The effective tax on carbon among the world's 41 biggest polluting nations, which account for some 84 percent of global carbon emissions from energy, amounted to about \$16.60 per metric ton of CO₂, on average. That's about \$20 less than the estimate of carbon's external costs. These external costs include falling average life expectancy; in countries like China, its dirty air has driven foreign executives and companies out of the country which negatively affects the economy. Similarly for the tradable permit system, the permits must be trading at an appropriate price that reflects the costs of pollution. A tradable permit system with too many permits will result in permits trading at too low a price.

Source: The New York Times, 30 June 2015

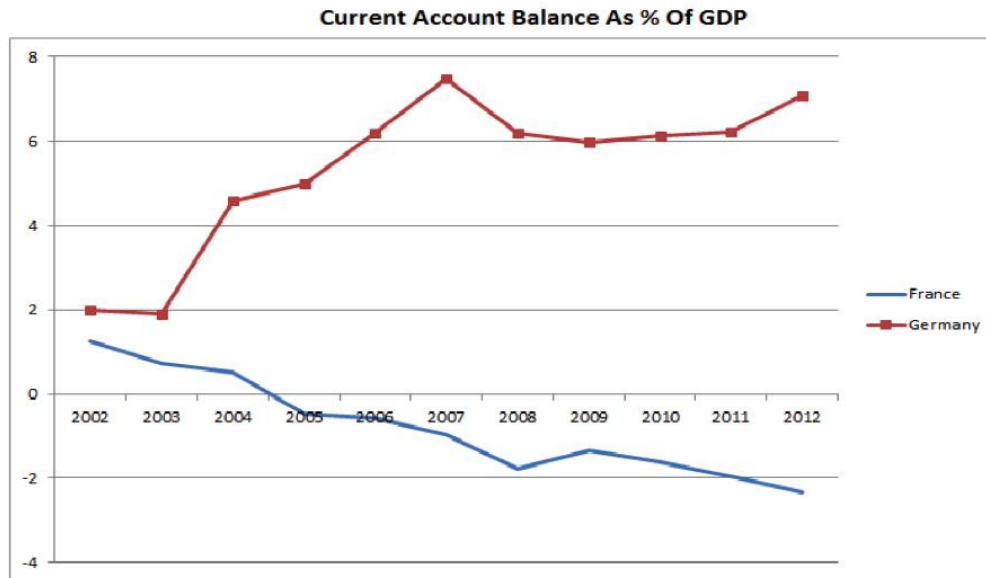
Questions:

- (a) With the help of a diagram, account for the overall change in crude oil prices between 2014 and 2015 with one demand factor and one supply factor. [6]
- (b) Explain the impact of the change in fuel prices on the US economy in extract 3. [4]
- (c) Comment on the possible effects of removing fuel subsidies on Indonesia's short run and long run growth. [8]
- (d) Using relevant data, explain how the use of oil generates negative externalities. [4]
- (e) Discuss the effectiveness of tradable permits in reducing the level of carbon emissions. [8]

[Total: 30 marks]

Question 2 Troubles in France

Figure 2: Trade balances of France and Germany



Source: Trading Economics

Table 1: France's key macroeconomic indicators

Key indicators	2008	2009	2010	2011	2012	2013e ₁
GDP (% real change pa ²)	-0.2	-3.1	1.6	1.7	0.0	-0.2
Private consumption (% real change pa)	0.2	0.2	1.4	0.2	-0.1	-0.2
Consumer prices (average % change pa)	3.2	0.1	1.7	2.3	2.2	0.9
Recorded unemployment (%)	7.4	9.2	9.3	9.2	9.9	10.6
Budget balance (% of GDP)	-3.3	-7.6	-7.1	-5.2	-4.8	-4.0
Public debt (% of GDP)	68	79	82	86	90	93

Source: Economic Intelligence Unit

Extract 7: France's battered economy

On April 16th the IMF issued a grim reminder by forecasting that France will join Spain, Italy, Greece and Portugal in recession in 2013. The worsening outlook leaves the French government not only unable to stick to its promises of budget deficit reduction, but facing an internal political rebellion over how to manage its public finances.

Household consumption fell in both January and February. In March the INSEE business-confidence index dropped to nearly ten points below its level of a year ago. Struggling with the lowest profit margins in the euro area, many firms are putting investment on hold. A persistent deterioration of competitiveness in France has led

¹ e: estimated² pa: per annum

to a greater loss of world export share over the past ten years than in Germany, Italy or Spain, particularly in manufacturing.

Three-quarters of the structural efforts to reduce the budget deficit this year depends on tax rises. However, France's overall tax burden is already the highest in the Eurozone and is set to rise yet again, to some 46.5% of GDP next year. Thus, the French government has promised that there will be no new taxes in 2014 beyond another Value-Added Tax increase.

This meant that to reduce the budget deficit, the government would have to cut its spending through a pension reform and cutting family benefits for the richest 15% of French households. This would not go well with a minority in the government who fear this will cause the economy to contract.

Source: Adapted from The Economist, 20 Apr 2013

Extract 8: President Hollande converts, proposes "austerity" and to boost growth in France

The policy battle of the last six years has been over how governments should respond to the recession that swept most of the globe, the slow growth that followed, and high unemployment. One camp argued for immediate large increases in government spending financed by borrowing, followed early in the recovery by higher taxes on the rich. The other camp recommends decreased government spending paired with tax cut measures, or more commonly known as austerity measures. The first camp was more popular initially, with governments around the world first reaching record budget deficits and then passing tax increases on high earners. However, in a major sea change on the policy battlefield this week, President Hollande of France announced a conversion to the second camp.

It is however worth noting that the French version of austerity measures is slightly different from the norm. The government is focusing mainly on cutting government spending but there is no room to raise taxes as they are already very high. Instead, President Hollande announced tax cuts on businesses to complement cuts in government spending. This is particularly significant to economic policy makers around the world as France has the highest ratio of government spending to GDP of any developed economy.

In opposition to those pushing for more government spending as the solution, President Hollande said that only private investments could create jobs and revive growth. In particular, President Hollande is proposing to lower the payroll taxes that businesses pay for hiring each worker. This is not only a big win for businesses, but also recognition that making labour less expensive will encourage business to use more of it.

The results of the few countries in Europe that have tried cutting government spending have been quite positive. As of 2013, Bulgaria, Latvia, Lithuania, Hungary, Poland, and Romania have all cut government spending and seen their economies grow faster than the average for the European Union.

Source: Adapted from Forbes, 18 Jan 2014

Extract 9: France resorting to protectionism

When an international credit agency announced that over 62,000 companies in France would face bankruptcy in 2013, the French government set out to overcome a temporary surge in unemployment in France with a concerted effort of national industrialisation through various policy interventions. The government has pledged billions of euros to fund struggling national firms, a thinly-veiled attempt at protectionism. Yet, are such well-intentioned policies preserving France's future competitiveness within the European market?

The European competition commission Mr Almunia critiqued that "the European economy cannot be invigorated through protectionism...as Europe will not find its place in globalisation by launching a subsidy race with the rest of the world." Many other critics have similarly cited the French policies as the cause of, not the cure for, the French economy heading towards little or no economic growth in the immediate future. Unsurprisingly, France's trade deficit continues to grow, as the result of excessively bureaucratic labour policies and sky-high payroll taxes which keep importers hesitant to the purchase of French national products. Protectionism is not only contributing to stagnating economic growth, but also helping to cultivate dangerous conditions that can give rise to regional European and even global economic recession.

And how is the French government paying for the industrial subsidisation? In one of the bids to increase tax revenue, the French government had increased the tax rate on top earners to 75 per cent. Some top earners have left France as a result; the sky-high payroll taxes will also lead to an increase in goods and services, including exports.

Source: Adapted from www.parisglobalist.org, 13 May 2014

Questions:

- (a) (i) Using Figure 2, compare the current account balance as percentage of GDP of France with that of Germany, from 2005 to 2012. [2]
- (ii) Account for France's current account balance from 2005 to 2012. [2]
- (b) What conclusion would you draw from Figure 2 and Table 1 about France's economic performance from 2008-2012? [3]
- (c) Identify and explain the cause of rising unemployment in France. [3]
- (d) Explain why the French government is unable to cut the budget deficit. [6]
- (e) Explain how "France's version of austerity measures" is expected to impact the French economy. [6]
- (f) With reference to the data where appropriate, assess whether the French government should adopt protectionism to deal with its macroeconomic problems. [8]

[Total: 30 marks]

Section B

Answer **one** question from this section.

3. (a) Explain how the price mechanism allocates scarce resources among competing needs in a free market. [10]

- (b) Economic problems are often complex. As a result, the government may sometimes use a policy mixture where more than one policy is used, to tackle an economic problem more effectively.

With the use of a merit good example, explain and evaluate a policy mixture that a government might use to bring about a more efficient allocation of resources. [15]

4. The increasing trend of globalisation involves more world trade and more movement of capital and labour, creating opportunities for Singaporean workers and firms.

- (a) Explain the gains from globalisation for Singapore. [10]

- (b) However, not all workers will benefit as increasing globalisation could potentially lead to increasing unemployment as well.

Evaluate the supply-side policies used in response to the above. [15]

END OF PAPER

(a) With the help of a diagram, account for the overall change in crude oil prices between 2014 and 2015 with one demand factor and one supply factor. [6]

Well labelled diagram with appropriate shifts - 1m
Identify fall in crude oil prices in given time period - 1m
Explain 1 demand factor- 2m
Explain 1 supply factor- 2m

Demand factors: (to explain fall in demand for crude oil)

Either:

1) Changing patterns of energy consumption (extract 1) - taste and preferences due to pollution concerns

Supply factors: (to explain increase in supply of crude oil) – Explain 1

1) OPEC producers increasing supply to retain market share (extract 2)

2) Increase in size of industry with the entrance of American fracking companies (extract 2)

Incorrect- removal of fuel subsidies (extract 4): fuel is not oil. removal of fuel subsidies will reduce supply of fuel, not necessarily supply of oil.

Examiners' Comments for CSQ1(a):

Most candidates demonstrated sound understanding and application of demand-supply analysis to explain changes in prices in a free market, i.e. accurately and well-explained diagram to explain how demand and supply changes will lead to adjustment to new equilibrium.

Stronger candidates extended the analysis to include extent of shifts in demand vs supply and some also applied PED and PES in their analysis.

Question requirement:

a) However, while the above was done well, it is less clear whether candidates understood what is meant when the command words are 'account for'. 'Account for' requires not only identification or stating of the factor(s) or reason(s) but also requires economic explanation of the reason(s). E.g. many candidates did not explain the reason for the change in pattern of energy consumption in China.

(b) Explain the impact of the change in fuel prices on the US economy in Extract 3. [4]

There are two main approaches to this question.

The first, more likely approach, is to talk about the macroeconomy using AD/AS analysis:

Impact on AD [Up to 2m]

- The fall in fuel prices, given price inelastic demand for fuel (necessity, few substitutes), means a less than proportionate increase in quantity demanded for fuel. Therefore the total expenditure on fuel will fall. Assuming that disposable income remains constant that means a greater proportion of disposable income is now

available for consumption of other goods and services. This would lead to an overall increase in (autonomous) consumption. [1m] Since consumption (C) is a component of aggregate demand (AD), therefore AD will increase, ceteris paribus. [1m]

OR

- The rise in consumer confidence could lead to a subsequent rise in business confidence, where firms will expect higher consumption and therefore greater revenue earned. Assuming costs remain unchanged, this leads to an increase in profits (or expected rate of return on investment). Investment therefore increases. [1m] Since investment (I) is a component of AD, therefore AD will increase, ceteris paribus. [1m]

OR

- The fall in fuel prices means a fall in cost of production for most firms that use fuel as a factor input. [1m] This lowers the price of domestically-produced goods and services should firms choose to pass on their lower costs to consumers. Should the prices of exports fall in domestic currency, it could improve price competitiveness of exports assuming that exchange rate remains unchanged. Therefore the demand for exports in domestic currency could increase. [1m] Since export (X) is a component of A, therefore AD will increase, ceteris paribus. [1m]

Impact on AS [Up to 2m]

- The fall in fuel prices would lead to a fall in cost of production for most firms that use fuel as a factor input. [1m] This will lower the unit cost of production, increasing the (short-run) aggregate supply as firms can now produce the same level of output at a lower unit cost of production. [1m]

Note: answers that use “fall in cost of production” to explain for impact on AD and AS can only be credited once for this analysis.

Overall impact on economy when AD and/or AS changes [Up to 2m]

- When AD and (SR)AS increases, there is increase in real national output via multiplier effect, increase in employment level. Increase in AD causes GPL to rise but the increase in AS will reduce inflationary pressures; therefore the overall impact on GPL is uncertain / depends on the relative shift of AD and AS. Balance of payments could also improve if X and/or FDI increases, ceteris paribus. [1m each for any macroeconomic indicator mentioned; however changes in real output and cyclical employment are treated as 1 point only since the analysis required is the same]

Note: AD/AS diagram not required to score full credit

The second approach, is to explain the impact on consumers and producers:

Impact on consumers [Up to 2m]

- The fall in fuel prices, given price inelastic demand for fuel (necessity, few substitutes), means a less than proportionate increase in quantity demanded for fuel. Therefore the total expenditure on fuel will fall. Assuming that disposable income remains constant that means a greater proportion of disposable income is now available for consumption of other goods and services. This increases the purchasing power of consumers [1m], allowing them to consumer more goods and services, therefore increasing consumer welfare / material standard of living. [1m]

Impact on producers [Up to 2m]

- The rise in consumer confidence could lead to a subsequent rise in business

confidence, where firms will expect higher consumption and therefore greater revenue earned. At the same time, the fall in fuel prices would lead to a fall in cost of production for most firms that use fuel as a factor input. [1m]

- Combined, the a likely increase in revenue and a fall in cost of production will lead to an increase in profits. [1m]

Examiners' Comments for CSQ1(b):

Overall, majority of candidates scored 3 or 4 marks (out of 4) for this question, because these answers showed clear attempts to analyse at least two ways the change (fall) in fuel prices would impact the US economy.

TAKE NOTE: Answers that were awarded 4 out of 4 marks may not be error-free. So please read on! These small errors could be amplified if you were attempting a AD/AS question that carries more weight (e.g. 6/8m case study, or even in the essay).

As predicted, the word "economy" in the question prompted the large majority of candidates to approach the question using the AD/AS framework. The AD analysis was usually done well; on the other hand, the AS analysis did contain some errors.

By and large, most candidates who used the AD/AS framework would have scored 2 marks for explaining the impact on AD. Some candidates, in fact, explained more than one possible way for AD to be affected. For a 4m question, multiple explanations for why AD would increase would be limited in scope, and unlikely to score 4m by itself.

Content:

a) The following comments are common mistakes for candidates using the AD/AS approach, focusing on impact on AD first:

- i. When explaining how a fall in fuel prices would lead to an increase in consumption, more than half the candidates made a reference to an increase in disposable income. This was wrong since, if we assume that there are no changes to income and tax rates, then disposable income must have remained constant. The correct phrasing, which only a small group of candidates managed to use, is, "as fuel prices fall, a lower proportion of disposable income is spent on fuel, which means consumers can spend more on other goods and services, thereby increasing consumption..." → Of course, an easier way out of this mess, is to avoid using the term "disposable income" altogether and just use "purchasing power increased".
- ii. Many candidates who used the export argument made incomplete analysis, jumping from "fuel prices fell" straight to "export demand will increase". Candidates **MUST** explain how "fuel prices fell" would cause a fall in price of exports first.

b) The following comments are common mistakes for candidates using the AD/AS approach, focusing on impact on AS next:

- i. A significant minority wrongly linked a fall in fuel prices, i.e. a fall in price of factor inputs, to an increase in productive capacity. Productive capacity (or LRAS, full employment level) can only increase when there is an increase in quantity of factor inputs and/or improvement in quality of factor inputs.

Some may consider an improvement in technology as a separate third determinant of a shift in productive capacity, but this can usually be accounted for by the earlier two factors. A fall in price of factor inputs, in short, does not lead to any of these two (or three) determinants of productive capacity.

- ii. A small minority mistook the “reduce(d) production and shipping costs” (Extract 3) to mean a fall in production. Please read carefully. The sentence, if lengthened, would have read “...falling fuel prices also reduce production (costs) and shipping costs...” Mis-reads can happen during examination conditions, but these mistakes can be costly.
- iii. A minority wrongly stated that a fall in cost of production would lead to a decrease in (short-run) aggregate supply. The correct analysis is fall in COP → increase in SRAS.

- c) The following comments are common mistakes for candidates using the AD/AS approach, focusing on how changes in AD and/or AS can impact the economy:
- i. A significant minority did not pick out that when AD increases, GPL would increase; on the other hand when AS increases, GPL would fall.
 - ii. A minority made directional references when no diagram was presented. For example, when no diagram is presented, it makes little sense to state “AD shifts to the right” or “SRAS shifts down”. It would be better to state “AD increases” and “SRAS increases” respectively.

(c) Comment on the possible effects of removing fuel subsidies on Indonesia’s short run and long run growth. [8]

Impact on short run growth:

- **SRAS**

Cost of production increases, leading to fall in SRAS. Results in inflation.

Evidence: Extract 4 “Subsidy cuts are widely associated with higher inflation: energy costs rise.”

With inflation, there may be uncertainty in profits and hence fall in new investments.

Also, cost-push inflation may lead to fall in employment and real national output. (The amount of real output that the existing level of total demand will buy will be reduced. That is, a given level of total spending will only be capable of buying a smaller real output when cost-push pressures raise the price level.)

- **AD**

AD may fall due to fall in investments resulting from inflation, or it may fall due to decreased government spending with the removal of subsidies. Fall in AD leads to accumulation of stocks and firms cutting down on production. There will be a fall in real national income via multiplier effect.

Therefore, detrimental to short run growth. There will likely be fall in actual growth.

Impact on long run growth:

- **LRAS**

LRAS increases. Increase quality and quantity of resources, improving technology with FDI.

There is likely to be increase in potential growth.

Evidence:

Extract 4

- Less vulnerable to external shocks with improvement in budget deficit
→ links to better confidence in economy, able to attract more investments.
- More money for growth boosting policies like infrastructural investment.

Extract 5

- Boost spending on health, education and infrastructure.
- → "Better infrastructure should lower transport costs and attract more business investment—including from foreigners. With a healthier and better-educated workforce, Indonesia would rely less on extractive industries. Instead, more people could find work in services and higher-value manufacturing—semiconductors and smartphones rather than T-shirts and trainers."
- Reduce budget deficit

• **AD**

AD may increase with increased government spending on areas like infrastructure etc. Attract more investments with positive business outlook so I will increase too. G and I increase, hence AD likely to increase. Actual growth increases.

Evaluative statement: Likely to benefit LR/SR growth or not.

From extract 5: "Jokowi can move on to thornier problems of streamlining regulatory tools and government bureaucracy." This hints that there are inherent problems present in the Indonesian government which may hinder growth, for example, due to corruption or bureaucracy. Will see positive impact on LR growth only if the institutional problems are solved.

L3	Well-developed analysis on the impact on both short run and long run growth. Strong support with evidence from data to provide contextualisation to get full 6 mark.	5-6
L2	Well-developed analysis on only long run or short run growth. or Under-developed analysis on both impacts on LR and SR growth. Answers attempt to use some relevant evidence from data but links may not be strong.	3-4
L1	Weak or no explanation about the impact on short run and long run growth. Answers contain major errors.	1-2
E1	Unexplained judgement	1
E2	Evaluative statement that is supported with sound economic analysis and in context.	2

Examiners' Comments for CSQ1(c):

Question requirement:

- a) About half of the candidates DID NOT link their answers directly to growth to answer the question- the better candidates stopped at impact on real national output/income, the rest were hovering around SOL and unemployment level,

which does not answer the question.

Content:

- b) Short run impacts are poorly explained. Few candidates recognised that, due to cost of production increasing, SRAS will decrease. This recognition, in addition to the other relevant analyses, would have put them in the L3 range.
- c) Most candidates wrote that in SR there is an increase in G (spending on education etc) and hence AD increased. Although this answer was accepted, candidates could have recognised that this is more of a LR effect. Instead, with the removal of subsidies, G is more likely to fall in the immediate term and hence AD falls in SR.
- d) About half the candidates also mentioned that due to higher prices, C will fall due to fall in disposable income, which is wrong. These candidates failed to recognise that a fall in purchasing power will not lead to a fall in C, but that with the same amount of money, less goods and services could be purchased (hence negative impact on SOL- which is not what the question is asking for).
- e) A couple of candidates also demonstrated confusion over the term 'budget deficit' and 'BOP deficit'.

(d) Using relevant data, explain how the use of oil generates negative externalities. [4]

Definition: Negative externalities are negative uncompensated spill-over effects on third parties who are not involved in the consumption or production of the good. (1m)

External Cost to third party:

- 1) Fall in life expectancy due to health problems brought by air pollution - experienced by people of China who are plagued by the air polluted cities.
- 2) Possible fall in economy's ability to attain sustained growth or maybe fall in employment when MNCs/FDIs withdraw, due to foreign executives leaving. Third parties are the workers in these companies who become unemployed.

[2m]- identify external cost and explain

[2m]- identify third party and explain

Max 4m. Cap at 3m if no relevant data was used.

Examiners' Comments for CSQ1(d):

Most candidates managed to at least secure one mark with accurate definition of negative externalities. Some candidates did not define but managed to show understanding with their examples and explanation of external cost and third party.

Overall, there was a lack of appreciation of the wording in the question. The question required an explanation of how...generates negative externalities. Many candidates wrote responses worth a lot more than 4 marks to answer the question "explain how...leads to market failure."

Question requirement:

- a) Many candidates wrote lengthy theoretical explanation about MPC and MPB and how the divergence due to MEC will lead to market failure, instead of focusing

their answer on explaining the external costs on third party.

- b) Candidates were more equipped in explaining external costs than the third parties' effect- they often used general terms like 'people' instead of 'people living around the factories who are not involved in the production of oil' for example.
- c) Most candidates who picked out relevant evidences did not go an extra step to explain the impact (health problems and medical costs incurred, or unemployment, loss in income and hence fall in SOL).

Data reference:

- d) Candidates who did not make explicit reference to relevant data in extracts were not granted full marks. These candidates linked greenhouse emissions to global warming which leads to flooding, or depletion of ozone levels and hence increased skin cancer etc. An explicit link to the extracts would be discussing the impact of air pollution or the impact of FDIs withdrawing (Extract 6 mentioned 'external cost' even!).

(e) Discuss the effectiveness of tradable permits in reducing the level of carbon emissions. [8]

Thesis: Tradable permits are effective in reducing emission levels.

The government grants each firm a certain number of permits to produce a particular level of pollutants over a period of time. The government ensures that the number of permits issues corresponds with the level of pollution that is socially acceptable at the optimum level of output, where $MSB=MSC$.

If a firm can produce its product by emitting a lower level of pollutants than the level allowed by the permits, it can sell its extra permits in the open market to firms that emit more pollutants beyond the level permitted. [explained in **Extract 6** para 1]

Thus the overall level of emissions is set and controlled by the government but the distribution is determined by the market.

Advantages:

- Overall level of pollution can be controlled by this system.
- Allocative efficiency is achieved- least cost. If cleaning up or polluting is the least costly, firms will do so.
- (possible argument though not required) System creates an incentive for firms to cut back on pollution. It encourages firms to use cleaner methods of production so that they can sell their excess permits in the market. Firms which are less efficient in cutting down pollution must be prepared to pay for the permits to pollute, thus the external cost of pollution is internalised.

Anti-thesis: Tradable permits are not effective in reducing emission levels.

Disadvantages:

- It is not easy for the government to determine the number of permits to issue to produce the desired reduction in the level of emissions to achieve allocative efficiency. (**extract 6:** complex task to use regulation to set quotas of carbon emissions to limit emissions from huge number of household, firms etc of different nature. Furthermore, price set is almost always too low to encourage significant

reduction in emissions- There is a need to determine right number of permits available for trading.)

- **Extract 6:** "could suffer from the same limitations of some of these individual measures"
 - **Taxes:** practical difficulties in determining amount of externalities emitted and designing tax of an equal value to external cost, high taxes needed for a good of price inelastic demand.
 - **Regulation:** enforcement may be difficult and costly. Penalties need to be harsh and inspection must be frequent and rigorous. Blunt method.
- (possible argument though not required) Firms that have a sizeable share of the market may be in a relatively stronger position such that they might be able to buy pollution permits in excess of the firms' cost-minimising requirements in order to deter other firms from entering the market. They will then not cut back on their emission levels.

Evaluate: Effective or not, dependent on which factors.

Tradable permit allocation and pricing is a complex process. Will not be effective if there is likely to be government failure. For big countries like US/UK, high cost of regulation may be significant. Prices must be adjusted upwards when results show that emission levels are not effectively reduced. Number of permits need to be reduced. May need to adopt a more forceful stance- like China (own knowledge).

Possible Evaluative points:

E marks may be awarded for the following:

- Contextualisation: Evaluation done based on weighing the advantages and disadvantages of different economies, using factors like size of industry etc.
- Theory may not work in the real world, eg. due to political reasons, ability of the government to stand against lobbying to set the optimum amount of permits
- Extent of effectiveness
- Government failure: may not be underestimation of costs but government may deliberately set large number of permits to incentivise firms to join the scheme in the first place, hence price becomes too low.

Note: Candidates do not need to bring in alternative policies. Focus of the question is on tradable permits.

L3	1. Well-developed answer that explained how tradable permit works to reduce emission levels. 2. Explained clearly how tradable permit has limitations in reducing emission levels. 3. Answers may contain few or no minor errors.	5-6
L2	1. Well-developed one-sided answer, i.e. well-explained answer that explained how tradable permit works to reduce emission levels OR well-explained answer that explained how tradable permits has limitations in reducing emission levels. OR 2. Under-developed two-sided answer. 3. Answers may contain some minor errors.	3-4
L1	1. Weak or no explanation about effectiveness / ineffectiveness of tradable permits.	1-2

	2. Answers may contain some major errors.	
E1	Unexplained judgement	1
E2	Evaluative judgement supported with analysis	2

Examiners' Comments for CSQ1(e):

Overall, answers showed a clear lack of familiarity with tradable permits – how these work and the key limitations of the measure when used to tackle negative externalities. This weakness was compounded by the poor understanding of question requirement which led to many answers containing correct but irrelevant content.

Question requirement:

a) Most candidates did not recognise that the question did not require them to bring in alternative policies, and spent majority of their answer explaining about them, such as education/campaign. Those who brought in other policies like imposition of taxes or legislation, which if linked to tradable permits or was relevant, was awarded credit.

Content:

- b) More than half of the candidates wrote that big firms will purchase the permits from small firms and this puts them at an advantage, without recognising that they would only do so if their cost of cleaning up is more costly than purchasing the permits, otherwise there is no need for them to monopolise the permits. Candidates need to understand that firms arrive at the decision by weighing the cost of buying a permit vs cleaning up, and will choose the least cost option. Also, there tends to be a lack of linkage from market domination back to the question of reducing emission levels.
- c) Some candidates also did not show understanding that tradable permits come with an initial allocation by the government for both big and small firms, thinking that it is entirely traded by the free market. If the analysis is sound, the point was still accepted, but answers that do not show logical thinking- saying that big firms will force the small firms to sell their permits and subsequently small firms cannot pollute nor continue production so they will be forced to leave the industry, or that the small firms will sell to the big firms and then big firms re-sell it to them at a higher price to exploit the small firms (for both arguments, why will the small firms sell it in the first place!)- then the answers were not credited.
- d) Some candidates who talked about the internalising of external cost made a mistake and mentioned internalising of social costs instead.

**Suggested answers to:
Q2- Troubles in France**

- (a) Using Figure 2, compare the current account balance as percentage of (i) GDP of France with that of Germany, from 2005 to 2012. [2]**

Throughout the time period, France was experiencing a current account deficit while Germany was enjoying a current account surplus; both were increasing.

(Note: deficit/surplus – 1m ; increased– 1m; note that Cambridge used increased as well in N2009)

Examiners' Comments for CSQ2(a)(i):**Phrasing:**

- a) A large majority of the candidates used the wrong terminology.
- Wrong: current account balance is increasing. Correct: current account balance is improving or current account surplus is increasing / current account deficit is decreasing.
 - Wrong: current account balance is decreasing. Correct: current account balance is worsening or current account surplus is falling / current account deficit is rising.

Question requirement:

- b) A significant number of candidates described how current account balance changed from 2005 to 2012 instead of describing an overall trend.
- c) Amongst candidates who did describe the overall trend of current account balance, they instead focused on the trend and the anomaly for each country instead of comparing between the 2 countries' current account balances.

- (a) Account for France's current account balance from 2005 to 2012. (ii) [2]**

France's current account worsened due to falling exports because of the weakening of competitiveness (E7P2). This weakening happened because of expensive labour and high taxes (E9P2) which lead to French product being less competitive.

(Note: 1m for reason ; 1m for explanation of reason)

Examiners' Comments for CSQ2(a)(ii):

Overall poor attempt, with two main weaknesses that can be lethal in a case study: (1) weak or no attempts to explain evidence that was lifted / quoted from the case material, (2) poor content mastery for relevant concepts.

Question requirement:

- a) Many candidates merely lifted the evidence from the case material without explaining why export revenue falls which led to an increase in France's current account deficit.
- b) Misinterpretation of question and explained why budget deficit / public debt increased instead
- c) Majority of candidates explained why France's current account is in a deficit instead of accounting for the increasing current account deficit. The difference is that a deficit is a longer term issue, e.g. poor export competitiveness; whereas an

increasing current account deficit could just be a short-term fall in export revenue and/or rise in import expenditure.

- d) Some candidates failed to understand question requirement and described how the current account balance changed from 2005 to 2012, which was supposed to be the answer for a(i).

Content:

- e) Some candidates explained how budget deficit was the cause of the increasing current account deficit.
- f) Weak understanding of what makes up the current account. A significant number of candidates explained how a fall in investments led to an increase in France's current account deficit. Investments, or specifically foreign direct investment features in the capital and financial account instead.

(b) What conclusion would you draw from Figure 2 and Table 1 about France's economic performance from 2008-2012? [3]

France's economic performance, which is about the country achieving the 4 macro aims, in general worsened. Although GDP remained fairly consistent, consumer prices had been rising in a muted fashion. This could signal inflation is starting. Further, unemployment increased and public debt worsened which means increasing loss of potential output along with weakening of government budget. To add, from Figure 2, the current account deficit as a % of GDP actually increased.

(Note: 1m for overall ; 1m for using an indicator to back overall stand capping at 2m)

Examiners' Comments for CSQ2(b):

Majority of candidates could score full marks by correctly interpreting at least 4 macroeconomic indicators with an overall comment on France's economic performance.

Data interpretation:

- a) Majority misinterpreted the change in consumer prices as falling and thus deflation.
- b) A couple of candidates used high unemployment. The term high describes the level of unemployment but to draw a conclusion of France's economic performance in 2012 compared to 2005, there is a need to describe the change (i.e. increase) in unemployment.

Phrasing:

- c) Many wrote current account balance is increasing. It should be current account deficit increased or worsened. See Examiners' Comments for CSQ2(a)(i).

Content:

- d) A few also mixed up unemployment with size of labour force. Unemployment increased hence productive capacity decreased which is incorrect!

(c) Identify and explain the cause of rising unemployment in France. [3]

Cyclical unemployment is the type of unemployment caused for falling AD. Falling business

confidence together with firms putting investment on hold, falling consumer expenditure and cut in government spending (E7P2) is expected to lower AD. As AD falls, lesser output is produced and hence lesser labour and resources are required leading to cyclical unemployment.

(Note: 1m for identifying the cause; 2m for correct explanation of the cause)

Examiners' Comments for CSQ2(c):

The performance for this question is probably the best across all the parts for Question 2. Almost all the candidates were able to identify the causes for the deficiency in the AD and many were able to explain how that led to lesser labour being employed causing cyclical unemployment.

Question requirement:

a) The only major problem with this question is that some candidates abruptly conclude that cyclical unemployment will increase when AD falls. Such answers assume that the examiners understand that an AD-AS framework is being used to explain cyclical unemployment. The required analysis is to use a brief explanation about AD falls leading to an unplanned inventory accumulation, leading to firms cutting back on production and hiring less factors of production including labour etc.

(d) Explain why the French government is unable to cut the budget deficit.

[6]

To begin, a budget deficit occurs when government spending is greater than tax revenue collected.

First, to cut budget deficit, France will need to raise taxes. This is however difficult as taxes are already very high (E7P3) thus leaving very little room for tax cuts (1m). These cuts are hard to achieve as cutting would be politically unpopular while also driving top-earners away from France which is detrimental (2m).

Second, to cut budget deficit, France will need to cut spending. This is however difficult as government spending through tax reforms and cutting family benefits (E7P4) (1m) is contractionary. This may further worsen the already weak economy (2m).

Thus, cutting the budget deficit is difficult for the French government.

Other acceptable answers for inability to raise taxes:

- i. Income in France is decreasing → weak economy → lower taxes collected
- ii. Increase taxes → contracting the economy through falling C
- iii. High unemployment in France, tax revenue collected already very low → budget deficit cannot be cut

Other acceptable answers for the inability to cut G:

- i. AD in France is already falling so need to increase G to expand the economy which will worsen budget deficit
- ii. The already high taxes dampened C and I → needs G to increase AD → cannot cut G → cannot cut budget deficit
- iii. The need to subsidise French industries (E9P3) → protectionism

Examiners' Comments for CSQ2(d):

Question requirement:

- a) Some answers tend to be theoretical, e.g. tax increases, after tax profits & disposable income falls → I and C falls → AD falls (whereas extract was hinting at taxation on top earners) OR G cannot decrease because government projects are ongoing (theoretical answers cap at 2m for either portion, i.e. if both T and G are theoretical and all explained well 5m). To score full credit in case study questions, answers need to consider the case material, making references where relevant.
- b) A handful of scripts only analysed the tax portion only, i.e. no mention about government spending → cap 3m
- c) Majority of candidates who defined budget deficit correctly were able to pick out from the data that taxes cannot increase due to high taxes as well as the negative effects of taxes, e.g. driving top earners out of the country (E9P3) but fail to explain the detrimental effects of driving top earners out of the country.

Content:

- d) Many candidates mistook budget deficit for BOP deficit – answers talked about low export revenue, worsening current account balance, worsening BOP deficit or policies unable to improve BOP deficit – no marks awarded.
- e) Those answers that mentioned both T and G showed better application of why taxes cannot increase to correct budget deficit but not the reason for the inability to reduce government spending. E.g. reduction in G on pension reforms and benefits will reduce C and therefore contractionary → this is an indirect impact on the economy which is not awarded full credit (1 out of 2 m awarded for explanation).

(e) Explain how “France’s version of austerity measures” is expected to impact the French economy. [6]

“France’s version of austerity measures” means a cut in government spending **and** a cut in taxes. A cut in government spending lowers G while a cut in tax rates increases C & I. Assuming that the cut in government spending and cut in taxes results in an overall fall in AD, real NY falls via the multiplier effect. Since the economy is already having rising unemployment, this will further worsen unemployment as workers are made redundant since lesser output is produced. BOT, and hence BOP, is expected to worsen if the cut in spending induces an increase in import.

(Note: Candidates may instead explain that the effect of austerity which may in fact be expansionary. This is also to be awarded with full credit as long as correct analysis and skills are shown as per level descriptor.)

Level	Descriptor	Marks
L1	Identifies austerity as changes in government spending and taxes with little to no elaboration about its effect on the French economy. May contain major errors in explanation.	1-2
L2	Explains correctly austerity as government spending without any mention of cut in taxes. Well elaborated argument that shows the impact on the French economy.	3-4

L3	Explains correctly austerity as government spending together with a cut in taxes. Well elaborated arguments which show the impact on the French economy. Full marks awarded only if effects on external economy is explained.	5-6
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Examiners' Comments for CSQ2(e):

This question was generally done well. Most candidates managed to identify the measures and explained the overall impacts on the economy.

Question requirement:

- a) A large number of candidates did not explain how both measures (cut in government spending and tax cuts) impact the French economy.
- b) Many candidates failed to explain the impact of tax cuts (corporate tax and / or payroll tax) on the cost of production and their impacts on the AS and the economy.

Data interpretation:

- c) Some candidates misinterpreted tax cuts to include a cut in personal income tax, bringing about an increase in C, thus leading to a rise in AD due to increases in both C and I.
- d) A number of candidates failed to realise that the austerity measures, work in opposite directions, i.e. cut in government spending → fall in AD; tax cuts → rise in AD. Overall impact on AD was not explained as a result.

(f) With reference to the data where appropriate, assess whether the French government should adopt protectionism to deal with its macroeconomic problems. [8]

The main macroeconomic problems faced by France seem to be slowing GDP growth together with falling employment and a worsening current account balance.

The benefits of adopting protectionism

Industrial subsidisation together with increased protectionism (E9P2) helps to lower prices of export which helps France to regain export competitiveness. This will help to raise exports which will improve the current account and will also raise AD which brings about an increase in r.NY via the multiplier effect. Further, it also reduces cyclical unemployment.

The costs of adopting protectionism

Protectionism should not be used as it leads to reduction in gains from trade. Protectionism goes against the theory of comparative advantage where countries specialise in producing goods they have a comparative advantage in and trade at a mutually-beneficial terms of trade such that both nations can now consumer beyond their production possibilities. Thus, with more protectionism, these gains will be lost instead.

Protectionism may also lead to French firms becoming complacent and inefficient. This comes in the form of higher prices of output that reduces export competitiveness (E7P2). This reduction leads have led to worsening of the current account. Further, AD also decreases leading to fall in employment and national income.

Protectionism may also lead to a subsidy race (E9P2) which reduces the gains from protectionism due to retaliation. This will thus not be beneficial to both France and her

trading partners due to beggar-thy-neighbour effect. This effect occurs as falling X in French trading partners lead to falling economic growth resulting in these partners purchasing lesser French export consequently.

Evaluative Conclusion:

Protectionism, depending on the type and effectiveness, may be helpful in the short run but reduces the gain from trade. Further, the trade deficit continues to grow in France. Thus, it may not be ideal to deal with the issues at hand. Instead, other policy measures such as retraining of workers to regain export competitiveness may be more helpful.

Level	Descriptor	Marks
L1	Identifies some relevant content about protectionism how it affects the economy. Higher scores awarded if linked to macroeconomic problems.	1-3
L2	One-sided explanation of how protectionism should/should not be adopted or an underdeveloped two-sided explanation. Limited use of case evidence.	4-5
L3	Well explained two sided arguments about how protectionism may help to deal with and also worsen macroeconomic problems faced.	6-7
E1	Makes stand with brief but valid justification.	1

Examiners' Comments for CSQ2(f):

The performance for this question is among the worst across all the parts for Paper 1. The main problem is that of data interpretation – begin by re-reading the data as you read through the following comments.

Data interpretation:

- a) The biggest concern is the inability of candidates to understand/comprehend the extracts correctly. Many candidates simply took matters out of context and demonstrated their poor understanding of what protectionism means. For example, those who wrote about sky-high payroll taxes, excessively bureaucratic labour policies, increased tax rates on the top earners as protectionism did not understand how these measures/steps taken by the French government mentioned in extract 9 are not protectionism. The following are explanations for the sections taken out of context:
- i. Sky-high payroll taxes, bureaucratic labour policies are probably reasons why French exports lacks competitiveness and the French firms suffer in the face of globalisation (reasons to support the case for protectionism)
 - ii. Increased tax rates on the top earners is probably the way the French government will go about financing the subsidies (method of protection)
- b) Slightly better answers included those who provided a generic explanation for the case for and against protectionism, e.g. protection of infant industries... over-reliance on government etc. Such answers demonstrated poor case study skills as they failed to appreciate the urgency of immediate concerns highlighted in the case material, e.g. 62,000 companies would face bankruptcy, pledged billions of euros to fund (coupled with public debt figures in Table 1), subsidy race with the rest of the world (i.e. retaliation), increased tax rates on top earners to finance the subsidies.

Question requirement:

- c) In cases where candidates were able to appreciate the context and address the

question correctly, many were let down by poor development of their explanations, i.e. merely quoting sentences or paragraphs from the case material.

Answers for 2015 YJC H1 Economics Prelims

3. (a) Explain how the price mechanism allocates scarce resources among competing needs in a free market. [10]
- (b) Economic problems are often complex. As a result, the government may sometimes use a policy mixture where more than one policy is used, to tackle an economic problem more effectively.

With the use of a merit good example, explain and evaluate a policy mixture that a government might use to bring about a more efficient allocation of resources. [15]

Suggested Answer 3(a)

(a)	Explain how the price mechanism allocates scarce resources among competing needs in a free market.	[10]
(b)	Economic problems are often complex. As a result, the government may sometimes use a policy mixture where more than one policy is used, to tackle an economic problem more effectively. With the use of a merit good example, explain and evaluate a policy mixture that a government might use to bring about a more efficient allocation of resources.	[15]

Examiners' Comments for EQ3(a):Content:

- a) Most candidates focused on the signalling function of the price mechanism. They were able to do this well using the demand / supply analysis, by explaining how the market equilibrium changes when there is a shortage and/or a surplus. Nonetheless, a common weakness is not clearly explaining the price adjustment process, i.e. able to identify that there is a shortage in the market, but not being able to clearly state that when there is a shortage, it means that at the given price level, quantity demanded exceeds quantity supplied. More commonly, a vague explanation of "demand is greater than supply" is given instead.
- b) Candidates who did attempt to explain the rationing and/or the incentive functions, usually did so superficially. Please read the suggested answer for details on how to explain the rationing and incentive functions.

Question requirement:

- c) Most candidates did not even mention the rationing and/or incentive functions.
- d) Many candidates did not explain scarcity and its implications.
- e) Explaining both a shortage scenario and a surplus scenario. One scenario would have sufficed
- f) Weaker candidates merely regurgitated definitions of scarcity, demand and supply.
- g) Several candidates skipped this part of the essay entirely.

Question requirement:

1. Explain the meaning of "allocate(ing) scarce resources among competing needs", i.e. scarcity, choice and opportunity cost
2. Explain the operation of the price mechanism in a free market economy by tracing through the effects of a change in demand or supply.

Introduction:

3. As limited resources are met with unlimited wants, there is a need for an efficient allocation of resources so that society's welfare can be maximised.
4. Explanation on **scarcity**
 - Scarcity arises because people have unlimited wants but resources are limited.
 - Thus society needs to make choices on what to produce, how much to produce and for whom to produce.
 - For every choice made, opportunity cost is incurred – the next best alternative forgone.
 - This is essentially the central problem of economics. Thus there is a need for resources to be allocated in a way that will best benefit society – via the price mechanism in a free market.

Body (version 1): (taken from 2014 J1 H1 Promos EQ, but swapped the order of incentive / rationing function to improve flow of answer)

5. Price mechanism as a **signalling function**
 - Price serves as a signalling function – tells us whether more or less resources are required.
 - An increase in price signals to producers that there is a shortage and thus more resources need to be channelled into the production of the good.
 - A fall in price signals to producers that there is a surplus and fewer resources should be channelled into the production of the good.
 - Thus changes to price levels indicate to producers whether to expand or cut back on production.
6. Price mechanism as an **incentive function**
 - When price increases arising from a shortage, supply is encouraged.
 - Higher prices give producers greater incentives to produce as there is a possibility of greater revenue and profits.
 - When prices fall, the reverse occurs, i.e. there is less incentives for producers to produce the good.
7. Price mechanism as a **rationing function**
 - When price increases arising from a shortage, demand is discouraged and only those who are more willing and able to pay for the good will get to enjoy the good.
 - When prices fall, the reverse occurs, i.e. there will be more people with willingness and ability to pay for the good.

*Note: Candidates may use diagrams to illustrate how shortages/surpluses have upward/downward pressure on prices and how changes in price lead to changes in Qd and Qs via the functions above.

Body (version 2): four fundamental questions approach

8. Demand determines “what” and “for whom” firms should produce
9. Supply determines “how” firms should produce
10. Interaction of demand and supply determines “how much” firms should produce

Conclusion:

11. Under conditions of perfect knowledge, perfect mobility and absence of externalities the price mechanism functions efficiently in allocating scarce resources.

Mark scheme for 3(a):

L3	1. Clear explanation of the meaning of scarcity and its implications with clear links to how the price mechanism in a free market economy allocates scarce resources through the effects of a change in demand or supply.	7-10
L2	2. Under-developed explanation, e.g. explanation of scarcity and how shortages/surpluses affect the prices of goods, <u>without clear links</u> on how the price mechanism allocates scarce resources. OR 3. developed explanation only of how price mechanism allocates resources <u>without</u> explanation on how scarcity arises and its implications. OR 4. developed explanation only of how scarcity arises and its implications <u>without</u> explanation on how price mechanism allocates resources. (Max L2–5)	5-6
L1	5. An answer which has some basic correct facts such as defining scarcity and providing incorrect or little analysis on its implications and how the price mechanism seeks to address this central problem of economics.	1-4

Suggested Answer 3(b)

(a)	Explain how the price mechanism allocates scarce resources among competing needs in a free market.	[10]
(b)	Economic problems are often complex. As a result, the government may sometimes use a policy mixture where more than one policy is used, to tackle an economic problem more effectively. With the use of a merit good example, explain and evaluate a policy mixture that a government might use to bring about a more efficient allocation of resources.	[15]

Examiners' Comments for EQ3(b):

Most responses to this question exhibited above average content knowledge, but also seemed uncertain what to focus on in the analysis to earn the necessary credit.

Content:

- a) Majority of the candidates did not leverage on their diagrams to deepen their analysis, or they showed difficulties reflecting their analysis on their diagrams. This was often due to the lack of understanding that subsidies were to producers or to consumers. For example, candidates who mentioned that subsidies will reduce hospital's cost of production for healthcare, ended up shifting the MPB curve to meet at Q_s – the correct analysis in this case should have been a change in MPC since it is related to the hospital's costs.

- b) Very few candidates tried to give an evaluation; perhaps there was uncertainty about how to do so effectively.

Question requirement:

- c) A significant number of candidates explained how the market fails with the presence of merit goods instead of focusing on policy measures to correct the market failure, hence failing to address the question as a result.
- d) Most candidates tended to evaluate policies individually, without linking back to the question requirement of a policy mixture which in fact requires them to combine policies to complement each other.
- e) Many candidates gave descriptive answers, or wrote about policies without bringing in their limitations. This was either a problem of time management (tendency for some answers to be really short) or a lack of awareness of what is required by the question.

Question requirement:

12. State the sources of market failure that arise in the merit good example chosen for discussion, e.g. positive externality and/or private benefits are undervalued.
13. Choose a policy mixture of more than one policy (i.e. at least two) – explain how the policies chosen work.
14. Overall, provide an evaluation of the policy mixture. Implicitly the policy mixture discussed should be an ideal one, e.g. policies are complementary in nature; however high credit can still be awarded if the policy mixture is not appropriate, as long as there is rigorous evaluation that accompanies this policy mixture.

Introduction:

15. Identify the merit good example chosen. [e.g. healthcare]
16. State the sources of market failure that arises in this merit good example. [e.g. positive externality, undervaluation of the private benefits of consuming healthcare services]
- The explanation for these market failure sources can be done as the candidates explain how the policies work.

Body Version 1 (TAE-TAE structure):

17. Thesis: explain how policy 1 works, which source of market failure it addresses / objective of policy.
- Explain the positive externality that arises from consumption of healthcare services. [e.g. reduced transmission of communicable diseases to others when one consumes a vaccination]
 - Explain that when left to the free market (Q_e at $MPC = MPB$), the consumption of healthcare services will be under-consumed (compared to Q_s at $MSC = MSB$) because of the divergence between MPB and MSB due to $MEB > 0$.
 - Explain that policy can help achieve the socially optimal level of consumption at Q_s . [e.g. the use of a subsidy to healthcare service providers will then reduce the MPC of individual consumers, thus increasing Q_e to $Q_e1=Q_s$ where MPC (with subsidy) = MPB and also $MSC = MSB$]
18. Antithesis: explain the limitations of policy 1.
- Limitations that affect effectiveness of policy, such as very low price elasticity of demand, inability of government to estimate the MEB and subsequently administer the right size of subsidy.

- Limitations that affect feasibility of policy, such as cost of subsidy which is related to the size of subsidy required.
 - **Note:** specific subsidies are often deemed to be inequitable, but we will not expect this argument in a H1 essay; credit can be awarded if used.
19. (Point) Evaluation
- Subsidy is appropriate in addressing the root cause of the externality problem, i.e. incentivising consumers to internalise the external benefits of consumption and to increase their consumption of healthcare services.
 - Depending on the type of healthcare services, the price elasticity of demand may vary; e.g. primary healthcare is considered a necessity and its demand can be considered price inelastic, while some forms of tertiary healthcare could be considered more of a luxury good and the demand could be considered more price elastic.
 - Depending on the efficacy of the government, the degree of imperfect information that the government faces could vary.
 - Depending on the size of the MEB (which could depend on the type of healthcare service, i.e. larger MEB for primary vs. smaller MEB for tertiary healthcare), the socially optimal size of subsidy will vary. Therefore, the required subsidy in primary healthcare is likely to cause a greater strain on government resources as compared to tertiary healthcare.
20. Thesis : explain how policy 2 works, either to address a different source of market failure / different objective of policy, or to complement policy 1
- Explain that consumers often undervalue the private benefits of consuming healthcare services. [e.g. underestimate the healthcare risks that one faces and chooses not to go for regular health checks, or refusal to seek treatment for illnesses that are deemed to be minor but actually have serious repercussions on one's health]
 - Explain that when left to the free market (Q_{e1} at $MPC = MPB$ with imperfect information), the consumption of healthcare services will be under-consumed (compared to Q_e at $MPC = \text{actual MPB}$) because of the divergence between actual MPB and MPB with imperfect information.
 - Explain that policy can help achieve the privately optimal level of consumption at Q_e . [e.g. the use of education campaigns to educate consumers about the true private benefits of consuming healthcare services, this will increase the MPB of individual consumers, thus increasing Q_{e1} to Q_e where $MPC = \text{actual MPB}$]
21. Antithesis: explain the limitations of policy 2.
- Limitations that affect effectiveness of policy, such as poor reception to education campaigns, or takes a long time to change entrenched mindsets.
 - Limitations that affect feasibility of policy, such as cost of education campaigns.
22. (Point) Evaluation
- Education campaigns are appropriate in addressing the root cause of the problem, i.e. reducing the level of imperfect information in the market.
 - Any reasonable evaluation on the likelihood of the government facing the limitations explained.
23. TAE for policy 3 (if student chooses to do so)

Body Version 2 (TTT-AAA structure with overall evaluation):

24. Explain the sources of market failure.

25. Thesis: Explain the policy mixture (two or more policies) used to tackle the market failure.
26. Antithesis: Explain the limitations of individual policies, or limitations of policy mixture.

Overall Evaluation:

27. Possible evaluative points:
 - Explaining how the policies complement one another; or highlighting that the policy mixture is used to address different aspects of the market failure.
 - There is no need for policy mixture if one policy alone is effective. [e.g. possible for subsidy alone to resolve the issue of under-consumption in healthcare services due to positive externality and undervaluation of private benefits; however, the size of the subsidy may need to be large and not financially sustainable for the government, and it is not appropriate (does not address root problem) in trying to resolve the problem of imperfect information.]
 - Possibility of government failure therefore no intervention could be the preferred response. (for H1 not really required, but credit can be awarded)
 - Any other reasonable evaluative points.

Mark scheme for 3(b):

L3	<ol style="list-style-type: none"> 1. Merit good example is chosen with sources of market failure explained stated clearly. Best answers should recognise both positive externalities and undervalued private benefits present in the case of merit goods. 2. Good use of economic analysis and framework to explain how at least two policies work to achieve an efficient allocation of resources in the presence of merit goods. 3. Good use of economic analysis and framework to explain the limitations of the above-mentioned policies. 	9-11
L2	<ol style="list-style-type: none"> 4. Merit good example is chosen with sources of market failure stated clearly with some attempt at explanation. 5. Good use of economic analysis and framework to explain how policy works to achieve an efficient allocation of resources in the presence of merit goods. However, only one policy is well-explained; or the overall explanation of two or more policies is underdeveloped. 6. Good use of economic analysis and framework to explain the limitations of the above-mentioned policies. However, the limitations are well-explained only for one policy; or the overall explanation of limitations of two or more policies is underdeveloped. 7. Alternatively, student only explained how the policies work or the limitations of the policies; i.e. did #2 well without #3, and vice versa (see L3 descriptors). 	6-8
L1	<ol style="list-style-type: none"> 8. Answer that does not address the question directly, or 9. Answer lacks scope of points <u>and</u> depth of analysis. 	1-5
E2	a) Clear evaluation supported by sound economic analysis.	3-4

E1	b) Weak attempt to provide an evaluation with little or no economic justification.	1-2
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Answers for 2015 YJC H1 Economics Prelims

4. The increasing trend of globalisation involves more world trade and more movement of capital and labour, creating opportunities for Singaporean workers and firms.
- (a) Explain the gains from globalisation. [10]
- (b) However, not all workers will benefit as increasing globalisation could potentially lead to increasing unemployment as well.
- Evaluate the supply-side policies used in response to the above. [15]

Suggested Answer 4(a)

The increasing trend of globalisation involves more world trade and more movement of capital and labour, creating opportunities for Singaporean workers and firms.		
(a)	Explain the gains from globalisation for Singapore.	[10]
(b)	However, not all workers will benefit as increasing globalisation could potentially lead to increasing unemployment as well.	[15]
	Evaluate the supply-side policies used in response to the above.	

Examiners' comments for EQ4(a):

Majority of candidates earned a L2 for this part, with many answers containing scope addressing "more world trade, more movement of capital and labour", but often without the sufficient depth of analysis to score L3.

It was good that a majority of the candidates recognised the need to use the theory of Comparative Advantage as an economic concept to explain the gains from trade and globalisation. Candidates who did this well and had the required scope of the answer would usually score L3.

Question requirement:

- a) Majority of candidates ignored the preamble and did not attempt to suggest why globalisation leads to increase in trade, labour and capital flows. The following are two examples
- i. **Trade.** Weaker answers will immediately start by saying that "more trade means there is more export revenue for Singapore, thereby increasing Singapore's net exports, increasing AD etc...." The stronger answers will make an effort to link "increasing trend of globalisation" to "more world trade", e.g. "...the increasing trend of globalisation means the lowering of trade barriers / more free trade agreements and/or cheaper transportation costs, which makes the price of exports and imports cheaper for Singapore etc...."
 - ii. **Capital / Labour.** Weaker answer will immediately start by saying that "Singapore attracts more FDI and foreign talent, thereby increasing AD and AS etc...." The stronger answers will explain how Singapore's economic stability, pro-business policies (such as low corporate tax, other incentives for setting up business operations in Singapore) etc. are some factors why we have a net inflow of FDI and talent as we observe an increasing trend of globalisation, leading to...(explanation of benefits of net inflow of FDI and talent)"

- b) Another common weakness amongst many candidates was not making specific references to characteristics of Singapore's economy. This was required in the question, and candidates who did not do so could only score a maximum of low L3.

Content (depth of analysis):

- c) This weakness was observed more for explanations on how Singapore could gain from more capital and labour inflows. There were many descriptive answers such as, "because Singapore has an aging population, more labour inflows mean that Singapore can continue to keep her workforce young etc...." What is expected in an economics essay is to link the positive net inflow of labour (that means more foreign talent coming in than local talent leaving) to the aggregate supply (AS) – the positive net inflow of talent leads to an increase in the quantity of labour (more labour) and improvement in the quality of labour (more skilled labour), which increases AS. Then explain the impact on full employment level, equilibrium of national income, general price level etc.

Content (accuracy):

- d) While many candidates tried to explain the theory of Comparative Advantage, there was a sizeable group who could not do it well. The common mistakes were:
- No mention of differences in opportunity cost throughout the explanation.
 - It is opportunity cost incurred in production of one good – don't phrase this creatively.
 - No links between differences in opportunity cost to differences in factor endowment and/or level of technology.
 - No references to Singapore even if the above point was done theoretically.
 - No explicit mention of the gains from specialisation and trade, such as increasing consumption possibilities, or increasing world and Singapore's output etc.
 - Mixing up theory of CA with another demand-side reason, such as tastes and preferences / variety of goods consumed. For example, if Singapore specialises and trades according to theory of CA, Singapore will export petrochemicals while importing cars. This will help to satisfy consumers' tastes and preferences for a variety of cars which improves material SOL. Both reasons are acceptable, but when put together like this, it gives an impression that candidates don't have clarity for either and are just regurgitating bits of content.
- e) There was a tendency by many candidates to lump FDI and hot money together. An increased net inflow of FDI can be taken to increase the investment function (I) in AD, and can also increase the quantity (amount of capital goods) and the quality (new technologies that can improve productivity) of factors of production – both AD and AS can increase as a result. Hot money, on the other hand, refers to short-term capital flows. Unless there is specific reference to how the mobility of hot money in/out of Singapore has helped Singapore build up its financial sector globally, otherwise there is little economic impact apart from fluctuations in exchange rate – even this is minimal because of how closely our central bank, MAS, monitors our exchange rate changes.
- f) At least 15% of candidates made the following error of mixing up the multiplier process with the determinants of consumption function. The increase in AD, as long as there is spare capacity, will lead to an increase in real national income. This will lead to induced consumption increasing, which is explained as part of the multiplier process. The error observed is how some candidates would explain

the increase in induced consumption as a separate point, arriving at the conclusion that this is another reason why Singapore is gaining from globalisation. It is not a separate reason.

Question requirement:

1. Use the preamble as a trigger to explain the three economic components of globalisation – (1) flow of world trade, (2) movement of capital and (3) movement of labour.
2. Explain the gains of globalisation in terms of the achievement of economic objectives, in the case for Singapore.

Expected scope:

3. At least three possible gains from globalisation in terms of achievement of economic objectives, e.g. macroeconomic and microeconomic objectives.
4. At least one of the gains could address the statement in the preamble, though candidates should not be penalised if it is not done so.

Body: (taken from trade and globalisation notes)

Possible points (from lecture notes)

Gains (benefits) from free trade

5. The benefits of globalisation in turn are essentially based on the gains from trade. This is due to the principle of comparative advantage, which allows a country to specialise in the activities that it does best, given its labour, natural resources and technology. World output will increase due to specialisation and countries can now obtain the good in which it does not have a CA in at a lower opportunity cost than if it produced the good itself. Thus, when countries are able to exploit their comparative advantage, they can consume beyond their production possibility curve and enjoy a higher standard of living.
6. Besides this, free trade brings along other benefits. It can stimulate economic growth, promote greater efficiency and economies of scale amongst firms and lead to lower prices and greater variety for consumers (refer to section on 'Benefits of Free Trade').

Microeconomic benefits from free trade

7. Specialisation in the area of comparative advantage with subsequent free trade increases the global output and consumption
8. Free trade increase competition resulting in lower price and improved products
9. Free trade allows the firms to reap economies of scale
10. Free trade also provides greater choice and variety for consumers

Macroeconomic benefits from free trade

11. Export as an 'engine for growth'

Gains (benefits) from attracting talent and capital into the country – for the economy

12. Many developed countries face a decreasing birth rate and a shrinking labour force. This has spurred them to compete aggressively for foreign talent. If countries can increase this pool of workers in the economy, it can help raise the quantity and quality of its labour force. Productivity will rise. With a higher productive capacity, the long run aggregate supply will then shift to the right. The country will thus be able to sustain its economic growth over a longer term.

13. Similarly, countries compete to attract capital flows, especially for foreign direct investments (FDIs), because they can help to achieve actual and potential growth. In the short run, greater investment spending will stimulate aggregate demand to rise, as investment is a component of AD. This in turn can generate more production and lead to a rise in employment and national income through the multiplier effect. In the long run, investment spending increases the amount of capital formation in the country and enhances its productive capacity.
14. A larger capital inflow also improves the capital account in the balance of payments and helps the country to accumulate more foreign reserves.

Gains for firms / individuals: Opportunities for capital and labour to earn higher rates of returns

15. Capital generally flows into countries where it can yield a higher rate of returns. For instance, short-term capital flows like hot money tend to move from one country to another in order to take advantage of the relatively higher interest rates, ceteris paribus. On the other hand, long-term capital flows, such as FDIs, tend to flow into countries where input costs are relatively lower as this can increase the firm's profitability. The opportunity to earn a greater rate of return in the long run fuels such capital flows.
16. Similarly, labour movements across countries are generally motivated by better employment opportunities and higher wage rates offered in other countries. This can stem from high unemployment rates and low wages in their own countries, thereby driving the workers out to search for greener pastures in other countries.

Gains (benefits) on a global level - **not applicable to question which requires an explanation in Singapore's context

17. Globalisation also leads to an increase in the diversity of knowledge and information available to individuals. Countries can now better draw on the expertise and experiences of other parts of the world in laying out the directions for their own economies and societies. Hence, on a global level, globalisation has raised the world income over time, and raising the economic welfare of the majority of the people in the world. This is because a greater international integration of markets provides workers in developing countries access to new ideas and new technologies. Such exposure can increase their productivity and real wages. Statistics have shown that the proportion of people living on less than \$US1 and \$US2 per day have been falling rapidly over the years.

Mark scheme for 4(a):

L3	<ol style="list-style-type: none"> 1. At least three possible gains from globalisation in terms of achieving at least two to three economic objectives, e.g. macroeconomic and microeconomic objectives, well-explained in the context of Singapore. 2. The three aspects of globalisation to be covered, i.e. flow in trade, capital and labour. 	7-10
L2	<ol style="list-style-type: none"> 3. Generally L2 answers lack certain elements as compared to L3 answers; however, in general L2 answers must contain some economic analysis in the answer. Some possible indicators of an answer good enough for L2 but not L3: 4. Well-developed explanation on only one gain from globalisation 	5-6

	relating to an economic objective(s) in Singapore's context. OR 5. Under-developed explanation on more than one gains from globalisation but lacks complete economic analysis, clear links to economic objectives, or reference to Singapore's context.	
L1	6. Overall undeveloped answer lacking scope and depth in analysis. 7. Likely not to have any explicit reference to Singapore's context.	1-4

Suggested Answer 4(b)

The increasing trend of globalisation involves more world trade and more movement of capital and labour, creating opportunities for Singaporean workers and firms.		
(a)	Explain the gains from globalisation for Singapore.	[10]
(b)	However, not all workers will benefit as increasing globalisation could potentially lead to increasing unemployment as well. Evaluate the supply-side policies used in response to the above.	[15]

Examiners' comments for EQ4(b):

Majority of candidates earned a L2 for this part, with many answers explaining supply-side policies typically as education and training / re-training. However, few candidates offered any other supply-side policies beyond this, and almost none were able to distinguish between education (longer term, at an earlier stage of life) and training / re-training (shorter term, during the work years).

Question requirement:

- The majority of candidates did not identify the cause(s) of unemployment arising from globalisation. The candidates who did better would explicitly explain how increasing globalisation would lead to, for example, an increasing rate of structural unemployment, and therefore the supply-side policies discussed are targeted to solve structural unemployment.
- The next most common problem observed was how a large number of candidates introduced policies that could not be considered supply-side in nature for discussion, e.g. interest rate policy.
- As mentioned earlier, the scope of supply-side policies offered for discussion was usually overly narrow. There is a wide range of supply-side policies that could be used for discussion such as direct wage subsidies to incentivise firms to continue hiring labour instead of switching to capital, removal / reduction of regulation in the labour markets such as lowering minimum wage levels to make it cheaper to hire labour, reducing labour inflow to protect the jobs of domestic labour etc.
- Only a few candidates also suggested policies to deal with the consequences of unemployment if it was deemed difficult to solve the problem of increasing unemployment directly, such as providing more welfare for the unemployed etc.
- Many candidates did not explain the limitations of the policies raised.

Evaluation:

- There was little attempt at evaluation by most candidates. The following are good examples of evaluation (non-exhaustive):
 - The increase in government expenditure from supply-side policies will be likely to worsen the government budget balance. If the government is

- already suffering from a poor government budget position (i.e. budget deficit and budget debt), then it is less feasible to use a supply-side policy that requires a significant level of expenditure.
- ii. A mixture of supply-side policies is required to help manage increasing unemployment presently as well as in the future. For example, while the government revamps the education system, or diversifies its industry sectors in the economy which will take time to bear fruits, the government also needs policies that can have a more immediate impact such as implementing more re-training and up-skilling programmes for existing workers to learn skills required by the newer industries as well as wage subsidies to specific sectors to dampen any potential increase in unemployment / delay the exit of certain industries.

Question requirement:

18. While the statement in the question mentions one macroeconomic problem that may arise from the increasing trend of globalisation, the scope of the essay is not limited to increasing unemployment as the only economic problem. Candidates can and should address related economic objectives such as rising income inequality that is one of the outcomes of increasing unemployment.
- A narrower question would have been “evaluate the supply-side policies used to address the increasing unemployment”.
 - The actual question is broader, i.e. “...in response to the above” was deliberately left open to different possible interpretations.
19. The candidates are required only to evaluate the supply-side policies used, without any need to mention other macroeconomic and/or microeconomic policies. But there is a very broad scope of supply-side policies available for use.

Introduction:

20. Identify the possible causes of unemployment due to increasing globalisation. This should point more towards structural unemployment; however, Singapore’s openness to trade does make the economy more vulnerable to trade cycles of key trading partners, which could lead to cyclical unemployment. The other causes of unemployment (frictional, real-wage, seasonal etc.) are unlikely to be significant causes.

Body Version 1 (TAE-TAE structure):

21. Thesis: explain how supply-side policy 1 works, which cause of unemployment it addresses / objective of policy.
- Explain how increasing globalisation leads to unemployment. [e.g. structural unemployment]
 - Explain how supply-side policy works to reduce unemployment.
 - And/Or, explain how supply-side policy works to mitigate the negative effects of increasing unemployment.
22. Antithesis: explain the limitations of supply-side policy 1.
- Limitations that affect effectiveness of policy.
 - Limitations that affect feasibility of policy.
 - Limitations that involve a negative impact on other economic objectives.
23. (Point) Evaluation
- Whether policy is appropriate, i.e. addresses root problem plus whether all the limitations explained above will hold in Singapore’s context.
24. Repeat TAE structure for a second supply-side policy

25. Repeat TAE structure for a third supply-side policy (optional if first two are well-developed)

Body Version 2 (TTT-AAA structure with overall evaluation):

26. Explain the cause(s) of increasing unemployment due to increasing globalisation in Singapore.
27. Thesis: Explain the various (at least two) supply-side policies that can be used to respond to the increasing unemployment, i.e. solve unemployment and/or to mitigate the negative consequences of increasing unemployment.
28. Antithesis: Explain the limitations of individual supply-side policies, and/or common limitations across the supply-side policies discussed.

Overall Evaluation:

29. Possible evaluative points, which should be done keeping the Singapore context in mind:
- The choice between market-oriented, prices and income, and interventionist policies.
 - Do all supply-side policies suffer from long time lags?
 - Any key conflict with other macroeconomic goals?
 - Whether cost of supply-side policies is sustainable, given the environment of excessive government spending all over the world.

Mark scheme for 4(b):

L3	1. Clear identification and explanation of the cause(s) of increasing unemployment, related to increasing globalisation. 2. The explanation for at least two supply-side policies is well-developed, i.e. how it works to respond to increasing unemployment, and the limitations. 3. There should be a good scope of different types of supply-side policies discussed, e.g. one market-oriented and one prices and income.	9-11
L2	4. Identification of the cause(s) of increasing unemployment, but not explained or not clearly linked to increasing globalisation. 5. The explanation for at least one supply-side policy is well-developed, i.e. how it works to respond to increasing unemployment, and the limitations. 6. OR. At least two supply-side policies are presented, but overall explanation is under-developed. 7. Alternatively, student only explained how the supply-side policies work or the limitations of the supply-side policies, but not both.	6-8
L1	8. Answer that does not address the question directly, or 9. Answer lacks scope of points <u>and</u> depth of analysis.	1-5
E2	a) Clear evaluation supported by sound economic analysis.	3-4
E1	b) Weak attempt to provide an evaluation with little or no economic justification.	1-2

YISHUN JUNIOR COLLEGE
JC2 PRELIMINARY EXAMINATIONS 2015

ECONOMICS
Higher 2

9732/01

14 AUGUST 2015
1430h – 1645h

Additional materials:
Writing paper
Cover page

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TIME 2 hours 15 minutes

INSTRUCTIONS TO CANDIDATES

Write your name, CTG and index number in the spaces provided on the cover page and on all sheets of writing paper handed in.

Write in dark blue or black pen.

You may use a soft pencil for any diagrams, graphs or rough working.

Do not use highlighters, glue or correction fluid.

Answer **both** questions **1** and **2**.

At the end of the examination, tie a cover page to **two** separate questions:

1. Case Study Question 1, and
2. Case Study Question 2.

INFORMATION FOR CANDIDATES

Including this cover page, there are **7** pages in this question booklet.

The number of marks is given in brackets [] at the end of each question or part question.

You are reminded of the need for good English and clear presentation in your answers.

Answer **all** questions.

Question 1 The grocery retail markets in different countries

Extract 1: Woolworths' 85 cent "cheap, cheap bread" campaign

A South Australian politician has called for the reintroduction of competition laws as concerns grow about a recent price cut on bread by Woolworths, one of the two largest grocery retail firms in Australia. The other major grocery retail firm, Coles, followed suit in cutting prices soon after.

A Woolworths spokesperson said the reduction of prices on its Homebrand white sliced bread from \$1 to 85 cents, was to cater to its customers' needs.

Another grocery retail store owner disagreed. Woolworths' pricing strategy is what he terms as a "loss leader" strategy. A grocery retailer sells a product below cost in order to attract more customers into the store, then hopes the customer goes on to buy other products. While this strategy is employed by most grocery retailers, the difference is that Woolworths and Coles have so much market power it may be damaging to everyone else.

First, Woolworths and Coles use their dominant market share in the grocery retail market to force their suppliers to provide food at a lower price, which in turn enables them to lower the prices of their food products such as bread. Second, the smaller grocery retail firms competing with Woolworths and Coles either have to match the price cut and reduce their profits, or be prepared to lose market share to these two giants should they resist. Third, while consumers may enjoy a short-term gain from cheap bread, such gains may be short-lived. "Woolworths and Coles know that the impact of such a price cut for bread will drive small bakeries out of the bread market. And when the local bakeries are closed, they will not keep selling bread for 85 cents."

Source: Article from www.smartcompany.com.au, September 2014

Extract 2: Tesco charging higher prices for groceries in its chain of One Stop local shops

The grocery retailer with the largest market share in the U.K., Tesco, also owns a brand of convenience stores, One Stop – a fact that not many customers know about. Convenience stores belong to a segment of the grocery retail market. These stores are generally located in convenient locations. It is reported that One Stop charges up to 14 per cent more for the same goods that are also sold in Tesco-branded stores.

In response, Tesco has released a statement claiming that One Stop is an independent chain with a different distribution and supply network and higher operating costs. Other analysts commented that the pricing at One Stop could also be taking reference from a rival convenience store chain, Cost Cutter.

Source: The Daily Mail, March 2010

Extract 3: Deal unites two major grocery retail firms

The planned merger of two grocery retail firms, Royal Ahold and Delhaize, would create one of the biggest U.S. grocery retail chains. Ahold Delhaize, as the merged firm will be called, will have a 4.6% share of the U.S. grocery retail market, making it the fourth-largest firm (see Table 1).

Table 1: Market share of grocery retail firms (or known as supermarkets)

in the U.S.

Firm	Market Share (in %)
Wal-Mart	25.8
Kroger	8.3
Albertson's	5.0
Royal Ahold merged with Delhaize	4.6
Publix	3.0
H-E-B	2.1
Meijer	1.6
Target	1.4
Others	48.2

Source: Euromonitor International, 2014

The firms have relatively little geographic overlap in the U.S. market and could leverage their increase in scale to lower transportation and warehousing costs, as well as garner more negotiating power with food suppliers. Further cost savings can be gained through shared advertising. The current Royal Ahold Chief Executive, who will be the CEO of the merged firm, said that the merger also allows him to invest more in innovation.

The grocery retail business historically is one of razor-thin profit margins. It has been difficult to grow revenue with increasing competition from warehouse stores that sell in bulk, dollar stores that sell inferior versions of most grocery products and even higher-priced "natural" food stores. Therefore, the merger is seen as a defensive move mainly to reduce their costs of production.

While the deal is still subject to regulatory approval, analysts don't expect antitrust issues to crop up. Instead, the two firms need to consider whether they will reap long-term success – will the merger make the firms better grocery retailers that can grow their combined market share, or will the only benefit be from economies of scale?

Source: The Wall Street Journal & The New York Times, both June 2015

Extract 4: Reform competition policy to tackle the market dominance in the grocery retail market

In the Australian grocery retail market, the growing dominance of the top two firms, Woolworths and Coles, is squeezing the profit margins of their suppliers such as farmers and local manufacturers. Small local grocery retail firms are also struggling to compete with the two firms, resulting in a reduced variety of products available to consumers.

The (Australian) Greens, a political opposition party in Australia, wishes to reform the competition policy in Australia to tackle the market dominance existent in the grocery retail market. In their efforts to increase competition, they propose the following measures:

1. Stop dominant firms from buying up any more existing grocery retail firms.
2. Stop dominant firms from buying any agricultural land to prevent control of the supply chain.
3. Strengthen competition laws to ensure dominant firms cannot abuse their market power through pricing strategies.

4. Ensure that business-to-business contracts are fair; especially the contracts between small businesses and large, often dominant, businesses.
5. Increase the resources of competition watchdog (e.g. Australian Competition and Consumer Commission (ACCC)) to monitor and enforce regulations that deter anti-competitive behaviour.

Source: Policy proposals by The Greens, accessed from <http://greens.org.au>, updated as of January 2013

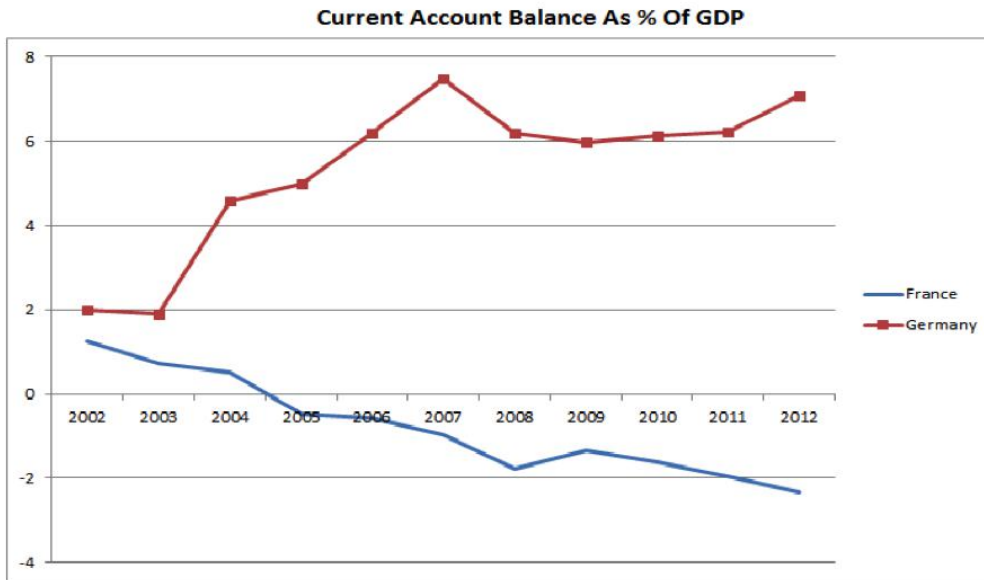
Questions:

- (a) With reference to Extract 1, explain how the cut in prices of the Homebrand white sliced bread may impact:
- (i) the revenue Woolworths earns from the sales of the Homebrand white sliced bread. [3]
 - (ii) the total grocery retail revenue earned by Woolworths. [3]
- (b) Using Table 1, identify and explain the type of market structure that best describes the U.S. grocery retail industry. [2]
- (c) With reference to Extract 2, explain whether Tesco is engaging in price discrimination. [4]
- (d) Discuss whether the market dominance in the grocery retail market brings about more benefits than costs to society. [10]
- (e) In Extract 4, The Greens proposed five measures to reform the competition policy in Australia to tackle the market dominance in the grocery retail market.
- Explain and evaluate the appropriateness of any two measures to “increase competition” in any one grocery retail market, namely the Australian, the U.K. or the U.S. grocery retail market. [8]

[Total: 30 marks]

Question 2 Troubles in France

Figure 1: Trade balances of France and Germany



Source: Trading Economics

Table 2: France’s key macroeconomic indicators

Key indicators	2008	2009	2010	2011	2012	2013e ¹
GDP (% real change pa ²)	-0.2	-3.1	1.6	1.7	0.0	-0.2
Private consumption (% real change pa)	0.2	0.2	1.4	0.2	-0.1	-0.2
Consumer prices (average % change pa)	3.2	0.1	1.7	2.3	2.2	0.9
Recorded unemployment (%)	7.4	9.2	9.3	9.2	9.9	10.6
Budget balance (% of GDP)	-3.3	-7.6	-7.1	-5.2	-4.8	-4.0
Public debt (% of GDP)	68	79	82	86	90	93

Source: Economic Intelligence Unit

Extract 5: France’s battered economy

On April 16th the IMF issued a grim reminder by forecasting that France will join Spain, Italy, Greece and Portugal in recession in 2013. The worsening outlook leaves the French government not only unable to stick to its promises of budget deficit reduction, but facing an internal political rebellion over how to manage its public finances.

Household consumption fell in both January and February. In March the INSEE business-confidence index dropped to nearly ten points below its level of a year ago. Struggling with the lowest profit margins in the euro area, many firms are putting investment on hold. A persistent deterioration of competitiveness in France has led

¹ e: estimated

² pa: per annum

to a greater loss of world export share over the past ten years than in Germany, Italy or Spain, particularly in manufacturing.

Three-quarters of the structural efforts to reduce the budget deficit this year depends on tax rises. However, France's overall tax burden is already the highest in the Eurozone and is set to rise yet again, to some 46.5% of GDP next year. Thus, the French government has promised that there will be no new taxes in 2014 beyond another Value-Added Tax increase.

This meant that to reduce the budget deficit, the government would have to cut its spending through a pension reform and cutting family benefits for the richest 15% of French households. This would not go well with a minority in the government who fear this will cause the economy to contract.

Source: Adapted from The Economist, 20 Apr 2013

Extract 6: President Hollande converts, proposes "austerity" and to boost growth in France

The policy battle of the last six years has been about how governments should respond to the recession that swept most of the globe, the slow growth that followed, and high unemployment. One camp argued for immediate large increases in government spending financed by borrowing, together with higher taxes on the rich. The other camp recommends decreased government spending paired with tax cut measures. The first camp was more popular initially, with governments around the world first reaching record budget deficits and then passing tax increases on high earners. However, in a major sea change on the policy battlefield this week, President Hollande of France announced a conversion to the second camp, or generally referred to as the "austerity" approach.

The French version of austerity measures is this: the government focuses mainly on cutting government spending, together with announced tax cuts on businesses to complement cuts in government spending. This is particularly significant to economic policy makers around the world as France has the highest ratio of government spending to GDP of any developed economy.

In opposition to those pushing for more government spending as the solution, President Hollande said that only private investments could create jobs and revive growth. In particular, President Hollande is proposing to lower the payroll taxes that businesses pay for hiring each worker. This is not only a big win for businesses, but also recognition that making labour less expensive will encourage business to use more of it.

The results of the few countries in Europe that have tried cutting government spending have been quite positive. As of 2013, Bulgaria, Latvia, Lithuania, Hungary, Poland, and Romania have all cut government spending and seen their economies grow faster than the average for the European Union.

Source: Adapted from Forbes, 18 Jan 2014

Extract 7: France resorting to protectionism

When an international credit agency announced that over 62,000 companies in France would face bankruptcy in 2013, the French government set out to overcome a temporary surge in unemployment in France with a concerted effort of national industrialisation through various policy interventions. The government has pledged billions of euros to fund struggling national firms, a thinly-veiled attempt at protectionism. Yet, are such well-intentioned policies preserving France's future competitiveness within the European market?

The European competition commission Mr Almunia critiqued that "the European economy cannot be invigorated through protectionism...as Europe will not find its place in globalisation by launching a subsidy race with the rest of the world." Many other critics have similarly cited the French policies as the cause of, not the cure for, the French economy heading towards little or no economic growth in the immediate future.

And how is the French government paying for the industrial subsidisation? In one of the bids to increase tax revenue, the French government had increased the tax rate on top earners to 75 per cent. Some top earners have left France as a result; the increase in payroll taxes will also lead to an increase in goods and services, including exports.

Unsurprisingly, France's trade deficit continues to grow, as the result of excessively bureaucratic labour policies and sky-high payroll taxes keeping importers from buying French national products. Protectionism is not only contributing to stagnating economic growth, but also helping to cultivate dangerous conditions that can give rise to regional European and even global economic recession.

Source: Adapted from www.parisglobalist.org, 13 May 2014

Questions:

- (a) (i) Using Figure 1, compare the current account balances as percentage of GDP of France and Germany from 2005 to 2012. [2]
- (ii) Account for France's current account balance from 2005 to 2012. [2]
- (b) Identify and explain the cause of rising unemployment in France. [3]
- (c) Using Figure 1 and Table 2, comment on changes in France's standard of living from 2008 to 2012. [5]
- (d) With reference to the data where appropriate, assess the impact of France's protectionism on consumers and producers. [8]
- (e) Discuss whether the France government should continue with its "version of austerity measures". [10]

[Total: 30 marks]

END OF PAPER

Suggested answers to:**Q1- The grocery retail markets in different countries**

- (a) With reference to Extract 1, explain how the cut in prices of the
(i) Homebrand white sliced bread may impact:

the revenue Woolworths earns from the sales of the Homebrand white sliced bread. [3]

As the question is on how the cut in prices may impact the revenue, we can accept any well-reasoned answer using economic analysis.

Suggested answer 1:

Evidence: [E1P2..... “A Woolworths spokesperson said the reduction of prices on its Homebrand white sliced bread from \$1 to 85 cents, was to cater to its customers’ needs”]

Explain:

Candidates can interpret “cater to...customers’ needs” to mean that the demand for Homebrand white sliced bread (or perhaps cheap white sliced bread as a whole) is price elastic. The argument can be that consumers who choose to consumer cheap white sliced bread are likely to be from the lower income group, so they are more sensitive to price changes for goods and services, i.e. the price of most goods are a larger proportion of their income. An alternative reasoning can be that there are many substitutes to Woolworths’ Homebrand white sliced bread, and therefore demand is price elastic.

Hence, with $PED > 1$ (**1m with justification**), the cut in price will lead to a more than proportionate increase in quantity demanded, leading to an **increase in total revenue from the sales of the Homebrand white sliced bread (2m)**.

Suggested answer 2:

Evidence: [E1P3... “Another grocery retail store owner disagreed. Woolworths’ pricing strategy is what he terms as a “loss leader” strategy...”]

Explain:

This suggests that revenue may fall as a result of a cut in price. This could mean that demand for Homebrand white sliced bread could be price inelastic, because expenditure on the bread makes up a small proportion of income. Any other plausible reasoning is acceptable.

Therefore, with $PED < 1$ (**1m with justification**), the cut in price will lead to a less than proportionate increase in quantity demanded, leading to an **decrease in total revenue from the sales of the Homebrand white sliced bread (2m)**.

- (a) **the total grocery retail revenue earned by Woolworths.**

(ii) **[3]**

Suggested answer:

Evidence: [E1P3. “Woolworths’ pricing strategy is what he terms as a “loss leader” strategy. A grocery retailer sells a product below cost in order to attract more customers into the store, then hopes the customer goes on to **buy other products**”].

Explain: “**buy other products**”. [ie besides bread, there are many other ranges of different products, being perishable and non-perishable products that are on the supermarkets shelves.]

Candidates could interpret these to be complements to bread – some may be very weak complements, e.g. fish that isn't eaten with bread, but could be bought at the same supermarket as one may buy bread, or strong complements, e.g. ham, bread spreads such as butter. Nonetheless, the demand for all these complements will increase to varying extent, that means the overall **total grocery retail revenue should increase**.

Mark Scheme:

If a(i) says revenue increases

→ Demand for other products increase → revenue increase (1m)

→ Explain how demand for complement increases (2m)

OR

→ Demand for other products decrease → revenue decrease (1m)

→ Explain how demand for substitutes decrease (2m)

If a(ii) says revenue increases

→ Demand for other products increase → revenue increase (1m)

→ Explain how demand for complement increases (1m)

→ Synthesise a(i) and a(ii) (1m)

OR

→ Demand for other products decrease → revenue decrease (1m)

→ Explain how demand for substitutes decrease (1m)

→ Synthesise a(i) and a(ii) (1m)

(b) Using Table 1, identify and explain the type of market structure that best describes the U.S. grocery retail industry. [2]

Suggested answer

Oligopoly [1m]

(must be supported with case materials):

Use Table 1 as evidence: The industry consists mainly of a few supermarkets. Market is concentrated in the hands of few firms, each with substantial market share. [1m] or small number of firms with significant market share in the industry. [1m] or the 5 firms' concentration ratio of 46.7% of the market share.

(c) With reference to Extract 2, explain whether Tesco is engaging in price discrimination. [4]

Suggested answer:

Yes - [2 m]

Market segmentation – Place (1m) –

Evidence : [E2P1 - “These stores are generally located in convenient locations”]

More price inelastic demand for consumers who value convenience over price, therefore convenience store prices are higher. (1m) –

Evidence : [E2P1 - “It is reported that One Stop charges up to 14 per cent more for the same goods that are also sold in Tesco-branded stores. “]

No - [2 m]

Explaining cost may differ (i.e. not exactly price discrimination) (1m) – Evidence : [E2P2 “In response, Tesco has released a statement claiming that One Stop is an independent chain

with a different distribution and supply network and higher operating costs.”]

Hence, in this case if there is a difference in cost and perceived differences, then the possible reason for the higher price could be the higher cost involved.

(d) Discuss whether the market dominance in the grocery retail market brings about more benefits than costs to society. [10]

Suggested answer:

Thesis: Market dominance bring more benefits than costs to society

- The planned merger of two grocery retail firms, Royal Ahold and Delhaize, would create one of the biggest U.S. grocery retail chains. Can compete more effectively against the other dominant firms –
- **Evidence:** “Could leverage their increase in scale to lower transportation and warehousing costs” [E3P2]
- **Explanation:**
- This explains technical economies of scale, as a result of all these economies of scale; the merged entity which will increase their market dominance allows them to enjoy a lower average cost. This can be passed on to consumers in the form of lower prices.
- Supermarkets benefit from lower cost of production and higher profits. Besides, there is greater ability to achieve productive efficiency and produce on the long run average cost curve (LRAC).

- **Evidence:** “as well as garner more negotiating power with food suppliers”. [E3P2]
- **Explanation:**
- The merged entity which will increase their market dominance allows greater marketing economies of scale where they can enjoy greater discounts when they buy its supplies in bulk.

- **Evidence:** “Further cost savings can be gained through shared advertising.” [E3P2]
- **Explanation:** Cost-savings in production as a result of economies of scale as the merged entity enjoys greater bargaining power in the purchase of its inputs e.g. more effective (joint) advertising → higher advertising cost can be more than offset by higher joint output / consumer base.

- **Evidence:** “merger also allows him to invest more in innovation” [E3P2]
- **Explanation:**
- Increase innovation (increase its dynamic efficiency).
- E.g. create its own online supermarket channel to better compete with the online stores. To provide better customer service to provide greater product differentiation from that provided by the online stores.

- **Evidence:** “merger is seen as a defensive move mainly to reduce their costs of production. [E3P3]
- **Explanation:**
- Streamline their business to ensure greater cost efficiency by reducing wastage and better use of resources.

- Market dominance firms left in the industry will each face a higher demand for their goods and services. Hence, total revenue will rise. With lower cost of production and higher total revenue, profits for the firms will also rise. With supernormal profits earned, they can also engage in research and development to develop better products or provide better services for the consumers. This will also lead to these firms achieving dynamic efficiency. Thus, consumers can also get to enjoy better quality goods and services at a lower price.
- Therefore, with market dominance, it will lead to less allocative inefficiency, lower prices and better products for the consumers (increase in consumer surplus) and higher profits for the firms.

Anti-thesis: Market dominance will bring more costs to society

- **Evidence:** “Woolworths and Coles know that the impact of such a price cut for bread will drive small bakeries out of the bread market. And when the local bakeries are closed, they will not keep selling bread for 85 cents.” [E1P4]
- **Explanation:**
- When other supermarket leaves the industry. This also leads to higher market power for the incumbent firms, and thus, these firms can seek to exploit the consumers by charging higher prices. This will then lead to greater allocative inefficiency.

- **Evidence:** “Woolworths and Coles know that the impact of such a price cut for bread will drive small bakeries out of the bread market. And when the local bakeries are closed,” [E1P4]
- **Explanation:**
- Market dominance may not be beneficial as **competition is reduced and consumers may be left with little choice.**
- With **greater market share and market dominance firms may choose not to pass any cost savings** that it reaped from economies of scale to consumers in the form of lower prices.
- Due to the huge supernormal profits by market dominance firms, there could be **greater income inequity**, at the expense of **consumers** paying a higher price.

- **Evidence:** “the difference is that Woolworths and Coles have so much market power it may be damaging to everyone else.” [E1P4].
- **Explanation:**
- It may bring about costs to UK society as well. One such cost will be the loss of jobs for supermarket staffs. If this is a significant industry in the UK, it will cause unemployment level to increase, bringing about several negative consequences to UK economy.

Conclusion

- Overall the market dominance is **likely to bring benefits** to the UK society.

- Strong competition is still available in the UK supermarket. Thus consumers are likely to enjoy price falls and improved services from the market dominance firms. Fewer choices in the supermarket may also not be an issue as the nature of the product is homogeneous and consumers would most likely value price over choices.
- In addition, in the increasingly globalised world, UK supermarkets have to compete against other foreign supermarkets. Therefore, market dominance firms may ensure

efficiency and cost minimizing for supermarkets would have been of society best interest, that if consumer welfare is not compromised.

→ Answers may choose to focus on grocery retail markets in Australia and/or the US.

L3	A balanced and well developed answer on whether market dominance brings more benefits than costs to society. An answer which thoroughly uses data evidence.	7-8
L2	An under-developed answer which explains how market dominance bring more benefits than costs to society. An answer which makes some reference to the data. A good one-sided discussion being market dominance bring more benefit or more cost. (Max 5m) A good discussion being market dominance bring more benefit or more cost without any reference to the text. (Max 5m)	4-6
L1	For an answer that shows a lack of understanding of the benefits and costs of market dominance pertaining to the text. Vague or incorrect explanation with no attempt to use case references.	1-3
E1	Evaluative comments with little or no justification.	1
E2	Evaluative comments with justification.	2

(e) In Extract 4, The Greens proposed five measures to reform the competition policy in Australia to tackle the market dominance in the grocery retail market.

Explain and evaluate the appropriateness of any two measures to “increase competition” in any one grocery retail market, namely the Australian, the U.K. or the U.S. grocery retail market. [8]

Suggested answer:

Any two measures applied to any one grocery retail market

- [1] Stop dominant firms from buying up any more existing grocery retail firms.
- [2] Stop dominant firms from buying any agricultural land to prevent control of the supply chain.
- [3] Strengthen competition laws to ensure dominant firms cannot abuse their market power through pricing strategies.
- [4] Ensure that business-to-business contracts are fair; especially the contracts between small businesses and dominant firms.
- [5] Increase the resources of competition watchdog to monitor and enforce regulations that deter anti-competitive behaviour.

Suggested approach:

[1] Identify one grocery retail market for discussion, i.e. Australia, UK or US

[2] Identify two measures (of the five) that could be used in selected grocery retail market – avoid using a measure that is clearly inappropriate

[3] Explain how these two measures would work, with reference to the selected grocery retail market where relevant

[4] Evaluate the use of these two measures in the selected grocery retail market**[1] Selecting a grocery retail market**

1. Candidates are expected to recognise that the grocery retail markets have slightly different characteristics – in the Australian market that are two clear market leaders; in the UK market there is limited information though there are signs of market dominance shown by one firm (Tesco); in the US market while Walmart is the clear market leader by market share, the top 10 firms have less than 50% of the market share which means there are many firms in this ultimately oligopolistic industry.
2. Depending on which market is chosen, there should be appropriate use of two measures that are chosen to specifically target the problems in the selected market.

[2], [3], [4] Using the Australian market as an example:

[2] Identifying appropriate measure: Measure 3 Strengthen competition laws to ensure dominant firms cannot abuse their market power through pricing strategies.

3. Given that Woolworths and Coles presently have very large market share, it is more effective to regulate their behaviour to ensure there is no abuse of market power through pricing strategies.

[3] Explain how the measure works

4. The main type of pricing abuse, is if dominant firms collude and raise prices in a bid to raise their revenue, especially for goods and services where demand is price inelastic. If consumers have few or no viable alternatives due to the sizeable market share of the colluding firms, consumer expenditure on such goods and services will increase – consumer welfare will be harmed while firms' revenues and profits will increase, assuming revenue increases are greater than costs increases. Therefore, preventing such abuse in the form of collusion and the raising of prices will ensure there is still healthy competition between the dominant firms and consumer welfare is not harmed.
5. Another type of pricing abuse, is where firms start a price war with the intent of driving out existing competitors as well as deter potential new entrants. The act of limit pricing / predatory pricing raises the barriers to entry into the grocery retail market, and also puts smaller firms or firms unable to sustain losses over a period of time at risk of shutting down (in the SR) or leaving the industry (in the LR). In the long run, consumers may face higher prices should the dominant firm(s) increase prices once the competitors have been forced out of the industry or new potential entrants have been deterred from entering the market; at the same time, consumers will also face a narrower variety of goods and services. It is also possible that with fewer competitors, the quality of products is no longer as good. By preventing such a pricing strategy from taking place, it will prevent the raising of BTEs, and also not put smaller firms at unfair risks of shutting down / leaving the industry. This will help maintain a healthy level of competition, and ensure that consumer welfare in the long run is taken care of.

[4] Evaluate the measure

6. Point Evaluation: It is an arduous task for the government to have to monitor whether dominant firms in a market are engaging in anti-competitive pricing strategies. It is not easy for the government to get hold of concrete evidence that collusion is taking place, especially if it is tacit in nature, e.g. price leadership. In terms of predatory / limit pricing strategies, it is also not easy to prove that firms are selling at a loss, i.e.

below their costs of production. Also consider that the government agency needs to monitor several markets, and not just the grocery retail market. All of these make it difficult for the government to effectively monitor what is happening in this market. In addition, it is also not easy to enforce in the case of predatory / limit pricing. Even if proven to be the case, it is difficult for the government agency to force the firms to raise prices – the public may not understand the long-term costs when there is predatory / limit pricing, as consumers may focus more on why they are not allowed to enjoy lower prices now.

[2] Identifying appropriate measure: Measure 5 Increase the resources of competition watchdog to monitor and enforce regulations that deter anti-competitive behaviour.

7. Given that there are just two firms with very large market share (Woolworths and Coles), the chances of collusive behaviour may be higher since it is easier to coordinate collusive raising of prices between fewer parties. The government may need to spend more resources monitoring this market more closely.

[3] Explain how the measure works

8. With more resources for the competition watchdog, there can be more investigations carried out to find evidence of collusive intent whenever there are significant increases in prices observed for goods and services in this market. This is for the purpose of monitoring. Once evidence is found of collusive behaviour, the competition watchdog will need to begin legal proceedings to charge the involved firms for violation of competition laws. This is usually a financially costly and time-consuming process, and will require significant resources as well. It is again important to keep in mind that the competition watchdog will have to monitor many consumer markets, and not just the grocery retail market. Therefore, increasing the resources that the competition watchdog has can improve its effectiveness in monitoring and enforcing anti-competitive behaviour, which can in turn serve as a stronger deterrence against anti-competitive behaviour and help to increase competition in markets, including the grocery retail market.

[4] Evaluate the measure

9. Point Evaluation: A common limitation for any form of government intervention is that the government has imperfect information. This measure is designed to improve the availability and accuracy of information that the government has, in order to act appropriately. Possibly, this measure should come first before any other specific measure can be implemented effectively. However, increasing resources for the competition watchdog will incur an opportunity cost; the government will have to forgo expenditure in some other area of government e.g. healthcare, education, housing expenditure – no right / wrong answer but we must recognise that there is a trade-off.

[4] Evaluate the measures as a whole

1. It could be argued whether increasing competition was even desirable to begin with. Answers could cite that excessive competition would bring about wastage of resources when firms engage in fundamentally unconstructive strategies such as persuasive advertising, i.e. does not improve any form of efficiency within the market, but could lead to over-allocation of resources into advertising.

Broad descriptions for Measure 1 (will be further edited)

Stop Woolworths and Coles from buying up any more existing grocery retail firms.

Explanation & Evaluate:

- If Woolworths & Coles starts buying up more existing grocery retail firms → both may have a significant market share → may lead to an even larger entity formed → may have significant market dominance → drive smaller and inefficient players out of the market → in LT, may set higher price.
- However, by stopping Woolworths & Coles from acquiring more existing grocery retail firms → industry may not grow into a market dominated by a few large grocery retail companies with high degree of market concentration (i.e. a large % of the market is taken up by the leading firms) → may mean more competition → competitive price and better quality in their product.
- As such, this measure may be seen as a boost to “increase competition”.
- Evaluation: it depends on the market. For Australia, Woolworths and Coles are already the two largest firms in the industry, so preventing their expansion can help to enhance competition. However, in the US market, allowing two smaller firms to merge may help increase the competition to the larger firms such as Walmart.

Broad descriptions for Measure 2 (will be further edited)

Stop Woolworths and Coles from buying any agricultural land to prevent control of the supply chain.

Explanation & Evaluate:

- This refers to vertical integration, which is the merging together of two businesses that are at different stages of production—for example, a farm rearing poultry and supermarkets like Woolworths or Coles. Merging with something further back in the process is known as backward integration.
- Benefits of vertical integration come from the greater capacity it gives supermarkets like Woolworths & Coles to control access to inputs (and to control the cost, quality and delivery times of those inputs).
- Merging in this way with something further on in the production process (and thus closer to the final consumer) is known as forward integration.
- E.g. If Coles’ poultry/beef is sourced directly from producers. This bypassing of wholesalers to deal directly with producers/growers → may achieve lower costs.
- However the smaller competing retailers using produce wholesalers may be unable to achieve similar low costs could be due to various reasons.
- As such, this measure may prevent Woolworths and Coles control of the supply chain.
- This could be seen as a boost to “increase competition”.
- Evaluation: it depends on the market, and at which stage of production (manufacturing or retailing stage) the government is trying to introduce competition.

Broad descriptions for Measure 4 (will be further edited)

Ensure that business-to-business contracts are fair; especially the contracts between small businesses and large businesses such as Woolworths and Coles.

Explanation & Evaluate:

- This measure will ensure small businesses such as local butcher, baker, green grocer, etc. are protected from unfair contract terms from larger businesses [e.g. Woolworths &

- Coles] → will help small businesses who struggle in ensuring appropriate retail tenancy arrangements with their landlords.
- The measure will ensure small businesses run alongside a competitive supermarket industry with a number of participants.
 - This measure puts a check on the dominant firms and helps small businesses compete in the marketplace; → will level the playing field for farmers as suppliers to the major supermarkets.
 - As the supermarket dominant firms are in a position to abuse their power in the marketplace to demand lower prices from farmers and other suppliers, which are threatening the viability of many farms.
 - Due to the dominance, there are few other options for farmers to sell their produce.
 - As a result, this measure will ensure farmers are protected from unfair contract arrangements.
 - As such, this measure may be seen as a boost to “increase competition”.
 - Evaluation: similar to measure 4. This measure is meant to protect small businesses more.

L3	<p>1. Well-developed answer that explained and evaluated any two measures, linked to how these would increase competition.</p> <p>2. Top answers would have made explicit references to the chosen grocery retail market in Australia, UK or the US.</p> <p>Maximum 6m if measures are well-explained but with no reference to specific grocery retail market.</p>	6-8
L2	<p>3. Well-developed explanation and evaluation for only one measure, linked to how this would increase competition.</p> <p>OR</p> <p>4. Under-developed explanation and evaluation for any two measures, linked to how these would increase competition.</p> <p>OR</p> <p>5. Well-developed explanation without evaluation for any two measures, linked to how these would increase competition.</p> <p>Maximum 4m if measures are not linked to how they would increase competition.</p>	3-5
L1	<p>6. Undeveloped explanations, mainly lifting from extracts.</p> <p>7. Erroneous interpretations of what the measures mean, or how they could increase competition.</p>	1-2

**Suggested answers to:
Q2- Troubles in France**

Answers for 2015 YJC **H2** Economics Prelims

(a) Using Figure 2, compare the current account balance as percentage of (i) GDP of France with that of Germany, from 2005 to 2012. [2]

Throughout the time period, France was experiencing a current account deficit while Germany was enjoying a current account surplus; both were increasing.

(Note: deficit/surplus – 1m ; increased– 1m; note that Cambridge used increased as well in N2009)

(a) Account for France’s current account balance from 2005 to 2012. (ii) [2]

France’s current account worsened due to falling exports because of the weakening of competitiveness (E7P2). This weakening happened because of expensive labour and high taxes (E9P2) which lead to French product being less competitive.

(Note: 1m for reason ; 1m for explanation of reason)

(b) Identify and explain the cause of rising unemployment in France. [3]

Cyclical unemployment is the type of unemployment caused for falling AD. Causes for the rising cyclical unemployment include falling business confidence together with firms putting investment on hold, falling consumer expenditure and cut in government spending (E7P2). Since C, I and G are falling, AD is expected to fall. As AD falls, unplanned inventories of firms will accumulate, firms will slow down production and hence lesser labour and resources are required leading to cyclical unemployment.

(Note: 1m for identifying the cause; 2m for correct explanation of the cause)

(c) Using Figure 1 and Table 2, comment on changes in France’s standard of living from 2008 to 2012. [5]

It is difficult to fully understand the changes in France’s SOL due to the lack of information using Figure 1 and Table 2 but in general, SOL has stayed fairly constant.

Material SOL (MSOL):

France’s MSOL in general stayed fairly consistent throughout the years. The MSOL measures the basket of goods and services available for consumption. Changes in real GDP can be used as a proxy measurement for changes in MSOL. As seen from Table 2, GDP growth was both slightly positive and negative with consumption growth also remaining fairly stable. Thus, MSOL did not really change.

NMSOL:

France’s NMSOL may in fact have fallen as unemployment rates had been rising. This adds stress to family. However, depending on current working stress and hours, some people may find joy in staying unemployed for a short period as they take breaks to spend time with their loved ones.

Insufficient Information:

There is a lack of information is general to determine the changes in SOL. Data about income inequality would help to understand whether MSOL have improved for individuals as a whole. Further, NMSOL can also be better understood with data on education, healthcare and environmental indicators.

Level	Descriptor	Marks
L1	Explains using data about changes in MSOL or NMSOL. Lesser credit is awarded if mere statements are present.	1-2
L2	Explain using data about changes to both MSOL and NMSOL.	3-4
E1	Justified the lack of information as inability to fully understand SOL changes Note: evaluation mark can still be awarded for one-sided answer as long as evaluative comment is on insufficiency of data.	1

(d) With reference to the data where appropriate, assess the impact of France's protectionism on consumers and producers. [8]

Impact on domestic consumers/households

Positive impact

- Increase in domestic employment – only if the question refers to “households” and not “consumers”
- Cheaper prices for domestically produced goods and services

Negative impact

- Top income earners need to pay higher taxes to fund the subsidisation.

Impact on domestic producers

Positive impact

- Reduced COP due to subsidisation → producers earn more profits if they keep prices constant or can reduce prices leading to increase in quantity demanded, and if $PED > 1$ can increase revenue and profits (assuming inc in revenue > inc in costs)
- (theoretical) Increases ability of producers to engage in product differentiation, e.g. R&D and/or advertising → can lead to increase in demand / reduction in PED value / reduction in cost of production

Negative impact

- Subsidisation may reduce incentive to be productive efficient and dynamic efficient (through R&D) if the subsidisation ends up reducing the level of competition in the industry, i.e. raises BTEs for incumbent firms
- To pay for the subsidisation, the govt needs to raise govt revenue through increase in taxes, which could still raise wage costs → net effect may not necessarily be a fall in COP

Level	Descriptor	Marks
L1	States without explaining or explains poorly with mistakes about various impacts of French protectionism on domestic consumers and/or producers	1-2
L2	Explains various impacts of French protectionism on domestic consumers or producers. More credit is awarded if both positive and negative impacts are explained. More credit is also awarded if	3-5

	attempt was made to use evidence from extract.	
L3	Explains various positive and negative impacts of French protectionism on domestic consumers and producers. More credit awarded if evidence from extract is applied.	6-7
E1	Provides an overall assessment of the impact that is well substantiated.	1

(e) Discuss whether the France government should continue with its “version of austerity measures”. [10]

Austerity measures are methods taken to reduce government budget deficit and would in this case mean to cut government spending while also, lowering tax rates to spur growth in order to raise more tax revenue in the long run.

France **should continue** with austerity measures:

Why cut in G is good ...

#1: Austerity will bring about a cut in spending which will allow the government to reduce a *ballooning government debt in Table 2*. This makes debt sustainable reducing political rebellion, due to indecision over FP (E5P1), which can help stabilise the French economy. This may also raise confidence in the government and thus attract foreign and domestic investment that drives economic growth. This is why *Bulgaria, Latvia, Lithuania, Hungary, Poland and Romania have all cut government spending and seen their economies grow faster than the average for the European Union (E6P4)*.

#2: Austerity may be helpful as it would mean *structural reforms in terms of pension and cutting family benefits for the richest 15% of French households (E5P4)*. This can lead to a more equitable distribution of income.

Why cut in T is good ...

#3: Austerity in this case may come in terms of a cut in spending but also together with a *tax cut on businesses (E6P1)*. As mentioned in E6P3, the president is proposing *lower payroll tax that businesses pay for hiring each worker*. This incentivises firms to invest as post-tax profits increases. Investment increases, AD increases leading to unplanned running down of stocks and firms hire more factors of production including labour, reducing cyclical unemployment and leading to a multiple increase in real national income via the multiplier.

France **should NOT continue** with austerity measures:

Why cut in G is not good ...

#4: Austerity should not be continued as domestic demand is already in decline. Low confidence, weak exports together with investments put on hold (E5P2) have worsened SREG and further cut in government spending will lead to a fall in AD and via the reverse multiplier effect lead to fall in real NY.

OR

#5: The cut in G is likely to outweigh the increase in I brought about by the cut in tax. This is because *“France has the highest ratio of government spending to GDP of any developed economy”*. Thus AD is likely to fall, leading to multiple fall in real national income (contractionary effect on the economy).

Evaluative Conclusion:

Whether France should continue on austerity measures heavily depends on the aim of the government and also, the effectiveness of the policy. To begin, public debts as a % of GDP is already rising and this could erode confidence in the country in the long run. This makes the case for austerity. However, it is worth noting that growth is flat or negative and reduction in G may worsen the economy in the short run. This may add to even lower taxes in the future as growth slows.

Level	Descriptor	Marks
L1	Identifies some relevant reasons with poor or no elaboration about being for OR against austerity.	1-3
L2	Explain the reasons for both (i.e. fall in G and T) for OR against austerity well. Explain either cut in G OR cut in T for AND against austerity well. Poorly developed two sided argument. Limited use of case evidence. Explained the effects of cut in G and T without linking to question as to whether should or should not continue with austerity. Max 4m	4-6
L3	Able to explain the reasons for both (i.e fall in G and T) for and against austerity well and thus, whether the government should continue them. Good use of relevant case evidence.	7-8
E1	Makes stand with limited or with an unjustified stand.	1
E2	Makes stand with strong justification.	2

YISHUN JUNIOR COLLEGE
JC2 PRELIMINARY EXAMINATIONS 2015

ECONOMICS
Higher 2

9732/02

21 AUGUST 2015
0800h – 1015h

Additional materials:
Writing paper
Cover page



TIME 2 hours 15 minutes

INSTRUCTIONS TO CANDIDATES

Write your name, CTG and index number in the spaces provided on the cover page and on all sheets of writing paper handed in.

Write in dark blue or black pen.

You may use a soft pencil for any diagrams, graphs or rough working.

Do not use highlighters, glue or correction fluid.

Answer **three** questions in total, of which **one** must be from Section A, **one** from Section B and **one** from **either** Section A or Section B.

At the end of the examination, tie all your attempted questions to a **one** cover sheet. Indicate clearly on the cover sheet the **question number** of your attempted questions, **in the order in which you attempted them**, e.g. if you did question 4, followed by question 1, followed by question 5, write 4 in the first row, 1 in the second row, 5 in the third row.

INFORMATION FOR CANDIDATES

Including this cover page, there are **2** pages in this question booklet.

The number of marks is given in brackets [] at the end of each question or part question.

You are reminded of the need for good English and clear presentation in your answers.

Answer **three** questions in total.

Section A

One or two of your three chosen questions must be from this section.

- 1 (a) Explain how firms can increase their market power. [10]
- (b) Discuss the problems that are likely to be faced by firms in their attempt to increase their market power. [15]
- 2 The US oil market has undergone major changes recently. The economic slowdown in the US has affected the level of consumption of products such as plastic bags and air travel that require oil as a factor input. This in turn affects firms such as plastics manufacturers and airline companies. At the same time, due to technological advancement in oil extraction the number of US oil producers has continued to increase.
- Using economic analysis, discuss the impact these events are likely to have had on the US oil and related markets. [25]
- 3 Public healthcare spending in Singapore is projected to triple by 2020 as the government increases subsidies and continues to promote national health and disease prevention programmes.
- (a) Explain how the presence of externalities and imperfect information in the healthcare market may lead to market failure. [10]
- (b) Discuss whether there is a need to change the current policies adopted by the Singapore government to deal with the above market failure in the healthcare market. [15]

Section B

One or two of your three chosen questions must be from this section.

- 4 (a) Explain the possible impact of inflation on an economy's balance of payments. [10]
- (b) Discuss whether the use of exchange rate policy alone can effectively tackle inflation in Singapore. [15]
- 5 In each of the budget announcements from 2012 to 2014, the Singapore government has emphasised on two key themes. One, the restructuring of the economy to improve domestic labour productivity while reducing the reliance on foreign workforce, and; two, the need to spread the benefits of income growth more evenly across the population.
- Assess the extent to which Singapore should still continue to prioritise the goal of achieving economic growth over other economic goals. [25]
- 6 (a) Explain the determinants of a country's pattern of trade. [10]
- (b) Assess the supply-side policies the Singapore government could adopt to continue benefiting from trade. [15]

- 1 (a) Explain how firms can increase their market power. [10]
 (b) Discuss the problems that are likely to be faced by firms in their attempt to increase market power. [15]

Part A

How students should approach this question

Students need to explain the different strategies that firms can use to increase their market power

- erecting/increasing the level of BTEs
- increasing market share through M&A

Mark scheme for 1(a)

L3	For a well-developed answer that explains at least three methods firms can use to increase their market power. Relevant use of examples. 3 well-developed points with brief or hypothetical examples – max 8 marks 3 well-developed points and illustrated with relevant examples – max 10 marks	7-10
L2	For an underdeveloped answer that <u>explains</u> a few methods firms can use to increase their market power. Either lacking in scope (e.g. only 1 method <u>well-explained</u> , the other 1 or 2 are insufficiently <u>explained</u>) or depth (e.g. 3 methods insufficiently <u>explained</u>) Well-explained methods with no linkage to how market power can increase – max 5 marks	5-6
L1	For an answer that merely <u>lists down</u> (low L1) and <u>describe</u> a few methods (high L1) firms can increase their market power.	1-4

Suggested answer

Introduction

1. Market power refers to a firm's ability to influence the market price without losing all of its sales. Firms can increase their market power through erecting artificial barriers to entry through strategic entry deterrence and control of raw materials. Firms can also seek to increase their market power by mergers with other firms.

Body

Increasing the level of artificial BTEs (strategic deterrence)

2. A way to achieve this is for the incumbent firms to engage in aggressive advertising campaigns to increase brand loyalty and brand awareness amongst its consumers. Through advertising campaigns, this would lead to higher demand for the product, hence increasing the consumer base for the firm. This would also make the demand for the firm's product relatively more price-inelastic due to greater brand loyalty.

This would deter potential competitors from entering the industry, as new firms would have to incur a sizeable cost for advertising (BTE) to be able to successfully penetrate the market. For example, relatively new car manufacturers in China face this problem due to the established reputation of other car manufacturers such as Ford and BMW. Therefore, this enables established firms to increase their market power as they increase / consolidate their already extensive brand recognition.

3. Other strategic deterrence methods: R&D/legal barrier, product proliferation, limit pricing, predatory pricing etc. E.g. Application of patents -- A firm can apply for patents, which grants an inventor the exclusive rights to produce/sell the product or use the production process that is patented. For example, Apple applied for patents for the multi-touch features as well as headphone jack detection for its products. As new firms do not have access to the technology, they are unable to enter the market. This enables the firm to increase its market power as it restricts competition.

Increasing the level of 'natural' BTEs (control of raw materials)

4. Firms can also increase their market power by controlling raw materials. Through controlling necessary raw materials for production, it will limit any entry of potential firms or existing rivals could face rising/higher cost of production. This will increase the market power of the incumbent firm.

For example, the De Beers Company owns most of the diamond mines in South Africa and bought diamonds from other markets. Thus, De Beers owns almost 90% of the world supply of diamonds in the mid-1980s and this prevented the entry of new firms into the market, as they are less likely able to obtain the necessary raw materials for production. Hence, this enabled De Beers to increase its market power.

5. Other methods to increase 'natural' BTEs: bribery, close ties with govt etc

Increasing market share (mergers)

6. Firms can also increase their market power through mergers with other firms. A merger refers to two or more companies or organisations combining together, resulting in a larger firm. As the merged firm controls a **bigger market share**, they will have a more price inelastic demand, giving them higher price-setting abilities. Besides, this could be done to reap greater economies of scale and to rationalise the production process to minimise wastage and to increase efficiency. Such reduction in cost will increase their cost advantage over their rivals, enabling the firm to sustain price and non-price competition better.

An example would be the merger between Exxon and Mobil in 1999 to form ExxonMobil. With a merger, this results in higher market power for the firm.

Part B

How students should approach this question

This part b question is a continuation of the earlier part a question. Students are required to either (1) discuss the possibility/feasibility of the strategies/methods explained earlier, (2) discuss how the real-world conditions may not meet or violate some of the necessary theoretical conditions or (3) how regulatory bodies or government may move in to limit/encourage such strategies.

The discussion (or 2-sides of the story) need not be restricted to ‘yes, there are problems’ and ‘no, there are no problems’. The approach adopted can be one of ‘yes, there are potential problems’ (direction as explained by theory) vs ‘and, the extent of the problem is large’ or ‘however, the extent of this problem is limited’ (extent as examined in the real-world).

Mark scheme for 1(b)

L3	For a well-developed answer that explains the potential problem + their extent or potential problems + non-problems that firms may encounter when they try to increase their market power. Well-developed points with brief or hypothetical examples – max 9 marks Well-developed points and illustrated with relevant examples – max 11 marks	8-11
L2	For an underdeveloped answer that <u>explains</u> a few problems or non-problems that firms may encounter when they try to increase their market power. Either lacking in scope (e.g. largely 1-sided) or depth (e.g. 2-sided insufficiently <u>explained</u>)	5-7
L1	For an answer that merely <u>lists down</u> (low L1) and <u>describe</u> a few problems or non-problem (high L1) firms may encounter when they try to increase their market power.	1-4
E2	E1 + justification with clear contrasting examples	3-4
E1	Ability to draw from the analysis some conditions/criteria which helps to decide if the firms are likely to face the problems/non-problems	1-2

Elaboration on possible approach

Increasing the level of artificial BTEs (strategic deterrence)

Strategy	Potential problem or non-problem	Extent of problem
Aggressive advertising	<u>Potential problem for some firms</u> In order to be able to conduct aggressive advertising, there has to be both the willingness (presence of some BTEs already) and ability (presence of supernormal profits). Firms in the PC or MC industry may not have the ability to do so; PC firms do not have willingness as well.	This is where the MC firms typically engage in forms of product differentiation to grant them some market power (or price setting abilities) E.g. fashion/designers
	<u>Non-problem for some firms</u> The oligopolists or monopolist will not	However, in the real world where the

	<p>have the problem of lack of willingness or ability to engage in aggressive advertising</p>	<p>oligopoly market structure tends to be keenly contested and the firms mutually interdependent hence competing mainly on non-price competition. Rivals will retaliate with similar advertising strategies and the intended impact on market power (or market share) is not observed. E.g. Chanel vs Prada vs LV</p>
<p>Students can tweak the above to other forms of strategic deterrence strategies</p>		

Increasing the level of 'natural' BTEs

Strategy	Potential problem or non-problem	Extent of problem
<p>Control of raw materials</p>	<p><u>Potential problem for some firms</u> In order to control raw materials, the cost outlay is significant as the firm will need to offer higher than market price to buy over.</p> <p>Besides the cost, some of these raw materials are found across national boundaries and the local laws may prohibit foreign firms from taking over control</p>	<p>For example, in the case of crude oil. Although the crude oil is extracted in many countries, these countries came together to form a cartel (explicit collusion) to behave like a single monopoly. The success for this formation is because of a lack of regulation at the international level.</p> <p>For example, De Beers was highly successful in monopolising diamond supplies because diamonds are largely found in a single territory.</p> <p>In some countries where this is poor governance (i.e. corruption is high), firms may just bribe local authorities to gain control of certain goods or services.</p>

Increasing market share

Strategy	Potential problem or non-problem	Extent of problem
<p>Merger and acquisition</p>	<p><u>Potential problem for some firms</u> In the case of merger, there could be significant transaction costs in terms of negotiation. Some of these negotiation may break down due to disagreement between the parties involved about the split in market share, profits etc.</p> <p>The above is a lesser problem for acquisitions.</p> <p>There could also be significant barrier due to getting approval from the regulatory body for the merger or acquisition.</p>	<p>This may not be a significant problem because the high transaction cost is usually outweighed by the high potential benefits from the merger. The split of the gains could sometimes be decided by the ratio of market share or market capitalisation. (the point here is mergers are win-win situation).</p> <p>In case where higher market power could reap significant dynamic efficiency or cost savings for the society, such mergers tends to be</p>

		approved. Proposal for mergers are typically rejected if the consumers are adversely impacted.
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- 2 The US oil market has undergone major changes recently. The economic slowdown in the US has affected the level of consumption of products such as plastic bags and air travel that require oil as a factor input. This in turn affects firms such as plastics manufacturers and airline companies. At the same time, due to technological advancement in oil extraction the number of US oil producers has continued to increase.

Using economic analysis, discuss the impact these events are likely to have had on [25] the US oil and related markets.

How students should approach this question

Candidates are expected to use demand and supply analysis coupled with relevant elasticity concepts (PED, PES, YED, XED) to illustrate how the US oil industry and related markets might be affected. A wide range of related markets can be discussed such as the spill over effects on US oil producers, firms listed above that makes use of oil as a factor of production (derived demand), market for substitutes of oil such as coal and natural gas as well as complements of oil. The impact can be on various economic agents in various markets looking at prices, quantity, revenue, welfare, etc.

Mark scheme for 2

High L3	<ol style="list-style-type: none"> 1. Answer shows excellent knowledge of demand and supply forces and how these affect market equilibrium in a combined diagram 2. Excellent consideration of at least 2 elasticity concepts 3. At least 2 markets have been discussed thoroughly 4. Excellent rigour in economic analysis and development 5. Excellent attempts at contextualisation with a variety of relevant examples 	19-21
Low L3	<ol style="list-style-type: none"> 6. Answer shows good knowledge of demand and supply forces and how these affect market equilibrium in a combined diagram AND 7. Good consideration of at least 1 elasticity concepts 8. If analysis is made on 1 market, max cap at 15m 9. If analysis is made on at least 2 markets, no max cap is set 10. Good rigour in economic analysis and development 11. Some attempts at contextualisation with some relevant examples 	15-18
High L2	<p>EITHER</p> <ol style="list-style-type: none"> 12. Answer shows good knowledge of demand and supply forces how these affect market equilibrium <p>OR</p> <ol style="list-style-type: none"> 13. Good consideration of at least 1 elasticity concepts 14. Only 1 market has been discussed 15. Some rigour in economic analysis and development 16. Minimal or no contextualisation 	12-14
Low L2	<p>EITHER</p> <ol style="list-style-type: none"> 17. Answer shows adequate knowledge of demand and/or supply forces and how these affect equilibrium price <u>and/or</u> equilibrium quantity <p>OR</p> <ol style="list-style-type: none"> 18. Little consideration of elasticity concepts and its relevance in influencing market equilibrium 19. Lack of economic analysis and development 20. No contextualisation 	9-11
High L1	<ol style="list-style-type: none"> 21. Answer shows some knowledge of how equilibrium price and/or equilibrium quantity may be affected, without clear linkage to demand and/or supply forces 22. Errors and inconsistencies occur in the explanation, showing lack of understanding of the economic concepts 23. No contextualisation 	5-8

Low	24. Answer is mostly irrelevant	1-4
L1	25. Only few valid points which do not clearly address the question 26. Largely incomplete	
E2	27. Well-reasoned judgements. Evaluates using various criteria	3-4
E1	28. Unsupported evaluative judgement. Lack explanation	1-2

Suggested answer

Introduction

1. Explain how market equilibrium price and quantity is achieved: via the intersection of the demand and supply curves.
2. Identify that supply of oil have increased due to increasing number of oil producers stemming from the advancement of technology that lowers cost of drilling and extracting oil.
3. Identify that the demand for various goods and services in various markets could be affected differently based on the income elasticity of the good or service.
4. The related markets (in-exhaustive) would look at the market for oil, plastics, airline services, coal and natural gas markets.

Market for oil

Case 1a: Increase in supply of oil due to advancement in technology resulting in lowered cost and increase in number of producers.

5. The price elasticity of demand measures the degree of responsiveness of the quantity demanded of a good to a change in its price, ceteris paribus
6. Illustrate how a rightward shift of the supply curve from S_0 to S_1 due to a fall in COP will have different effects on price and quantity, given different PED (absolute) value.
7. Explain that the demand for oil can be price inelastic for some firms (who uses it as a necessity with little substitutes) compared to others who can use other materials.
8. With reference to Figure 1, the demand curve D_1 is relatively more price inelastic than demand curve D_0 . Given a rightward shift of the supply curve from S_0 to S_1 , the more price inelastic the demand, the greater the effect on its price. As seen from Fig 1, for D_1 the rise in quantity Q_2 is less than proportionate to a rise in its price, ceteris paribus.

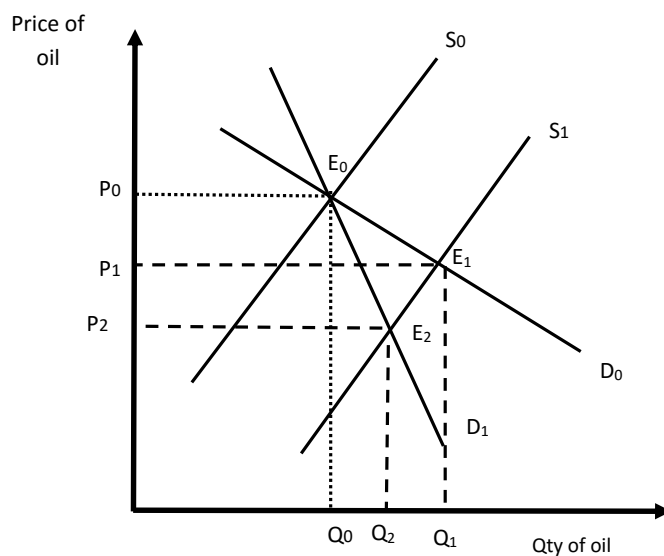


Figure 1

9. The above (if drawn) must be accompanied by a graphical explanation of shift in the supply curve for oil, that it cause a decrease in quantity supplied at every price level, reflected by a leftward shift of the supply curve from S_0 to S_1 .

Case 1b: Changes in demand for oil by producers due to economic slowdown (taken as fall in income for discussion though students can also argue for rising income at a slower rate).

10. The income elasticity of demand measures the degree of responsiveness of the quantity demanded of a good to a change in its income, ceteris paribus
11. Illustrate how a leftward shift of the demand curve from D_0 to D_1 due to oil being a normal good, have different effects on price and quantity, given different PES value.
12. Illustrate how a rightward shift of the demand curve from D_0 to D_2 due to oil being an inferior good, have different effects on price and quantity, given different PES value.
13. Explain that the demand for oil can be income elastic or income inelastic. Some firms such as airlines uses kerosene, produced from oil, heavily and therefore deem it a necessity as a derived demand. Hence, it is a normal good. However, for some other industries that focus on green energy in their production process, oil becomes an inferior product and thus, these firms uses natural gas as it is less pollutive, making it less income elastic in demand.
14. Assume that oil is price inelastic in supply as it takes a time for oil to be extracted for oil fields. (Note that one can also assume otherwise and provide the right analysis – that OPEC keeps a steady stockpile and hence can react to price changes)
15. With reference to Figure 2, the supply curve S_0 is relatively more price inelastic. A leftward shift of the demand curve, due to falling income, leads to a fall in price from P_0 to P_1 and Qty from Q_0 to Q_1 . Revenue gained for the producer from these consumer decreases. A rightward shift of the demand curve leads to an opposite effect with prices rising from P_0 to P_2 , Qty increasing from Q_0 to Q_2 and revenue increasing.
16. To add, it is expected that the change in prices oil will be more significant than change in Qty.
17. Note: It is possible that candidates may not discuss about income changes but in fact use economic slowdown as a mean to discuss expectation of falling prices in the future which lowers demand.

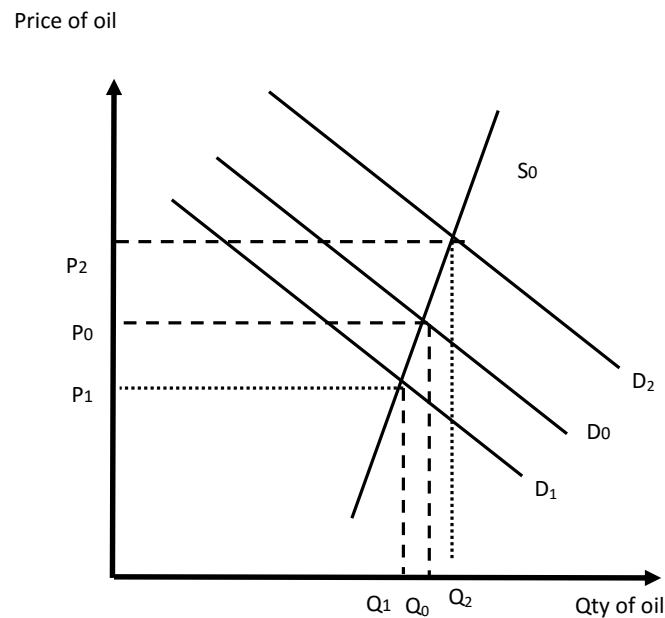


Figure 2

Case 2: Combined analysis for oil. Draw diagram to illustrate that due to the simultaneous shifts of the demand and supply curve, the resultant equilibrium price and quantity is uncertain depending on the relative magnitude of shift in the demand and supply curves. However, a likely case to be discussed is a fall in demand for oil and an increase in supply of oil.

18. It is likely that the demand for oil decreases. Oil is a derived demand as it's demand is based on demand for products that are made from oil – kerosene, bitumen, diesel etc.
19. Demand for such products in most part of US is a normal good that is used in many primary, manufacturing and service related processes. This means that demand for oil is likely to decrease.
20. Supply for oil is likely to increase as the number of producers rises due to lower cost of production.
21. Assuming that the rise in supply is greater than the fall in demand (demand for oil may not fall as much as US is oil efficient in processes these days meaning that the cutback in demand is less significant given how efficiently oil is used OR supply for oil increases more as technological processes increase the amount of oil fields available for drilling in a cost efficient manner).
22. As shown from diagram (if drawn), demand decrease and supply increases. Supply increases more than demand decreases. At original process, a surplus exists exerting a downward pressure on prices. As prices fall, Qty Dd increases while Qty Ss falls until a new equilibrium is reached. In the new equilibrium, prices fall from P_0 to P_1 while quantity transacted increases from Q_0 to Q_1 .
23. Note: It is possible that candidates use other forms of rational explanation to explain combined effects.

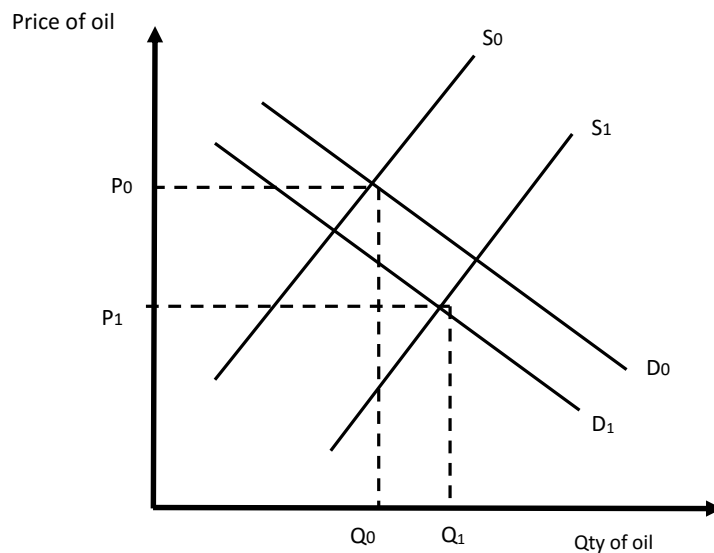


Figure 3

Case 3a: Increase in supply of kerosene due to lowered cost of production for oil (as analysed above) for airline companies.

24. Oil is a main ingredient in production of kerosene and thus a fall in price of oil lowers the cost of producing kerosene and thus lowering the cost of producing air flight services. It is also expected that supply increases significantly.
25. Demand for air flight services can be price elastic in demand and also price inelastic in demand. In general, demand for air flights by business travellers have value of $PED < 1$ while demand for air flights by holiday travellers have value of $PED > 1$. This is based on their necessity for travel disregarding the number of substitutes available for each party.
26. In this above case, the analysis is similar to **Case 1a**.
27. Note: For plastic manufacturers, the analysis is also expected to be same as above with the PED value facing some plastic manufacturers to be > 1 while others < 1 . However, it is worth noting

that supply is expected to increase less as oil is merely one of the minor constituent costs in the overall production of plastics.

Case 3b: Combined analysis for airline companies. Draw diagram to illustrate that due to the simultaneous shifts of the demand and supply curve, the resultant equilibrium price and quantity is uncertain depending on the relative magnitude of shift in the demand and supply curves.

28. Supply for air flights is expected to increase.
29. Demand for air flights however may rise or fall depending on the type of airline services. For example, for budget airlines, demand for air flights is expected to rise in an environment of economic slowdown. However, for international airlines, demand is expected to fall, especially for luxury-service based air flights.
30. The analysis should revolve around changes in prices, quantity and revenue/expenditure.
31. In this case, the analysis is similar to **Case 2**.
32. Note: The same can be done for plastic manufacturers.

Case 4: Decrease in demand for natural gas due to falling oil prices affecting natural gas markets.

33. Due to changes in demand and supply for oil in **Case 2**, some consumers of oil (can be direct such as power stations) switches to using natural gas instead.
34. Supply for natural gas is expected to remain constant.
35. Demand for natural gas increases as substitution effects take place. The demand for natural gas may increase significantly or less so based on whether natural gas and oil are strong or weak substitutes respectively. (Depends on XED values)
36. Either way, prices and quantity transacted of natural gas is expected to increase. Expenditure on natural gas as a whole is also expected to increase.

Evaluative Conclusion:

The impact on various markets in terms of prices, quantity, revenue/expenditure, welfare etc. is varied depending on different elasticity conditions and values as well as extent of shifts in demand and supply. It is important to note that many of the above discussed scenarios are highly dependent on ceteris paribus conditions together with no changing dynamics of elasticity values. Further, each market has their own sets of demand and supply drivers which are important to their own markets. The above analysis also happens mainly over a long period of time but is shorter compared to other countries as information is closer to being perfect in a widely connected country such as US.

- 3 Public healthcare spending in Singapore is projected to triple by 2020 as the government increases subsidies and continues to promote national health and disease prevention programmes.
- (a) Explain how the presence of externalities and imperfect information in the healthcare market may lead to market failure. [10]
- (b) Discuss whether there is a need to change the current policies adopted by the Singapore government to deal with the above market failure in the healthcare market. [15]

Part A

Mark scheme for 3(a)

L3	Clear explanation of the meaning of externalities and imperfect information, including developed explanation of how the presence of the above factors may lead to market failure in the context of healthcare market.	7-10
L2	Under-developed explanation of how the presence of both externalities and imperfect information may lead to market failure. OR Developed explanation of how the presence of either externalities or imperfect information may lead to market failure. Theoretical answers → cap L2-6	5-6
L1	For an answer that shows knowledge of the reasons for market failure but contains unexplained statements, containing major conceptual errors	1-4

Suggested answer

Introduction

- Briefly explain that healthcare is a merit good, deemed socially desirable by the government and often under-consumed due to the presence of positive externalities and imperfect information.
- Briefly explain that imperfect information is due to the underestimation of MPB.

Body

#1: Explain how the presence of externalities in the healthcare market may lead to market failure

- Healthcare is a merit good that are deemed socially desirable by the government but under-consumed
- The decision to seek healthcare services by an individual is made based on the individual's private efficiency by equating its MPB (provide examples) and MPC (provide examples), ignoring the MEB (healthier workforce and this generates external benefits in terms of higher productivity which will benefit employers and the economy of the country as a whole)
- As such MSB of consuming healthcare exceeds the MPB for every output level (Explain using a diagram if necessary ** EXTERNALITIES DIAGRAM)
- Explain that the socially optimal amount of healthcare is at Q_s , where the MSB is equal to MSC, is more than the private optimal amount of healthcare at Q_E
- At Q_e , $MSB > MSC \rightarrow$ society values an additional unit of healthcare more than it costs society \rightarrow society desires more of healthcare consumed but left to free market forces, there is under-consumption of healthcare and under-allocation of resources to the consumption of healthcare \rightarrow **allocative** inefficiency \rightarrow healthcare will also be too expensive

8. Between Q_e and Q_s , $MSB > MSC \rightarrow$ by summing the excess of MSB over MSC for the units $Q_e - Q_s$, we arrive at a monetary measure of **welfare loss** to society as shown by the shaded area in the diagram
9. Therefore market fails.

#2: Explain how the presence of imperfect information in the healthcare market may lead to market failure

10. Due to imperfect information, there can be an **underestimation** of the **true private benefits** (better individual health in the future, less chances of falling sick) of consuming healthcare services (imperfect information diagram, if relevant) [candidates have to explain how there is imperfect information well]
11. When left to the free market, these private benefits are weighed against their private costs (cost of healthcare, consultation, time)
12. **Consumption of healthcare may be below what is socially optimal \rightarrow too little resources allocated to the consumption of healthcare \rightarrow inefficient allocation of resources, resulting in welfare loss to society** [Unstated assumption: $MSB = MPB$ & $MSC = MPC$, but MPB perceived is lower]

Conclusion:

13. Hence, due to the presence of externalities and imperfect information, the market for healthcare may fail \rightarrow there is under allocation of resources to the consumption of healthcare \rightarrow therefore, government intervenes to correct this market failure.

Part B

Mark scheme for 3(b)

L3	Developed explanation of how both the stated policies are used to correct for market failure in the healthcare market and developed explanation of the policies' limitations.	9-11
L2	Under-developed explanation of how both the stated policies are used to correct for market failure. OR Developed explanation of how one of the stated policy stated is used to correct for market failure and the policy's limitations. OR Developed explanation of the limitations of both policies to correct market failure. Theoretical answers \rightarrow cap L2-8	6-8
L1	For an answer that shows knowledge of the policies stated in the preamble to correct market failure but contains unexplained statements, containing major conceptual errors.	1-5
E2	Clear evaluation supported by sound economic analysis on whether the Singapore government needs to change the states policies.	3-4
E1	Weak attempt to provide an evaluation with little or no economic justification on whether the Singapore government needs to change the stated policies.	1-2

Elaboration on possible approach**Introduction:**

14. Briefly explain that the government has currently adopted subsidies and education & campaigns to correct market failure (based on the preamble).
15. Whether there is a need to change the current policies adopted by the Singapore government to deal with market failure depends on whether the policies have been effective in alleviating the problem.

Body:**#1: (Based on the preamble) Explain how subsidies work to correct market failure in the healthcare market**

16. Subsidies for regular care (at polyclinics) and hospital care (at public hospitals) / subsidies to lower costs (medical equipment, training of medical staff, operating costs, etc)
17. Subsidies on vaccination (e.g. cervical cancer, immunisation) **do take note that not many of Singapore's healthcare policies target externalities
18. Shifts MPC to the right until the MPC1 cuts MSB at the optimal level, lowering the price of healthcare and increase consumption to the socially optimal level

Possible points of evaluation:

19. A short term policy → does not tackle the root cause of the problem; does not tackle imperfect information
20. To be effective, the government needs to know the right amount of subsidy → 'wrong' amount of subsidy may lead to inefficiency
21. Subsidies for polyclinic treatment are enjoyed by every Singapore citizen who consumes such treatment regardless of their income level → does not improve income inequality
22. Government subsidies combined with ageing population will mean a rising health bill for the government to finance → not financially sustainable
23. Certain vaccinations (e.g. vaccination for poliomyelitis, diphtheria, tetanus and pertussis) may generate high level of MEB → high amount of subsidies needed to influence consumption level → not financially sustainable, hence the government might want to consider other policies like compulsory vaccination

#2: (Based on the preamble) Explain how education & campaign work to correct market failure in the healthcare market

24. Programmes conducted by HPB → increase information on private benefits on healthcare → bridge the gap between perceived MPB and true MPB → increase consumption of healthcare
25. Specific examples:
 - a. The Health Promotion Board (HPB) launched the National Myopia Prevention Programme (NMPP) → aimed at preventing and reducing myopia progression → achieved mainly through public education and vision screening for children.
 - b. HPB organises awareness programmes to the general public as well as targeted interventions with customised messages → Screen For Life → enable learning about the immunisations and health screening tests one needs, i.e. cancer screening, breast screening, pap smear etc.

Possible points of evaluation:

26. A long term policy → tackles the root cause of the problem; i.e. providing information for consumers to accurately estimate their true MPB and changing behaviours of consumers towards the consumption of healthcare
27. However, it takes a long time to take effect → behaviours are difficult to change → therefore, if the problem is severe, this policy may be ineffective in the short run → may need to be complemented with a short run policy that has quick and effective results e.g. an outbreak of disease that is highly contagious → make vaccinations compulsory
28. Costs of continuing to implement this policy is high (implementation costs)

Evaluative conclusion:

Whether there is a need to change current policies?

Use of subsidies is appropriate and should be continued but complemented with other policies:

29. Although the government does not have perfect knowledge on the exact amount MEB, the new consumption level is not likely to deviate that much from the socially optimal level as the Singapore government does not subsidise to the point of zero price.
30. The use of means testing for hospital care helps ensure that allocative efficiency is not attained at the expense of equity in distribution.
31. However, it may not be sustainable as this policy poses a financial burden for the government especially with an ageing population.
 - a. Therefore, the government complemented subsidies with Medisave and Medishield schemes, which make Singaporeans share the burden of their healthcare costs → help address sustainability of government financing

Use of education and campaign is appropriate and should be enhanced, complementing with short run policies:

32. Even though it is costly to implement, this policy is a long term policy and should continue to be pursued → helps individuals to perceive the right amount of MPB
33. Yet it takes a long time to see effects, therefore has to be complemented with short run policies, e.g. subsidies and legislation → in the long run costs (e.g. need to give out subsidies) may be reduced if this policy is successful

- 4 (a) Explain the possible impact of inflation on an economy's balance of payments. [10]
- (b) Discuss whether the use of exchange rate policy alone can effectively tackle inflation in Singapore. [15]

Overall comments

Candidates do not need to find a strong link between Parts (a) and (b) to score full credit, even though a discussion on the causes of inflation could be relevant in both parts.

Part (a) focuses narrowly on consequences on inflation on balance of payments. Part (b) focuses on the issue of whether the use of exchange rate policy alone can effectively tackle inflation in Singapore – in essence requiring content on policy mechanism and relevant limitations, as well as some references to the different possible causes of inflation in Singapore's context.

Part A

How students should approach this question

The focus is on explaining how inflation could lead to consequences pertaining to balance of payments. The possible scope of points could comprise:

- How inflation affects different parts of the balance of payments, namely the current account and the capital and financial account
- How inflation affects balance of payments positively and negatively
- How inflation affects balance of payments in the short run and in the long run
- How the cause(s) of inflation could then determine the kind of impact on balance of payments

Mark scheme for 4(a)

L3	1. A well-developed answer that comprises at least two of the scope of points outlined in the approach to the question, e.g. how inflation affects current account and capital and financial account, positively and negatively. 2. A high L3 answer should contain good exemplification, i.e. illustration of content with relevant examples.	7-10
L2	3. A well-developed answer that comprises at least one of the scope of points outlined in the approach to the question, e.g. how inflation affects current account and capital and financial account only. 4. There could be other scope of points outlined but the analysis is not well-developed. Alternatively, 5. An answer that comprises at least two of the scope of points outlined in the approach to the question, but none of the points are sufficiently developed in depth. Max L2 if no distinction between current account and capital and financial account.	5-6
L1	6. Answer that does not address the question directly, or 7. Answer lacks scope of points and depth of analysis.	1-4

Suggested answer

How inflation affects different parts of the balance of payments, namely the current account and the capital and financial account

1. **Relatively higher** inflation rate than that of trading partners', will mean that an economy's exports will become relatively dearer/more expensive and imports will become relatively

- cheaper. We can expect net exports to fall, worsening the balance of trade which is a part of the current account. The technical aspects of explaining relatively higher inflation rate, i.e. domestic inflation is 5% while trading partners are facing 3% inflation are difficult.
2. An easier way to explain the above, is to assume that the domestic economy experiences positive inflation while the trading partners are all experiencing zero inflation. Then the analysis is made easier.
 - a. As prices of domestic goods increase foreigners will reduce their quantity demanded for domestic exports; assuming that exchange rate remains unchanged and that the price elasticity of demand for exports is more than one, then there will be a fall in exports revenue. The balance of trade and subsequently the current account will worsen, *ceteris paribus*. If the analysis stops here, students are expected to at least state that the level of imports remains unchanged.
 - b. A better explanation would go on to explain what could happen to the level of imports. Since the prices of domestic goods have increased, foreign goods will be relatively cheaper. Assuming that foreign goods are considered substitutes to domestic goods, consumers will reduce their quantity demanded for domestic goods and increase their demand for foreign goods ($XED > 0$). Assuming that exchange rate remains unchanged, the total expenditure on imports will increase. The balance of trade and subsequently the current account will worsen, *ceteris paribus*. There is no need to discuss PED of imports because there is no change in prices of imports in terms of both foreign and domestic currency, so as long as the student establishes that the demand for imports increase, the total expenditure on imports will definitely increase. If the analysis only comprises #2b without #2a, then students are likewise expected to at least state that the level of exports remains unchanged.
 3. If inflation is a sign of poor business confidence, e.g. cost-push inflation which could lead to stagflation if not handled well, then the expected rate of return on investment could decline. This could reduce the inflow of foreign direct investment (FDI) and/or increase the outflow of FDI – the net effect is a net outflow of FDI which could then worsen the capital & financial account, *ceteris paribus*.

How inflation affects balance of payments positively and negatively

4. Points #1, #2 and #3 are all explanations on how inflation can affect balance of payments negatively.
5. Inflation could have a positive impact on balance of payments, especially when it is a sign of economic recovery, e.g. when the US or Japanese economies began to face signs of inflation that could be reflecting demand-pull inflation in the aftermath of the long recessions that followed from the 2008-9 global financial crisis. In essence, this would be the opposite of #3, whereby inflation is taken to be a sign of improving business confidence, e.g. demand-pull inflation, where the expected rate of return on investment could increase. This would lead to a net inflow of FDI which could improve the capital & financial account, *ceteris paribus*.

How inflation affects balance of payments in the short run and in the long run

6. Based on the flows of FDI in #3 and #5 in the short run, students can also explain the impact on the income balance in the current account in the long run.
 - a. For example, a net outflow of FDI in the short run (#3) can lead to an increased inflow of investment income in the long run. That means the income balance as part of the current account can improve in the long run, *ceteris paribus*.
 - b. Likewise a net inflow of FDI in the short run (#5) can lead to an increased outflow of investment income in the long run. That means the income balance as part of the current account can worsen in the long run, *ceteris paribus*.

How the cause(s) of inflation could then determine the kind of impact on balance of payments

7. See point #3 (cost-push inflation) vs. point #5 (demand-pull inflation).

Part B

How students should approach this question

The main focus of the question is really on how Singapore uses exchange rate policy to tackle inflation effectively. The main content points are:

- Explaining how the use of exchange rate policy, specifically revaluation, can tackle imported inflation
- Explaining the limitations of using revaluation to tackle imported inflation effectively
- Explaining how the use of exchange rate policy, specifically revaluation, can tackle demand-pull inflation due to export demand / foreign-based investment in domestic assets such as housing
- Explaining the limitations of using revaluation to tackle demand-pull inflation effectively

As for the judgement, there is an explicit question asked, so the students need to answer whether the use of exchange rate policy alone can effectively tackle inflation in Singapore. A measured response would be no; however, it is possible to argue that accept a “yes” argument if the student presents a strong case that the most likely causes for inflation are imported inflation and/or rises in export demand.

- A basic E1 mark can be awarded when a stand is presented with at least one accompanying reason
- A higher E2 mark can be awarded when the answer explains the reason using contextual knowledge grounded with economic analysis
- Policies other than exchange rate policy can be briefly mentioned as part of the evaluation, but a lengthy discussion is not required

Mark scheme for 4(b)

L3	<p>1. A well-developed answer that provides a balanced discussion on the use of exchange rate policy to tackle both causes of inflation, i.e. explains how exchange rate policy (revaluation) works to tackle imported and demand-pull inflation, followed by an explanation of the relevant limitations that would reduce the effectiveness of using revaluation.</p> <p>2. A high L3 answer should contain good exemplification, i.e. illustration of content with relevant example(s) to the Singapore context.</p>	9-11
L2	<p>3. A well-developed answer that provides a balanced discussion on the use of exchange rate policy to tackle only one cause of inflation, i.e. explains how exchange rate policy (revaluation) works to tackle imported or demand-pull inflation, followed by an explanation of the relevant limitations that would reduce the effectiveness of using revaluation.</p> <p>4. There could be mention of how revaluation can be used to tackle the other cause of inflation, but it is not well-developed.</p> <p>Alternatively,</p> <p>5. An answer that provides a one-sided discussion on the use of exchange rate policy to tackle both causes of inflation, i.e. explains how exchange rate policy (revaluation) works to tackle imported and demand-pull inflation, but does not explain the relevant limitations that would reduce the effectiveness of using revaluation.</p> <p>6. Similarly, the above could comprise a one-sided discussion on the limitations without explaining how revaluation could tackle inflation.</p>	6-8
L1	<p>7. Answer that does not address the question directly, or</p> <p>8. Answer lacks scope of points and depth of analysis.</p>	1-5
E2	<p>9. An answer that explains the reason for #10 using contextual knowledge</p>	3-4

	grounded with economic analysis	
E1	10. For a stand with at least one accompanying reason.	1-2

Suggested answer**Main body**Explain how revaluation can reduce imported inflation

8. Revaluation reduces the price of imports, including imported factor inputs. This will reduce the unit cost of production in Singapore, increases aggregate supply (or short-run aggregate supply, SRAS). This reduces GPL. (Note: no need to mention Marshall-Lerner condition)

Explain limitations of using revaluation to reduce imported inflation

9. We should not expect students to overdo this, because there are in fact very few valid limitations here. We could award credit to students who:
- Immediately evaluates that the use of revaluation to tackled imported inflation is very effective in Singapore due to the high proportion of imported factor inputs used in our production.
 - Or, students who highlight that the proportion of imported factors inputs could determine the impact on imported inflation, thereafter explaining that because Singapore does have a high proportion of imported factor inputs used in production, therefore revaluation is effective in reducing imported inflation in Singapore.
10. Other possible limitations could be time lag which reduces effectiveness (theoretical), or foreign reserve constraints in buying back domestic currency from the foreign exchange market (not true in Singapore's context).

Explain how revaluation can reduce demand-pull inflation

11. Revaluation raises the price of exports. Quantity demanded for exports will fall, leading to a fall in exports, leading to a fall in aggregate demand (AD). This will lead to unplanned investment...and reduce GPL. (Note: again no need to mention Marshall-Lerner condition)

Explain limitations of using revaluation to reduce imported inflation

12. The strongest argument we should expect here is Singapore's small multiplier size.
13. Other possible limitations could be time lag which reduces effectiveness (theoretical), wage stickiness (slightly beyond H2 syllabus), small proportion of X to Singapore's GDP (not valid in Singapore's context), or foreign reserve constraints in buying back domestic currency from the foreign exchange market (not true in Singapore's context).

EvaluationPossible lines of evaluation

14. No, exchange rate policy alone cannot effectively tackle inflation in Singapore.
- There are other causes of inflation in Singapore, apart from imported inflation and demand-pull inflation due to export demand. For example, government policies on wages, foreign worker levy and foreign worker ratio, COE, housing have contributed significantly to inflation over the past few years. There could also be increasing domestic demand due to continued economic growth. To tackle these other sources of inflation, policies apart from exchange rate policy would be required.
 - If the rate of imported inflation is high enough, even revaluation can do very little. Can cite the cases on rapid increase in oil and other commodity prices, e.g. 1980s, years leading up to 2008.
15. Yes.
- Imported inflation and export demand driven demand-pull inflation are the main causes of inflation. The other causes of inflation are not as significant. – this is of

course a much more difficult stand to take, and only answers that provide very strong reasons and examples should gain full credit.

From macroeconomic policy notesLimitations (effectiveness) of using revaluation

Limitation (effectiveness): demand for export may be price inelastic – The price elasticity of demand for exports will determine the extent of decrease in quantity demanded (foreigner sector's perspective) and demand (domestic economy's perspective) for exports when price of exports rises; the more price inelastic the demand for exports is, the smaller the extent of decrease in export. This will mean a smaller decrease in AD and subsequently smaller change in real national income and general price level.

(applies to policies that alter price of exports)

Limitation (effectiveness): cross-price elasticity between imported and domestically-produced goods and services may be a low positive (weak substitutes) or even negative (complements) – We must consider the cross-price elasticity of demand between imported and domestically-produced goods; if the cross-price elasticity is a low positive (weak substitute) or even negative (complement), there will only be a small decrease in consumption on domestically-produced goods and services (or even an increase). This will also mean a smaller decrease in AD and subsequently smaller change in real national income and general price level.

(applies to policies that alter price of imports)

But revaluation may not reduce imported inflation (cost-push inflation)

Limitation (effectiveness): proportion of factor inputs that are imported is small – The impact of revaluation on unit cost of production in an economy (i.e. short-run Aggregate Supply (AS)) depends on the proportion of factor inputs that are imported. Factor inputs that are not imported will come from domestic sources, e.g. local labour, land. The smaller the proportion of factor inputs that are imported, the smaller the increase in short-run AS, i.e. smaller impact on reducing cost-push inflation.

(applies to policies that alter price of imports)

But revaluation may not reduce demand-pull inflation

Limitation (effectiveness): AD decreases may not lead to fall in inflation rate – While production may decrease, firms may not necessarily reduce the hiring of factors of production immediately, so the competition for factors of production does not ease. The wages paid to workers may also not fall if wages are "sticky downwards" as workers are reluctant to accept cuts in nominal wages and firms are reluctant to cut nominal wages for fear of leading to poor worker morale.

(applies to all contractionary policies)

Limitation (effectiveness): X and/or C_d as small components of AD therefore AD does not change significantly – If X and C_d make up a small proportion of AD, then when X and C_d decrease, AD may not decrease significantly. As a result, decrease in employment, real national income and general price level is also not significant.

(applies to exchange rate policy only)

Limitation (effectiveness): small multiplier size – The size of multiplier will also determine the extent of increase in employment and real national income with any given change in AD; the smaller the multiplier size, the smaller the extent of decrease in employment, real national income and general price level.

(applies to all demand-management policies)

Limitation (effectiveness): time lag – The time lag involved in policy making could render the policy ineffective, or even do more harm than good (pro-cyclical instead of counter-cyclical). Basically, it could further decrease AD at a time when the economy is already slowing down and may face risks of pushing the economy towards a recession.

(applies to all policies)

Limitations (feasibility) of using revaluation –

Limitation (feasibility): no monetary policy autonomy – For countries that have decided to peg their currency value to that of another country's (such as Hong Kong Dollar (HK\$) to the US Dollar (US\$)), it is not possible to change exchange rate.

(applies to all monetary policies)

Limitation (feasibility): monetary policy trilemma – Countries that wish to control interest rate and keep their economy open to capital flows are unable to control their exchange rates.

(applies to all monetary policies).

Limitation (feasibility): limited / no foreign reserves – The central bank must have sufficient foreign reserves to buy back domestic currency through the sale of foreign currencies in its foreign reserves. Alternatively, the central bank must have other non-currency assets such as gold. In short, this is a foreign reserve-depleting policy and can be very costly.

(applies to revaluation only)

- 5 In each of the budget announcements from 2012 to 2014, the Singapore government has emphasised on two key themes. One, the restructuring of the economy to improve domestic labour productivity while reducing the reliance on foreign workforce, and; two, the need to spread the benefits of income growth more evenly across the population.

Assess the extent to which Singapore should still continue to prioritise the goal of [25] achieving economic growth over other economic goals.

Overall comments

The question suggests that Singapore prioritises the goal of achieving economic growth over other economic goals. The focus of the discussion should be on- (1) what are the trade-offs in economic goals, if any, when prioritising economic growth, and (2) to what extent are these trade-offs acceptable?

The preamble in the question hints at the recent focus of the Singapore government, which is how to restructure the economy without causing too much disruption (i.e. inability to achieve economic goals), and how to spread the benefits of income growth – basically when Singapore prioritises economic growth it may lead to losers in the economy, which namely leads to structural unemployment and income inequity.

How students should approach this question

Students can first explain the possible trade-offs that may arise when the Singapore government prioritises the goal of achieving economic growth over other economic goals. Possible points are:

- Macroeconomic conflict: actual economic growth trade-off with demand-pull inflation, worsening balance of trade; actual and potential economic growth trade-off with structural unemployment
- Microeconomic conflict: economic growth trade-off with income inequality and environmental sustainability (externality)

Thereafter, the discussion can then be on the extent whereby these trade-offs are deemed acceptable.

Typically, if only one main argument is presented, there should be three parts to the argument, e.g.

- How achieving economic growth can lead to structural unemployment (how the economic trade-off arises)
- Why it is acceptable for this trade-off to occur, i.e. why economic growth may be more important than structural unemployment
- Why it is not acceptable for this trade-off to occur, i.e. why structural unemployment may be more important than economic growth

Mark scheme for 5

General guide:

- For depth, we are looking at:
 - o Well-developed for L2 or L3 answers
 - o Under-developed which typically falls in the L2 range
 - o Undeveloped which may fall in the L1 range
- For scope, we are looking at:
 - o Number of economic trade-offs that may arise when prioritising economic growth – more trade-offs presented means greater scope of argument, where answers with more trade-offs presented typically score in the higher L range
 - o Balanced discussion on whether the government should / should not prioritise economic growth over the presented trade-offs – if the answer only answers should **or** should not then it is considered one-sided, and these answers typically fall into the L2 or even L1 range

- Also, answer that only explain the consequences of achieving / not achieving goals are likely to score only L2; answers need to compare the consequences to score L3 marks

High L3	<p>8. A well-developed answer that explains how prioritising economic growth can lead to trade-offs with at least three other economic goals with top answers addressing how achieving economic growth can lead to trade-off with other macroeconomic and microeconomic goals.</p> <p>9. A balanced discussion on whether the government should / should not prioritise economic growth over the said economic goals, e.g. by comparing the consequences of achieving one goal and not the other.</p> <p>10. The answer should be well-contextualised to Singapore’s economy with top answers addressing the economic trade-offs suggested in the preamble, i.e. how achieving economic growth can lead to trade-offs with structural unemployment and income inequity, and discusses the merits of these trade-offs.</p>	19-21
Low L3	<p>11. A well-developed answer that explains how prioritising economic growth can lead to a trade-off with two other economic goal, and;</p> <p>12. A well-developed and balanced answer that explains whether the government should / should not prioritise economic growth over the above economic goals, e.g. by explaining the consequences of achieving one goal and the other.</p> <p>13. There may be other relevant points raised but the explanations for these points are generally under-developed or undeveloped.</p> <p>14. There may only be little reference made to the Singapore economy</p> <p>15. If the answer only focuses on one economic trade-off, maximum 15m.</p>	15-18 (18 as mid-point)
High L2	Typically, a high L2 answer should be approaching a L3 answer, but just missing scope in points <u>or</u> depth in analysis; however, the quality of answer is better than a low L2 answer (see low L2 descriptor).	12-14
Low L2	<p>Typically, low L2 answers have generally some scope with attempts at using relevant economic analysis:</p> <p>16. An under-developed answer that explains how prioritising economic growth can lead to trade-offs with only one other economic goals, and;</p> <p>17. A under-developed one-sided or balanced answer that explains whether the government should / should not prioritise economic growth over the above economic goals, e.g. by explaining the consequences of achieving one goal and/or the other.</p> <p>In some cases, L2 answers may present strong analysis but only for one argument, with very weak analysis for any other arguments presented. While the depth for that one argument may be strong, in a 25-mark essay the student is unable to score any higher than low L2 just for one strong argument. The answer may look like this:</p> <p>18. A well-developed answer that explains how prioritising economic growth can lead to a trade-off with only one other economic goal, and;</p> <p>19. An under-developed but one-sided (the other side may be presented but not well-developed) answer that explains either the government should or should not prioritise economic growth over the above economic goals, e.g. by explaining the consequences of achieving one goal or the other.</p>	9-11

	<p>OR</p> <p>20. An under-developed answer that explains how prioritising economic growth can lead to a trade-off with only one other economic goal, and;</p> <p>21. A well-developed but one-sided (the other side may be presented but not well-developed) answer that explains either the government should or should not prioritise economic growth over the above economic goals, e.g. by explaining the consequences of achieving one goal or the other.</p> <p>22. There may be other relevant points raised but the explanations for these points are generally undeveloped.</p>	
High L1	<p>Compared to the low L2, the answer typically has less depth:</p> <p>23. An undeveloped answer that mainly states how prioritising economic growth can lead to trade-off(s) with other economic goals, and</p> <p>24. An undeveloped one-sided or balanced answer that mainly states whether the government should / should not prioritise economic growth over the above economic goal(s), e.g. by stating the consequences of achieving one goal and/or the other.</p>	5-8
Low L1	<p>25. Answer that does not address the question directly, or</p> <p>26. Contains nothing more than statements with no attempts at economic analysis</p> <p>Compared to the high L1 answer, these answers typically have poorer scope (depth is already very poor, even for high L1 scripts):</p> <p>27. An undeveloped answer that mainly states how prioritising economic growth can lead to trade-off(s) with other economic goal(s), or</p> <p>28. An undeveloped one-sided answer that mainly states whether the government should / should not prioritise economic growth over other economic goal(s) without explaining how the trade-off(s) arises, e.g. by stating the consequences of achieving one goal and/or the other.</p>	1-4
E2	<p>29. Arriving at a clear judgement of whether the Singapore government should prioritise economic growth over other economic goals, with sound reasoning supported by economic analysis.</p>	3-4
E1	<p>30. Any reasonable evaluative comments without a clear judgement.</p> <p>31. Or a clear judgement with a stated reason that is not explained or briefly/poorly explained.</p> <p>32. Judgement alone without a stated reason will not be awarded any marks.</p>	1-2

Suggested answer

Main body 1

Explain how prioritising / pursuing economic growth in Singapore may lead to a trade-off with structural unemployment

Knowledge, theoretical application, analysis

16. When an economy pursues economic growth through an increase in public investment (G) or private investment (I), there may be a shift in focus in the type of industries in the economy. These shifts may require different labour skills; if the existing labour force is unable to

provide these required labour skills due to occupational immobility, the workers may not be able to find employment and may face structural unemployment.

Contextual application

17. In Singapore, for example, there was an increase in G and I into newer industries such as aerospace engineering, biomedical sciences etc. These industries will require skills that the current labour force may not have in abundance. The workers who do not have these skills, may lose jobs in industries that are losing competitiveness in Singapore, and find themselves unable to transit into jobs in these newer industries. This is evidence of occupational immobility, which explains how Singapore's pursuit of economic growth may lead to structural unemployment.

Explain how prioritising / pursuing economic growth in Singapore may lead to a trade-off with equal distributions of income

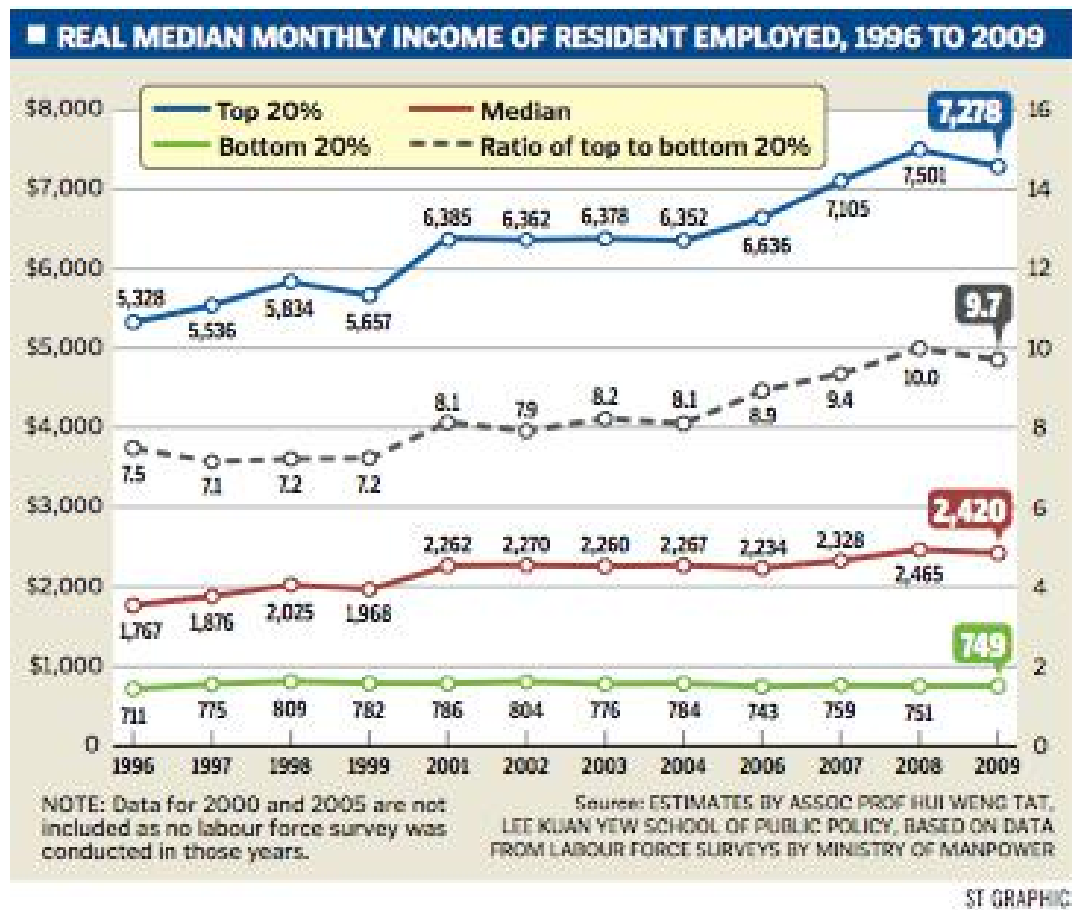
Knowledge, theoretical application, analysis

18. As an economy pursues and experiences economic growth, the overall real national income increases; and if this outpaces the growth of population, then real national income per capita will also increase. However, this increase in real national income may not be distributed equally across the population, i.e. there will be some degree of income inequality. This is because workers have different skills, and dependent on the demand and supply of labour in labour markets across industries, the equilibrium wage may differ. Also, there are business owners, whereby the profits earned by firms may vary as well. Both of these contribute to unequal distributions of income, and over time, unequal distributions of wealth.

Contextual application

19. The Singapore government has pursued economic growth and low unemployment for most of the past 10 years. Average real income growth per year has been healthy (around 5%, though not very meaningful to use average since real income growth rate could be as high as over 14% in 2010 or as low as slightly below 0% in 2009), but the real wage growth for the bottom 20% of wage earners has remained relatively stagnant. This suggests that the higher income earners have been reaping a more than proportionate portion of the overall income growth. This can be explained by skill differentials and profit differences earned by firms (see #3).

See table – this is relatively dated information from Straits Times. Probably can find a more updated version



Explain how prioritising / pursuing economic growth in Singapore may lead to a trade-off with other economic goals

20. Macroeconomic conflict: actual economic growth trade-off with demand-pull inflation, worsening balance of trade
21. Microeconomic conflict: economic growth trade-off with environmental sustainability (externality)

Main body 2

Explaining why Singapore government should still prioritise economic growth

From economic growth notes – benefits of achieving economic growth

22. Economic growth will lead to higher real income per capita, assuming no changes in population growth. With higher purchasing power, consumption of goods and services will increase. Generally, a high growth rate is also taken to indicate that more goods and services have been produced and available for consumption. Consumption of goods and services is related to the material aspect of standard of living and hence economic growth provides a gain to society.
23. As people grow richer and the standard of living reaches a certain (high enough) level, they may be less preoccupied with consumption and be more aware and concerned about environmental issues. This means that they may be more willing to adopt environmentally friendly practices or technology. This is the case for the developed countries that have the ability to do a part for the environment.

24. Also possible to discuss other benefits such as how this increases the government revenue which usually improves the budget position, or link to other complementary macroeconomic goals such as lower cyclical unemployment.

From economic growth notes – rebuttal to whether there is indeed a trade-off between economic growth and income inequality

25. *A rapidly growing economy helps the government to redistribute incomes from the rich to the poor. The rise in income brings about extra tax revenue from a given tax structure (e.g. progressive tax system), enabling the government to spend more on social welfare programmes to alleviate poverty. However, this is dependent on the nature of government policies in the country (whether it is of such redistributive nature, or not).*

Rebuttal to whether there is indeed a trade-off between economic growth and structural unemployment

26. Can focus on the idea that government revenue increases, which allows the government to spend more on retraining / reskilling / upskilling efforts to reduce occupational immobility and structural unemployment.

Explaining why Singapore government should instead prioritise the reduction in structural unemployment**From unemployment notes – negative consequences of unemployment, in particular how it could also affect the achievement of economic growth**

27. *Unemployment, if prolonged, may cause a person to lose touch of existing skills and knowledge. This could lead to a decline in the quality of labour (or what is called human capital), **hampering efforts to achieve potential economic growth**. This could also trigger a vicious cycle, where this group of workers who had become deskilled would find it harder to find employment, and could add to the level of structural unemployment. The resulting persistence of high unemployment is known as hysteresis.*

Note: also from unemployment notes – negative consequences of increasing unemployment → this may be more suitable to use when explaining cyclical unemployment but if the answer explains how there is increasing structural unemployment, then also acceptable

28. *With increasing unemployment, the fear is that the macroeconomic situation may deteriorate further, and we will generally observe weakening consumer confidence where households become less inclined to spend. This could lead to **further rounds of losses in output and income**, a phenomenon that is sometimes called the Paradox of Thrift.*
29. *Business confidence can be weakened for various reasons. Apart from the weakened consumer confidence already mentioned, there could be a decreased level of security in an economy due to the increase in social problems. Increasing unemployment can sometimes lead to unhappiness and disenchantment which could result in **increased crime, more substance abuse etc.***
30. *With fewer people working, there will be fall in tax revenue since the unemployed person pays no income tax and given that the unemployed person spends less and pays less GST. In addition, a government that provides social welfare will face increased spending on unemployment benefits. Put together, **the government will have a worsening in budget balance, and may run into a budget deficit in the fiscal year**. Successive years of budget deficits could contribute to a budget debt problem.*

Explaining why Singapore government should instead prioritise achieving a more equal distribution of income

31. Answers may focus on macroeconomic and/or microeconomic impact of having unequal distribution of income.

Explaining why Singapore government should instead prioritise any other economic goal instead of economic growth

Evaluation

Possible lines of evaluation

32. Yes. Prioritising economic growth is important to ensure that the government continues to have the means to tackle structural unemployment and rising income inequality. Can elaborate (briefly) on the policies that the Singapore government has been able to implement thanks to the healthy budget balance from economic growth, to reduce structural unemployment and redistribute income more fairly.
33. Yes. The achievement of sustained economic growth (both actual and potential growth) has enabled Singapore to also achieve all other economic goals – both macroeconomic goals (low inflation, low unemployment, healthy balance of payments) and microeconomic goals (efficiency, equity) – take note that income inequality may not necessarily lead to inequity as long as the government ensures that key markets such as healthcare, education, transportation, housing remain accessible to most / all of the population regardless of income levels.
34. No. The rate of economic growth is too fast and some segments of the population clearly are unable to keep up. In addition, the foreign sector plays a heavy role in Singapore's economy, and the locals are increasingly getting displaced by foreign investors / foreign workers. The Singapore government needs to consider slowing the rate of economic growth in order to make the growth more sustainable over time.
35. Any other acceptable evaluative comment.

- 6 (a) Explain the determinants of a country's pattern of trade. [10]
- (b) Assess the supply-side policies the Singapore government could adopt to continue benefiting from trade. [15]

Overall comments

Candidates do not need to find a strong link between Parts (a) and (b) to score full credit, with both parts requiring different content areas from the international trade topic.

Part (a) focuses on the determinants of a country's pattern of trade, i.e. what determines what a country trades, with whom a country trades and how much a country trades. Part (b) on assessing the supply-side policies that the Singapore government could adopt to ensure that the economy continues to benefit from trade – this means recognising the negative consequences that arise from trade and how the government can use supply-side policies to mitigate these consequences, or; recognising the gains from trade and how the government can use supply-side policies to ensure the economy continues to possess the key characteristics to gain from trade.

Part A

How students should approach this question

The focus is on what determines (determinants) the pattern of trade of a country:

- What does a country trade, i.e. import and export – demand and/or supply reasons
- With whom does a country trade, i.e. import and export partners – demand and/or supply reasons
- How much does a country trade, i.e. volume of import and export – demand and/or supply reasons

Mark scheme for 6(a)

L3	1. A well-developed answer that comprises at least two of the scope of points outlined in the approach to the question, e.g. determinants that explain two of what/how much/with whom a country trades. 2. A high L3 answer should contain good exemplification, i.e. illustration of content with relevant examples.	7-10
L2	3. A well-developed answer that comprises at least one of the scope of points outlined in the approach to the question, e.g. determinants that explain one of what/how much/with whom a country trades. 4. There could be other scope of points outlined but the analysis is not well-developed. Alternatively, 5. An answer that comprises at least two of the scope of points outlined in the approach to the question, but none of the points are sufficiently developed in depth.	5-6
L1	6. Answer that does not address the question directly, or 7. Answer lacks scope of points and depth of analysis.	1-4

Suggested answer

The comparative advantage that a country enjoys can determine what and with whom it trades

1. Explain what comparative advantage is, and use an example to illustrate the comparative advantage that two countries have, e.g. Singapore enjoying lower opportunity cost in production that requires high-skilled labour (e.g. pharmaceuticals) vs. Thailand enjoying

lower opportunity cost in production that requires large plots of land (e.g. agricultural products). This helps to determine that Singapore / Thailand would import and export agricultural products and pharmaceuticals respectively as they trade with one another.

Tastes and preferences within a country can determine what and with whom it trades

2. Explain why there are differences in tastes and preferences of consumers within a country, and how this prompts demand for imported goods and services that are similarly produced by domestic firms, i.e. why a country imports a certain good or service even though it also exports that same good or service (intra-industry trade).

Government policies within a country can determine the volume of trade

3. The government’s stance towards trade, i.e. whether it is pro-free trade or implements protectionist policies could be a key determinant towards the volume of trade. This is because, while a country may enjoy comparative advantage in certain types of industries and the consumers have tastes and preferences for certain imported goods and services, the government policies could then promote or deter trade which would then lead to a certain volume of trade in the country.

Any other determinants of pattern of trade are acceptable

Note: the demand/supply reasons for trade cannot be loosely explained as the determinants of trade. For example, economies depending on exports as an engine for growth can help explain why an economy trades, but it is comparative advantage a country enjoys that determines the type of goods traded and the key trading partner s(#1), or the government’s pro-free trade policy approach (#3) that determines the volume of trade. Basically, **why an economy trades ≠ determinants of pattern of trade.**

From notes

Determinants of pattern of trade

The types of exports a country sells to the rest of the world and the type of imports it buy are largely determined by demand and supply reasons (as explained in Sections 2.1 and 2.2).

Reasons for trade

<i>Supply-side reasons</i>	<i>Demand-side reasons</i>
<i>Theory of comparative advantage</i>	<i>Differences in tastes and preferences</i>
<i>Gains from economies of scale</i>	<i>Increase competition for domestic firms to stimulate efficiency</i>
	<i>Export as an ‘engine of growth’</i>

However, in the real world (where the strict assumptions of trade theories may not hold), the policy implementation by the governments and institutions around the world also greatly affects the pattern of trade between countries.

Determinants of pattern of trade (in the case of Singapore, for reference)

Supply-side reasons

The following explains why Singapore produces certain goods and services and exports them.

- *The openness of Singapore implies that it has a high degree of exchange in capital, particularly in FDI. Such FDI has brought about significant technological progress through the capital goods used by foreign firms.*
- *Singapore also has a highly skilled labour force (both foreign talents and an educated workforce). The congregation of highly productive capital and labour thus meant that Singapore tends to have comparative advantage in high-tech, high skilled level goods and services (e.g. financial, bio-*

medical services, and electronic goods such as data processing machines and telecommunications equipment).

On the other hand, Singapore does not have comparative advantage in producing land-intensive and labour-intensive goods.

- *Hence, she will see the need to import increasingly from developing economies like China which have an abundance of labour to specialise and produce labour-intensive, low-end manufacturing goods like toys and textiles. Singapore will also need to import agricultural goods from countries with abundant land resources such as Australia.*

Demand-side reasons

- *Intra-industry trade (trade in the same industry) may take place despite similar opportunity costs in production due to differences in taste and preferences. There are differences in taste and preferences due to different lifestyles, technological innovations and improved product design. This means that there will be trade between Singapore with other countries in goods and services in the same industry. E.g. Singapore export banking services (e.g. DBS, OCBC, UOB) to other countries but we also import banking services from other countries (e.g. HSBC, Citibank).*

Role of the Singapore government and foreign governments

- *Singapore's trend towards signing of Free Trade Agreements (FTAs) to capitalise on the opportunities presented by globalisation would contribute to the rising volume of traded goods & services with member countries.*
- *On the other hand, protectionist measures imposed by other countries in order to protect their own interests may also adversely restrict trade volume between Singapore and her trading partners*
- *Policies implemented by the government will determine the type of goods and services that Singapore will produce. For example, the government's decision in building the Integrated Resorts means not only an increase in the volume of exports but also the trade composition will shift towards that of the services sector. Also, the decision by the Singapore government to spend on a certain industry also beckons investment into a particular sector. For example, the government's aim to promote Singapore as a research hub saw the government's spending on infrastructure for this industry (Biopolis). This improves the quality of resources available in the research industry and therefore contributes to Singapore's comparative advantage in the production of services. Consequently, Singapore's trade composition and volume for the services industry is likely to increase further.*

Singapore's pattern of trade has changed over time and will continue to change. For instance, the composition of our exports has been changing to progressively higher capital and skill intensive products, reflecting our economy's level of technological sophistication and our commitment to the development of human capital. Tourism is also an important export industry that Singapore intends to develop e.g. having the Integrated Resorts to grow the MICE (Meetings, Incentive Travel, Convention and Exhibitions) tourism industry. Singapore is also developing itself into regional educational hub and health-care centre. Government policies and directions, in particular, have been an important determinant in changing our comparative advantage and hence our pattern of trade over the years.

Part B

How students should approach this question

To continue benefiting from trade, students will need to first be able to highlight the following, though they may overlap:

- Characteristics of Singapore’s economy that could benefit from trade
- Negative consequences that trade brings about to the Singapore economy

Once students have done so, they can then pick at least two different types of supply-side policies for discussion / assessment:

- For example a market-oriented / prices and income, and an interventionist supply-side policy
- Explaining how these supply-side policies work to shape characteristics of Singapore’s economy that could benefit from trade and/or mitigate the negative consequences that trade brings about
- Explaining the limitations of these supply-side policies

As for the judgement, there is no explicit question asked. Therefore, students can score evaluation credit by doing any of the following:

- Highlight the importance of having both supply-side policies that improve Singapore’s competitiveness such that Singapore can continue to benefit from trade, as well as mitigate the negative consequences such that groups of workers less able to keep up with trade do not get left behind – this will ensure Singapore can achieve the macroeconomic goals of actual economic growth, low unemployment while also achieving the microeconomic goals of equity
- Highlight the importance of having a mixture of market-oriented / prices and income, and interventionist supply-side policies as they tackle different aspects of Singapore’s economy; also possible to mention that it may sometimes be necessary to complement supply-side policies with other fiscal / monetary policies
- Assess that some supply-side policies work very well in Singapore due to the nature of Singapore’s economy, while others may work less well due to poor effectiveness / feasibility / appropriateness
- Any evaluative comment that helps to assess the supply-side policies that the Singapore government currently adopts / could implement in the future

Note: evaluation marks need not only be awarded at the end of the essay

Mark scheme for 6(b)

L3	<p>1. A well-developed answer that provides a balanced discussion on the use of at least two supply-side policies to help Singapore continue to benefit from trade, i.e. explains how supply-side policies work to help Singapore benefit from trade and/or to mitigate the negative consequences the trade brings about, as well as the limitations of the policies.</p> <p>2. A high L3 answer should contain good exemplification, i.e. illustration of content with relevant example(s) to the Singapore context.</p>	9-11
L2	<p>3. A well-developed answer that provides a balanced discussion on the use of only one supply-side policy used.</p> <p>4. There could be mention of other supply-side policies but it is not well-developed.</p> <p>Alternatively,</p> <p>5. A well-developed, but one-sided answer e.g. explains how the supply-side policy(ies) works or the limitations of the policy(ies).</p>	6-8

L1	6. Answer that does not address the question directly, or 7. Answer lacks scope of points and depth of analysis.	1-5
E2	8. Any reasonable evaluative comment with sound use of economic analysis / reasoning.	3-4
E1	9. Any reasonable evaluative comment with very brief / no use of economic analysis / reasoning.	1-2

Suggested answer**Main body**Explain how supply-side policies can help to maintain / improve Singapore's competitiveness

4. To continue benefiting from trade, it is important for Singapore to maintain / improve her competitiveness. Competitiveness can be interpreted broadly:
 - a. One form of competitiveness can be export competitiveness, for example, in terms of price and/or quality of exported goods and services.
 - b. Another form of competitiveness can be desirability to foreign direct investment, which can then lead to improved export competitiveness.

5. Explain any supply-side policy that can help maintain / improve Singapore's competitiveness, in order for Singapore to continue benefiting from trade, i.e. a high level of export demand, which then leads to actual economic growth, lower cyclical unemployment, improved balance of trade.

Explain the limitations of supply-side policies used to maintain / improve Singapore's competitiveness

6. The most common limitation, but generic limitation used would be that supply-side policies suffer from long time lags. The better answers should include explanations of limitations pertaining to the specific supply-side policy chosen.

Explain how supply-side policies can mitigate the negative consequences arising from trade

7. Some of the negative consequences include increasing structural unemployment, worsening balance of trade if there is increased reliance / demand for imports, failure of infant industries to survive in the competitive global market, victims of protectionist measures such as dumping etc. The better answers should choose the negative consequences that best fit the characteristics of Singapore's economy, i.e. increasing structural unemployment and failure of infant industries to survive in the competitive global market.

8. Explain any supply-side policy that can help to mitigate these negative consequences.

Explain the limitations of supply-side policies used to mitigate these negative consequences

9. Again, better answers should avoid using just the generic limitation of long time lag, and address limitations specific to the supply-side policy chosen.

EvaluationPossible lines of evaluation

10. Need to use policies that help to maintain / improve Singapore's competitiveness, as well as mitigate the negative consequences arising from trade – discussion on why Singapore needs to achieve a broad range of macroeconomic and microeconomic goals.

11. Need to use both market-oriented / prices and income, and interventionist policies in order to shift the entire Aggregate Supply (AS) curve – discussion on why it is important to improve various aspects of Singapore's economy, i.e. SRAS (unit cost of production) and LRAS (productive capacity).
12. Make assessment on why those supply-side policies are effective / appropriate / feasible in Singapore's context – applying the relative theoretical points explained in the main body into Singapore's context.
13. Any other acceptable evaluative comment.