2013

H1 & H2 Economics

JC2 Prelim Exams

All JCs except NJC & H2 for YJC.

Use bookmarks to navigate.

ANDERSON JUNIOR COLLEGE

JC2 PRELIMINARY EXAMINATION 2013
Higher 1

ECONOMICS **8819/01**

Paper 1 **16 September 2013**

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 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. Begin your answer to each **question** on a fresh sheet of writing paper.

Section B
Answer **one** question. Begin your answer to **Section B** 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 your answers to Question 1.

Indicate in the table below the **question number** of the question in **Section B** you have attempted.

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

Name _____ ( )

PDG _____/12

Section A	Marks Awarded
1	/ 30
2	/ 30
Section B 3 / 4* * Delete accordingly	/ 25
Total Marks	/ 85

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

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Section A

Answer **all** questions in this section.

Question 1 Fuel prices and the need for renewable energy

Extract 1: Indonesia cuts fuel subsidies, risking social unrest

President Susilo Bambang Yudhoyono is cutting fuel subsidies that threatened to swell to $30 billion in 2013 and pushed the budget deficit well beyond the legal limit of 3% of its Gross Domestic Product. In doing so, he risks sparking street protests and inflation. He has to weigh the threat of social unrest against the risk that international investors will desert the country. Meanwhile, the combination of a mounting budget deficit and a weakening currency - the rupiah has lost 5% of its value in the past 12 months, making it the second worst-performing currency in Asia - has sapped investor confidence.

Adapted from *Business Week,* 27 June 2013

Table 1: Fuel information for Indonesia, 2009 to 2012

	2009	2010	2011	2012
Oil Production (thousand barrels daily)	994	1003	952	918
Oil Consumption (thousand barrels daily)	1,316	1,426	1,549	1,565
Current account (US$ million)	10,628	5,144	1,685	-24,183
Current account (% of GDP)	2	0.7	0.2	-2.8

Sources: *World Bank; BP.com*

Extract 2: Indonesia inflation hits 5.9% after fuel hike

Indonesia's inflation accelerated in June after the government hiked the price of fuel for the first time since 2008. The increase had been expected after the price of fuel rose by up to 44% last month, pushing up the cost of transporting goods and people.

The decision to reduce huge fuel subsidies, seen as a drag on Southeast Asia's largest economy, has sparked angry protests across the country. Economists have warned that inflation will likely accelerate to above 7% in the coming months. The delay in adjusting the price of subsidised fuel will

have an immense effect on the economy. Indonesia has posted a current account deficit for three consecutive quarters this year, primarily because of rising import spending on capital goods and oil. Besides aggravating the country's external stability, fuel subsidies were bad for the economy as they would only boost energy consumption. Moreover, it would also widen inequality among Indonesians as the policy was not in effect pro-poor since the fuel subsidies were mostly enjoyed by the upper-middle class.

Adapted from *Channel News Asia,* 1 July 2013 and *Jakarta Post,* 13 July 2013

Extract 3: More subsidies offered to ease fuel price hikes in China

Despite moves by the central authorities here in China to provide more subsidies to fuel-dependent industries, the rise in prices at the pumps this year has many complaining about the impact it is having on their day-to-day lives. Public transport is one of the industries that is worst hit by the price increase. Oil price hikes will also lead to rising expenditure in energy consumption and soaring cost of farming resources and raw materials for agricultural industries. Subsidies will better protect the rights and interests of farmers. However, the artificially low energy prices increase waste and destroy incentives to invest in alternative technologies.

Studies suggest that energy efficient measures can lead to more cost savings. Although renewable energy currently costs more, it may prove viable in the medium term with technological advances.

Adapted from *Global Times (China)*, 29 March 2012

Extract 4: Indonesia told to focus on renewable energy

Indonesia has plentiful supply of accessible energy sources, both from fossil fuels and renewables, and is the largest energy producer and consumer in Southeast Asia. Yet the country is struggling to keep up with its own energy demands. Total energy demand is growing by around 7% per year, as the transport and industrial sectors grow and as households become more affluent. The National Energy Council (DEN) has issued a series of recommendations to reorient the national energy policy to renewable energy by 2050, urging the government to stop exporting gas and coal to preserve depleting fossil energy reserves. With the rise in fuel consumption and a decline in fossil energy reserves, renewable energy must be utilized and exports of gas and coal must be stopped as they could be used as alternatives to oil at home. To achieve the target, the country has to scrap its fuel subsidy and adjust the price to the global market to curb fuel consumption and to disburse more incentives to develop renewable energy.

Adapted from *Jakarta Post,* 13 July 2013

Questions

(a) **(i)** Using Table 1, compare Indonesia's production and consumption of oil between 2009 and 2012. [2]

(ii) Explain whether the above explains the changes in Indonesia's current account balance in Table 1. [4]

(b) Using demand and supply diagram(s),

(i) explain the impact of an introduction of a fuel subsidy on the Indonesian government. [2]

(ii) discuss whether consumers or domestic producers of fuel in Indonesia are more likely to benefit from the introduction of a fuel subsidy. [8]

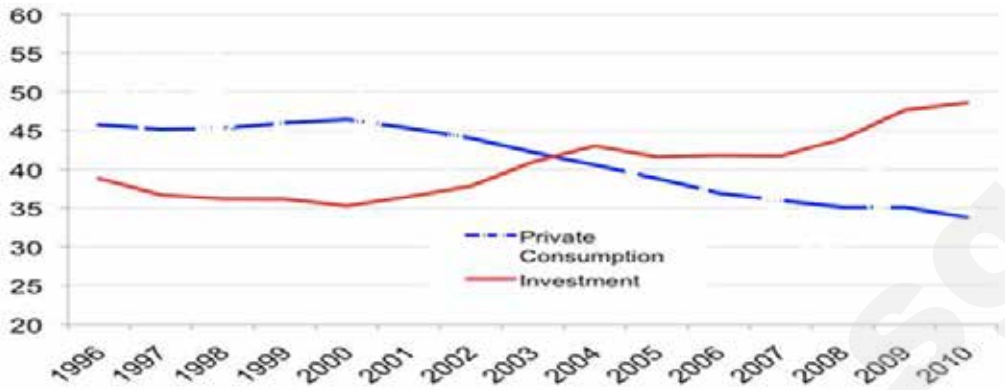
(c) Explain how cutting fuel subsidies can improve the allocation of resources. [6]

(d) Comment on the impact of cutting fuel subsidies on the Indonesian economy. [8]

[Total: 30 marks]

Question 2 Growth and crisis

Figure 1: China's shares of private consumption and investment in GDP (%)



Source: Economist Intelligence Unit, 2010

Table 2: Selected macroeconomic indicators, 2008 to 2012

China	**2008**	**2009**	**2010**	**2011**	**2012**
Unemployment rate (% of total labour force)	4.0	4.3	4.1	4.1	4.1
Inflation Rates (% change)	5.9	-0.7	3.3	5.4	2.7
Current account balance (% of GDP)	9.3	4.9	4.0	1.9	2.3
United States					
Unemployment rate (% of total labour force)	5.8	9.3	9.6	8.9	8.0
Inflation Rates (% change)	3.8	-0.4	1.6	3.2	2.1
Current account balance (% of GDP)	-4.8	-2.7	-3.1	-3.1	-3.0
Singapore					
Unemployment rate (% of total labour force)	3.2	4.3	3.1	2.9	2.8
Inflation Rates (% change)	6.5	0.6	2.8	5.3	4.5
Current account balance (% of GDP)	16.1	17.2	28.6	26.7	18.7

Source: The World Bank, 2013

Table 3: Overview of world output measured in real GDP growth (%), 2008 to 2014

	2008	**2009**	**2010**	**2011**	**2012**	**2013***	**2014***
World Output	3.0	-0.6	5.0	3.9	3.1	3.1	3.8
Advanced Economies	0.5	-3.4	3.0	1.7	1.2	1.2	2.1
United States	0.4	-2.6	2.8	1.8	2.2	1.7	2.7
Euro Area	0.6	-4.1	1.8	1.5	-0.6	-0.6	0.9
Singapore	1.7	-0.7	14.8	5.2	1.3	2.3	4.0
Emerging Market and Developing Economies	6.1	2.6	7.1	6.2	4.9	5.0	5.4
China	9.6	9.2	10.3	9.3	7.8	7.8	7.7

[*Projections]

Source: International Monetary Fund: World Economic Outlook Database, July 2013

Extract 5: Asian exports hurt by European debt crisis and sluggish US economy

The effects of the European debt crisis and sluggish US growth are radiating into Asia's export-driven economies, putting brakes on the rebound from the 2009 global recession. The crisis made it difficult or impossible for some countries in the euro area to repay or re-finance their government debt without the assistance of third parties. Credit rating agency Standard and Poor's (S&P) has said it could downgrade the credit ratings of 15 euro-zone countries.

Singapore, seen as a bellwether of Western demand because of its very high reliance on trade, would likely suffer a sharp slowdown next year as export orders from developed countries wane. Europe's economy is barely growing amid its ever widening debt crisis and sharp government spending cuts might tip the region back into recession. At the same time, the US is dogged by high unemployment, making it difficult for the world's Number 1 economy to stage a healthy comeback from the recession sparked by the 2008 financial crisis. "Although resilient domestic demand in emerging Asia will provide some support to global demand, it will not fully mitigate the effects of an economic slowdown in the advanced economies," Singapore's Trade and Industry Ministry said in a statement.

Adapted from *The Fiscal Times*, 21 November 2011

Extract 6: Singapore will remain open to global investment

Singapore has a relatively small domestic market, and thus has to open its economy to external markets in order for the economy to thrive. Singapore will continue to be "an international hub open to global investments and talent, while being mindful of our physical and social constraints" and "we will maintain sound economic policies that promote growth and improve people's lives" said PM Lee. Apart from these policies, the government has also actively encouraged new industries to develop in Singapore so as to respond to the needs of the global market.

Adapted from www.mfa.gov.sg, 3 April 2013 and www.economywatch.com, 2 August 2011

Extract 7: Becoming number one

US remains the world's biggest economy, but that status is under threat from a resurgent China. Emerging markets keep on growing faster than US and they are likely to account for two-thirds of the world's output by 2030. The combined weight in the world economy of US and the European Union will shrink from more than a third to less than a quarter. China had overtaken Germany four years ago to become the world's third largest economy. During the second quarter of this year, China overtook Japan as the world's second-largest economy.

Behind the spectacular economic growth in China, however, households are more inclined to save than spend the extra income. To sustain its catch-up with US, China needs to rebalance its economy away from exports towards consumer spending, which will require a rise in its real exchange rate. Some of this will come from having a higher inflation rate than its trading partners. The shift towards consumer spending may not be easy though. China may be the second largest economy but it ranks at 119 in terms of average incomes, according to World Bank data.

Adapted from *The Economist*, 24 September 2011 and *The Guardian*, 14 February 2011

Extract 8: Emerging economies to look for inner richness

Rapid growth in the major emerging economies will need to be accompanied by a realignment of growth away from external sources and toward internal sources of growth. Emerging economies that used to rely on technological adaptation and external demand to grow will have to make structural changes to sustain their growth momentum through productivity gains and robust domestic demand.

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For example, in China, there are plans to rebalance its economy towards domestic demand, shifting away from exports. It is in part a reaction to expected weaker imports from the west as consumers there repay their debts rather than spend at previous rates.

At the same time, China is wary of the "middle-income country trap" where few countries join the ranks of the rich because growth slows in the absence of technological and productivity improvements. This means China will want to continue to integrate with the global economy so its firms can learn while competing on the world stage. But it also means that it needs to reform its domestic economy to improve conditions for private firms to invest and remove impediments in the labour market.

These policy shifts suggest China has perhaps begun to realise it can be a major trader even when its economy is largely driven by its own consumers and firms, as is the case in the US and Japan.

Adapted from *The Guardian*, 14 February 2011 and The World Bank, 17 May 2011

Extract 9: Less Optimistic Growth Rates

The global economy is growing more slowly than expected, says the International Monetary Fund (IMF) in an update to its World Economic Outlook (WEO). Growth in emerging markets and developing economies is expected to moderate. The weaker prospects reflect, to varying degrees, infrastructure bottlenecks and other capacity constraints, lower export growth, lower commodity prices, financial stability concerns, and, in some cases, weaker monetary policy support. China's forecast is also adjusted downwards.

There is a need for structural reforms across all major economies, to lift global growth and support global rebalancing. As in the past, this means steps to raise domestic demand in economies with large current account surpluses (such as China and Germany) and measures that improve competitiveness in economies with large current account deficits.

Source: International Monetary Fund, 9 July 2013

Questions

(a) Using Table 3, compare the real GDP growth rates of the emerging economies with that of the advanced economies between 2008 and 2011. [2]

(b) Using AD/AS analysis, explain how

(i) the European debt crisis might lead to a fall in the export revenue of Singapore; [4]

(ii) a rise in China's real exchange rate affects its inflation rate. [4]

(c) With reference to Extract 7, explain the likely change in the size of the multiplier in China. [2]

(d) With reference to Figure 1 and Table 2, explain the possible short term and long term consequences on living standards from a change in investment such as that experienced in China. [4]

(e) How far does Table 2 and Table 3 support the view expressed in the first sentence of Extract 7 that China may overtake US as the world's largest economy? [6]

(f) Extract 8 explained that emerging economies such as China should look for inner richness for growth. With reference to the data, to what extent should countries rely more on internal sources rather than external sources of growth? [8]

[Total: 30marks]

Section B

Answer **one** question from this section.

3 **(a)** Explain how the price mechanism allocates scarce resources in an efficient manner. [10]

(b) Discuss the difficulties of achieving this in practice. [15]

4 **(a)** Explain the likely benefits and costs of globalisation. [10]

(b) Discuss the view that the best way for a government to maximise the gains of globalisation is to adopt discretionary fiscal policy. [15]

End of Paper

Anderson Junior College
JC2 2013 H1 Economics Prelims Examinations
Case Study Questions

Question 1 Fuel prices and the need for renewable energy

(a)	**(i)**	**Using Table 1, compare Indonesia's production and consumption of oil between 2009 and 2012.**	**[2]**
		Oil consumption generally increased while oil production generally decreased. [1m] Oil consumption was always greater than oil production throughout the years. [1m]	
	(ii)	**Explain whether the above explains the changes in Indonesia's current account balance in Table 1.**	**[4]**
		The current account balance is the balance of the transactions of currently produced goods, currently rendered services, income flows and unrequited transfers. Indonesia's current account generally worsened over the years from a surplus position till a deficit position in 2012. **Perspective 1: The above explains the changes in Indonesia's current account balance.** Oil consumption consistently exceeds domestic oil production and the shortfall has been increasing over the years because oil consumption has increased while domestic oil production has decreased. This suggests that Indonesia increasingly needs to meet this shortfall by importing from other countries. Hence, we can infer that the number of imports would be rising [1m] and this is likely to worsen its current account balance. [1m] **Perspective 2: The above does not explain the changes in Indonesia's current account balance.** However, there are limitations to the data in Table 1. The data for oil production and consumption in Table 1 is presented in absolute terms at thousand barrels daily. As such the data only reflects quantities of oil produced and consumed. [1m] However, current account balance is measured in monetary values, taking into consideration net inflow or net outflow of money. Hence, to have a more comprehensive analysis of the changes to the export revenue or import expenditure, price of oil has to be considered. [1m] **OR** The data only considered the oil component. Hence, how significant oil is relative to other exports and imports in the current account balance has to be considered to explain the impact of changes in oil production and consumption on current account balance. [1m] As current account also consists of import expenditure and export revenue of other goods and services and other components such as net income flows and net transfers, the data on oil production and consumption is limited to explain the	

		changes to current account balance. [1m]	
(b)		**Using demand and supply diagram(s),**	
	(i)	**explain the impact of an introduction of a fuel subsidy on the Indonesian government**	**[2]**
	(ii)	**discuss whether consumers or domestic producers of fuel in Indonesia are more likely to benefit from the introduction of a fuel subsidy**	**[8]**

(i) The Indonesian government will have to bear the entire burden which is shown by the sum of the 2 shaded areas in Figure 1 which is also calculated by subsidy per unit multiplied by the equilibrium quantity.

As mentioned in Extract 1, this spending on fuel subsidy will strain the government's finances, leading to budget deficit [1m] that has threatened to swell to $30 billion in 2013.

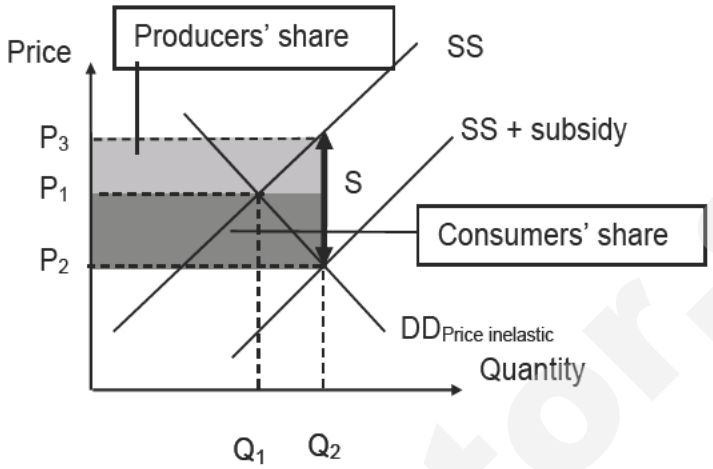


Figure 1: Subsidy to consumer and producer (1m for diagram)

(ii) Fuel subsidy lowers the cost of production which increases the quantity supplied by the producer at every price. Hence, the supply of fuel increases and the price of fuel falls from P_1 to P_2.

The introduction of a fuel subsidy will benefit both consumers and domestic producers of fuel in Indonesia. However, the relative share of benefit for the consumers and producers would differ under different time periods. The relative values of Price Elasticity of Demand (PED) and Price Elasticity of Supply (PES) will determine which party will benefit more. A subsidy favours the side of the market that is less price elastic.

PED is defined as the degree of responsiveness of the quantity demanded to a change in its price, ceteris paribus. PES is defined as the degree of responsiveness of the quantity supplied to a change in its price, ceteris paribus.

In the short run, **demand is likely to be relatively more price inelastic than supply** as consumers find it difficult to adjust their consumption pattern. Given the fuel subsidy, the consumers' share of the benefit from the subsidy is the proportion of the government funding that leads to a reduction in the market price from P_1 to P_2. The domestic producers' share of the benefit from the subsidy is the proportion of the government funding that allows them to receive a higher price (P_3) which is inclusive of the subsidy. Hence, the consumers' share of the subsidy will be greater than that of the domestic producers of fuel, as shown in Figure 1. **Hence consumers benefit more in the short run relative to the domestic producers of fuel.**

In the long run, **demand is likely to be relatively more price elastic than supply** as consumers are better able to adapt and adjust their consumption pattern. Given the fuel subsidy, the consumers' share of the subsidy will be lesser than that of the domestic producers of fuel, as shown in Figure 2. **Hence domestic producers of fuel benefit more in the long run relative to the consumers.**

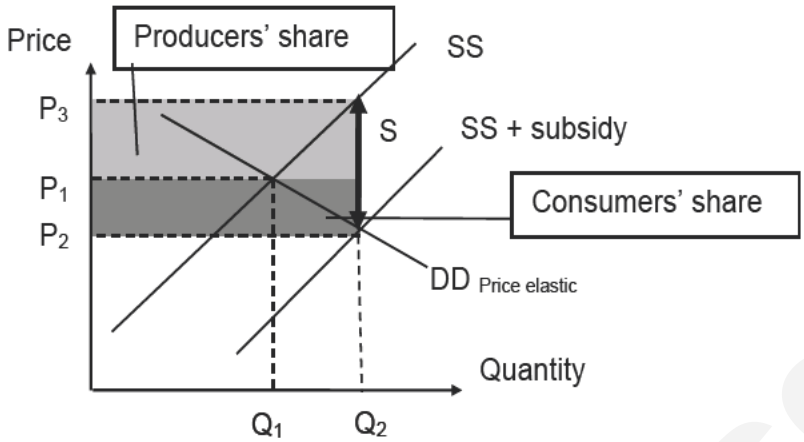


Figure 2: Subsidy to consumer and producer

Evaluation

S: Whether consumers or domestic producers benefit more from the fuel subsidy depends on the price elasticity of demand/ supply which can be caused by the different time period considered. In this case, price elasticity of demand differs under different time period, hence giving rise to the different share of the subsidy.

Knowledge, Application, Understanding and Analysis		
L3	Comprehensive knowledge of whether consumers or producers are likely to benefit from the fuel subsidy, with evaluation Balanced answer, with well-labeled diagram	6 – 8 marks
L2	Good knowledge of whether consumers or producers are likely to benefit from the fuel subsidy Balanced answer, with well-labeled diagram (if no reference to diagram, max L2)	3 – 5 marks
L1	Insufficient application of relevant economic concept to determine whether consumers or producers are likely to benefit from the fuel subsidy For an answer that showed conceptual errors One-sided, no/inaccurate diagram	1 – 2 marks

(c)		**Explain how cutting fuel subsidies can improve the allocation of resources.**	**[6]**

Briefly explain the market failure problem arising from fuel consumption.

Fuel subsidies further hinder the effective working of the market mechanism by encouraging even more consumption of fuel. Hence, cutting fuel subsidies is in the right direction to improve the allocation of resources. The cut in subsidies would increase the private marginal cost of consuming fuel. As consumption of fuel inflicts external costs such as health problem experienced by third parties who live in the environment polluted by the consumption of fuel. Social marginal cost is greater than its private marginal cost. It is therefore necessary to factor in the external costs in the consumption of fuel in order to prevent over-allocation of resources

- As private marginal cost increases due to the cut in subsidies, the PMC curve would shift to the left by the amount of the cut in the subsidies. If the cut in subsidies were to be very significant, this could even reduce consumption right down to the socially optimum level, where social marginal benefit equates social marginal cost.

- At this level of consumption (where SMB=SMC), society's welfare is maximized as society's benefit of consuming the last unit of good equates society's cost of consuming that last unit. Resources are thus allocated in an efficient manner as society's welfare is maximized in the allocation of resources.

The **cut in subsidies helps remove inefficient firms** that are complacent in cost controls and therefore tend to be less productive efficient. In extract 3, China provides subsidies to fuel-dependent industries. As a result, there might be no competitive pressure to produce at the least cost method of production as firms are heavily subsidized in their use of fuel for production purposes. As the domestic firms do not strive to use the technique of production with the least opportunity cost, they could be forgoing a higher amount of goods for the same set of resources deployed. With the cut in fuel subsidies, the cost inefficiencies of such firms will become more apparent which are likely to be reflected in the form of higher price charged for the goods / services they produce. This is a better reflection of the true cost of production. These inefficient firms may exit the market, thus ensuring a more efficient allocation of resources.

Subsidy can be a protectionist measure used by the government to give the domestic producer an advantage over the foreign producer. Indonesia may appear to have a comparative advantage in the production of certain goods due to the subsidies given by the government. With the cut in subsidies, the artificial cost advantage of domestic firms over foreign firms is now removed and the price of goods produced by domestic firms will now be higher than that produced by foreign competitors. This will allow foreign firms which may have the true comparative advantage to thrive. In this regard, world resources can be more efficiently allocated as countries that incur relatively lower opportunity costs in producing the goods will be producing the good.

Mark scheme

Knowledge, Application, Understanding and Analysis		
L2	For an answer that provides a thorough discussion with close reference to the case material and contains developed analysis.	4-6 m
L1	For an answer that attempts to discuss the issue and make some reference to case material but inadequate economic analysis.	1-3 m

(d)		**Comment on the impact of cutting fuel subsidies on the Indonesian economy.**	**[8]**
		Perspective 1: Cutting fuel subsidies will lead to positive impact on the Indonesian economy. From extract 1, the budget deficit is likely to swell to $30 billion and take a significant percentage of Indonesia's Gross Domestic Product. Hence the cut in subsidies is needed in order to reduce the mounting budget deficit. This will lead to a gain in investors' confidence and thus achieving economic growth. Additionally, the improvement of Indonesia's budget deficit can lead to a greater investor confidence leading to a higher FDI and thus having a positive impact on its capital account and exchange rate. With a greater inflow of FDI, demand for Indonesia's currency will now be higher, resulting in an appreciation of the exchange rate. A stronger exchange rates can help to lower the price of imported good and mitigate cost push inflation. **This is significant for Indonesia as inflation is likely to rise above 7% in recent months.** The cut in the fuel subsidies will help to reduce income inequality. From extract 2, the fuel subsidies were in fact not pro-poor, indicating that the subsidies were largely enjoyed by the middle class. Since the current fuel subsidies favour the middle class, production of goods and services is skewed towards producing the wants of the rich. The price mechanism signals the allocation of resources of goods and services and these goods are distributed to those who are able to pay. With the cut in fuel subsidy and hence having a higher budget to finance social welfare programmes for the poor, this will lead to a more equitable allocation of resources. Furthermore, in extract 4, in order for Indonesia to disburse more incentives to develop renewable energy that is more sustainable, it has to cut its fuel subsidies. Subsequently, this could lead to higher government spending and foreign direct investment (FDI) for developing renewable energy. Hence, Indonesia can develop its potential comparative advantage in this alternative energy, generating growth and employment. **Perspective 2: Cutting fuel subsidies will lead to negative impact on the Indonesian economy.** **A cut in fuel subsidies may lead to a higher cost of production as oil is an essential raw material use in the production of many goods. This will lead to a fall in SRAS resulting in cost push inflation.** Inflation is defined as a period of sustained and general increase in the average level of prices. From extract 2, Indonesia is already experiencing a high inflation of 7%. Thus the high rate of inflation will cause problems both in the domestic and the external sector for Indonesia. In the domestic sector, a high rate of inflation tends to have adverse effect on <u>output and employment</u> in the short run. In the case of high cost-push inflation, firms that cannot pass on the high costs to consumers have to absorb them. They might find it difficult to survive and hence this results in business failure. All these will result in a <u>lower income and employment</u>. With a high rate of inflation, firms are also reluctant to make plans for investment. This will <u>reduce the rate of economic growth</u> over the long term. Furthermore, high rate of inflation tends to encourage firms to engage in more risky speculative activities in hopes of generating higher returns that can outstrip inflation. This leads to a diversion	

of funds from productive activity into speculative activity. A high rate of inflation also erodes the real value of savings hence people are likely to withdraw their savings and spend it on real assets. Long term economic growth of the economy will be affected since the investors need savings as funds for investment.

As for the external sector, a high rate of inflation in Indonesia will have adverse effects on trade and capital flows.

A high rate of inflation in Indonesia that supersedes that of other countries can erode the competitive edge of Indonesia's exports as they are priced relatively higher than other countries'. On the other hand, relatively cheaper imports into Indonesia may channel domestic demand away from locally produced substitutes to foreign imports. This will lead to a fall in net exports, worsening Indonesia's current account and give rise to a significant fall in aggregate demand (AD). With this fall in AD, output and employment will fall leading to demand deficient unemployment. If this trend persists to affect future return on foreign investment, withdrawals of FDI may occur, hurting Indonesia's capital account and threatening its long term growth prospects as well.

Evaluation

(R) The Indonesian economy faced the twin problems of a current account deficit and high inflation of 7%. Though a cut in the subsidies of oil prices can help correct the current account deficit, it could worsen inflation. In order to mitigate the adverse impact of a cut in fuel subsidies on the economy, the government can use a combination of policies to correct these different issues. For e.g. Incentives can be offered to encourage more R & D efforts to reduce firms' reliance on fuel while cutting subsidies to correct a current account deficit. According to Tinbergen's rule, it states that the government should use a separate policy instrument for each macroeconomic objective.

(*Adapted from Han Wen PDG 0912*)
(R, T) In conclusion, given the major problems – high inflation, current account deficit and social unrest, it is best for Indonesia to cut fuel subsidies at a gradual pace. The notion of cutting fuel subsidies has substantial impact, but it is important for the government to push through such reform as the present rate of consumption of fuel is unsustainable given the fuel resources. Additionally, when fuel subsidies are cut, more incentives are given to invest in renewables energy, leading to more cost savings and ultimately less pollution, hence a better material and non-material standard of living for Indonesians in the long run.

Knowledge, Application, Understanding and Analysis		
L3	For an answer that provides a thorough discussion of the positive and negative impact on the economy due to a cut in fuel subsidies and makes close reference to the case material and contains sufficient analysis.	6-8 m
L2	For an answer that attempts to discuss the positive and negative impact on the economy due to a cut in fuel subsidies and make close reference to case material but inadequate economic analysis. Max 4m if positive impact is ONLY on improvement in resource allocation [from Q(c)]	3-5 m
L1	For an answer that is one-sided or lacking in economic analysis.	1-2 m

Question 2 Growth and Crisis

(a)	**Using Table 3, compare the real GDP growth rates of the emerging economies with that of the advanced economies between 2008 and 2011.**	**[2]**
	· **Similarity**: Both emerging economies and advanced economies generally enjoyed positive growth. (1m) · **Or** both generally enjoyed rising growth rates (1m) · **Difference**: Advanced economies experienced negative growth in 2009 but emerging economies experienced positive growth throughout the period of 2008 to 2011. (1m) · **Or** emerging economies had higher growth rates than advanced economies (1m)	
(b)	**i. Using AD/AS analysis, explain how the European debt crisis might lead to a fall in the exports revenue of Singapore.**	**[4]**
	Given the debt crisis in Europe, some countries in the Euro area are unable to repay or refinance their public debt without assistance from third parties. As stated in Extract 5, the credit rating could be downgraded and this lowers investors' and consumers' confidence level (1m). This lowers the investment and consumption expenditure respectively, resulting in a fall in AD of European countries (1m). This lowers the real NY of European countries. The purchasing power of European countries is thus lowered and hence they are less able to consume goods and services, including imported goods (1m). This leads to a **weaker demand for Singapore's exports and hence a fall in Singapore's export revenue** (1m)	
	ii. Using AD/AS analysis, explain how a rise in its real exchange rate affects the inflation rate in China.	**[4]**
	With an appreciation of the yuan, the foreign price of China's exports rises while the domestic price of imports falls. Assuming MLC holds, i.e. (PED_X + PED_M) >1, an appreciation of the Yuan would result in a worsening of the BOT (1m) à (X-M) falls à AD falls à reduce **DD-pull inflation** (1m) With an appreciation of the yuan, the foreign price of China's exports rises while the domestic price of imports falls. à Price of imported inputs is lower à this lowers the COP of goods and services (1m) à AS increases à GPL falls à lowers **imported inflation** (1m)	
(c)	**With reference to Extract 7, explain the likely change in the size of the multiplier in China.**	**[2]**
	· In Extract 7, "behind the spectacular economic growth in China, however, households are more inclined to save than spend the extra income" à may indicate that MPC was low. · As China attempts to boost consumer spending à **MPC** may increase (1m) à there is **less leakage** from the circular flow of income and therefore the size of the multiplier will be **larger**. (1m)	
(d)	**With reference to Figure 1 and Table 2, explain the possible short term and long term consequences on living standards from a change in investment such as that experienced in China.**	**[4]**
	· Short-term consequences for living standards (2m) o The short-term consequences for living standards as a result of an increase in investment depend upon **the extent of any unemployed resources in China** to determine if there's any **trade-off** between	

	producing consumer goods and capital goods. If China is operating near or at full employment level, a trade off results. o **As seen in Figure 1, the share of investment in GDP has increased while the share of private consumption fell.** This suggests that there could be a **trade-off** between production of consumer goods and capital goods, ceteris paribus, especially when the economy is close to full-employment. **Table 2 shows that China's unemployment rate is 4.1%**, which may be considered relatively close to full-employment level. Thus, the **opportunity cost** of increased investment would be the consumer goods that have to be sacrificed as resources are diverted to the production of capital goods. Therefore, **material standard of living could possibly fall in the short term**. · Long-term consequences for living standards (2m) o As for the long-term consequences on living standards, the increased in capital spending could lead to the **increase in the productive capacity** of the economy (1m) since there could be an increase in the quality and quantity of resources available. As a result, this could possibly increase the amount of goods and services available for consumption in the future and hence**, improve living standards** as well. (1m)	
(e)	**How far does Table 2 and Table 3 support the view expressed in the first sentence of Extract 7 that China may overtake US as the world's largest economy?**	**[6]**
	<u>Perspective 1: There is some data in Table 2 and Table 3 that may support the view expressed in the first sentence of Extract 7 that China may overtake the US as the largest economy.</u> **Table 2:** · As Seen in Table 3, China has a much higher rate of real GDP growth compared to US and it is already the 2nd largest economy based on Extract 7. Thus, it can likely overtake US if the difference in growth rate persists. · The real GDP growth in other countries & also the world seem to mirror China's direction of growth more than US. **Evidence**: à US' growth rate is higher in 2012 compared to 2011. China's growth rate is, however, smaller in 2012 compared to 2011. The growth in **world output** in 2012 is smaller compared to 2011 too. This shows that China may be influencing world output more than the US. à A similar trend is also seen in the projections in 2013, where China's growth rate is expected to remain the same as in 2012, likewise for the world output despite US' growth being projected to fall. This shows that China may be starting to have more impact on the world economy than US and it may overtake US as the world's largest economy. **<u>Perspective 2: However, there is information in Table 2 and Table 3 that does not support the view</u>** · High growth rate in China seems to be **tapering off** while US growth seems to be restarting based on estimates for 2014. <u>If this trend continues</u> & China's growth slows even more, then China may not be able overtake to be the largest economy · Relatively higher growth rates in China compared to the US and the other advanced economies implies that China might be approaching full-employment level as more of her resources are utilised to produce goods and services in her economy. As seen in **Table 2**, **China's unemployment rate is about 4%** throughout the period and there is a possibility for China to suffer from **DD-pull**	

inflation in future. (**Table 2** shows that **China's inflation rates are relatively higher** compared to the US). à In order to be the largest economy, there is a **need to ensure sustained economic growth** (ie: actual growth accompanied by potential growth). à if resources are used up and economy grows too rapidly, may not experience potential growth and result in higher inflation instead.

- Furthermore Table 3 **only provided projections up till 2014**. à not sure what the future growth trend will be like à cannot come to a conclusion that China will overtake the US as the largest economy.

Conclusion:

- Table 2 and 3 support the view to a large extent based on the large difference between the growth rate of China and US and that it has persisted over many years, China is on the path to overtake US. OR
- More information is required beyond 2008-2014. Data for 2013 and 2014 are also projections which may be inaccurate. (Extract 9 shows World Economic Outlook having to adjust China's growth forecast downwards in 2013).

è Depends whether china is making effort or able to increase its productive capacity in the future OR

è Depends if US is able to continuously attract foreign talent into her country and constantly innovate (productivity and technological improvements), China may not be able to overtake the US as the largest economy.

Marks Scheme for part (e)

Knowledge, Application, Understanding and Analysis		
L3	Thorough, balanced approach on both views. Citing evidence from case material to support the arguments, **with good evaluative comments made**.	5-6 m
L2	Correct, balanced approach but limited or underdeveloped explanation. Some attempt in making reference to the case materials. **No / little evaluative comments made**.	3-4 m
L1	Very superficial analysis. Weak interpretation of data or No clear reference to case materials as stated in question Inaccurate knowledge of concepts. One-sided answer, max 3 marks	1-2 m

(f) **Extract 8 explained that emerging economies such as China should look for inner richness for growth. With reference to the data, to what extent should countries rely more on internal sources rather than external sources of growth?** **[8]**

<u>Perspective 1:</u>
<u>Some countries particularly, may need to rely more on inward sources of growth rather than outwards.</u>

The reason why some countries may need to rely more on inward sources of growth rather than outwards differs across countries, depending on the nature of the economy. One reason why there should be such a shift is **to reduce the vulnerability of a country to adverse economic situation** in trading partners' countries. On top of this, for some countries, there is just **<u>huge potential</u> of domestic consumption** that can be tapped on instead of just relying on external demand which can be destabilising for other countries which are running huge trade deficits.

- Extract 8: Large emerging economies need to "make structural changes to **sustain their growth momentum through… robust domestic demand**." Hence these emerging economies need to look at internal demand to sustain their growth.
  In addition, with huge domestic consumption potential, when efforts are directed

to boost domestic spending, the people's attitude towards spending can also be altered. MPC could increase. Hence such countries could tap on their **large multiplier** to increase actual growth.

- Extract 8: China plans to rebalance its economy towards domestic demand as **external demand is expected to be weak** (consumers from the west need to repay debt à will not spend at previous rates). Table 2 also shows current account balance taking up smaller portion of China's GDP.
  China should therefore focus less of its resources on measures that support export-driven growth and focus more on developing its domestic market potential. This can also **prevent China from being vulnerable** to adverse demand conditions elsewhere.
- Extract 9 also stated that there's a need for "structural reforms across all major economies, **<u>to lift global growth and support global rebalancing</u>"**. It is suggested that domestic demand be raised in economies with large current account surpluses (such as China). This is because in light of the recent crisis that occurred in the advanced economies like the US and EU, who were previously big importers of output from other countries, **there's a need for other economies to increase demand in order to support global growth, especially in an increasingly globalised world**. By building up its domestic demand potential, not only China can enjoy growth but also other countries as well. People in China could also import more goods and services, leading to faster recovery in the global economy. Hence, **large emerging economies like China could demand goods and services from other countries** (including advanced economies) to support growth in those countries. As China imports from the advanced economies, exports of advanced economies would increase, resulting in **increase in AD, and thus actual growth in those economies.**

<u>Perspective 2: There's a limit to which China and other emerging economies can rely on inward sources of growth. à Need to look outwards as well.</u>

- Extract 8: "China will need to look outwards and continue to integrate with the global economy so its firms can learn while competing on the world stage." China needs to **look outwards to promote technological and productivity improvements** – need to **obtain talent and resources** from abroad (external source of growth). This would help China to **increase its LRAS and achieve potential growth.**
- Extract 9: "Infrastructure bottleneck and other capacity constraints" are seen to lower growth rates. While working on improving domestic productive capacity in the current period, China could consider carrying out more **outward investments (**external source of growth).
- In the SR, it will **not** be **easy to boost domestic consumption** in China. China is the second largest economy but <u>ranks at 119 in terms of average incomes. **Low average incomes imply low purchasing power**. (Extract 7)</u>

<u>Perspective 3: Some economies may need to rely more on outward sources of growth either due to the nature of the economies or the economic conditions facing them.</u>

- Extract 5 talked about how the **US and EU are still grappling with negative/slow growth and unemployment** in 2011 although measures to address the problem have been put in place since the onset of the crisis few years earlier. Therefore this shows that these economies **cannot just depend on domestic demand to support growth. It also needs external demand as well.**
- As part of the reform that Extract 9 stated to support <u>global growth and global rebalancing,</u> there's a need for measures be put in place to improve

competitiveness in economies with large current account deficits. This implies the **importance of exports for those economies in driving growth.**

- Also, given the characteristics/nature of certain economies, it is not possible for these economies to rely more on domestic demand than external demand. E.g. S'pore. – Extract 6: **small economy à small domestic demand** à won't be able to support growth and employment. à Need to **rely on external dd and FDI** to **increase AD and support growth**. Therefore it needs to be open.
  Small economy à limited resources à need to also **source for foreign talent to increase LRAS (to achieve potential growth).**

Conclusion

- For small economies à rely more on external sources than internal sources.
- For the advanced economies facing crisis à may need to look outwards more, particularly in the short term (as confidence is weak in the domestic market).
- For China (and other emerging economies) à as analysed earlier, there's a need for these countries to look inwards more / build up domestic sources of growth due to the reasons mentioned earlier (while looking outwards for productivity improvements at the same time). This is especially important in an era of increasing globalisation. In a more recent situation analysed in Extract 9, it talked about how growth rates of emerging economies like China are revised downwards. This is partly attributed to the financial stability concerns, which arise partly due to the crisis that occurred in the US and EU that affected the confidence of investors worldwide. This showed the importance of the external environment in influencing China's growth. Hence for China and other emerging economies, despite shifting their reliance towards inward sources of growth, cannot be too "inward-looking" in the measures it puts in place to achieve sustainable growth.

Marks Scheme for part (f)

Knowledge, Application, Understanding and Analysis		
L3	Thorough, balanced approach to analyzing the different economies citing evidence from case materials to support the arguments, **with good evaluative comments made**.	7-8 m
L2	Correct, balanced approach but limited or underdeveloped explanation. Some attempt in making reference to the case materials. **No / little evaluative comments made**.	4-6 m
L1	Very superficial analysis. Mere listing of points. Inaccurate knowledge of concepts. One-sided answer, max 3 marks.	1-3 m

Question 3

a. **Explain how the price mechanism allocates scarce resources in an efficient manner. [10]**

b. **Discuss the difficulties of achieving this in practice. [15]**

Scarcity is the situation that exists when there is insufficient amount of resources to produce all goods needed to satisfy unlimited wants. Most economies seek to address three basic economic questions – 'What to produce', 'How to produce' and 'For whom to produce'. In a market where the government does not intervene at all, the price mechanism seeks to address the above basic economic questions by determining the prices of goods and services and factors of production through the interaction of the forces of demand and supply.

Explain scarcity and its implications

Demand refers to the willingness and ability of consumers to purchase a particular good or service at various prices per period of time, ceteris paribus. The supply of a good is the amount of the good that producers are willing and able to offer for sale at various prices per period of time, ceteris paribus.

Define demand and supply

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. On the supply side are profit-maximising producers who will provide a certain good or service if the revenue they receive is equal to the cost of producing an additional unit of that good or service (i.e. MR = MC). On the demand side are consumers who will acquire a certain good or service to maximise their satisfaction if the price they have to pay is equal to the utility or benefit derived from consuming an additional unit of that good or service (i.e P = MU).

Price acting as a signal from consumers to producers

The price thus acts as a signal which consumers send to producers indicating their demand for a good and producers will allocate resources among competing needs to the production of these 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. In deciding on what to produce, consider crops such as corn which could be used to produce either biofuel or breakfast cereals. Biofuel and food are goods in competitive supply. Demand for biofuel has been growing in recent years due to greater acceptance of it as a viable source of fuel in place of oil. Referring to Figure 1(a), the increase in demand for biofuel causes the demand curve D1 to shift to D2. Without a change in supply, the increase in demand results in a shortage and the price of biofuel rises from P_1 to P_2.

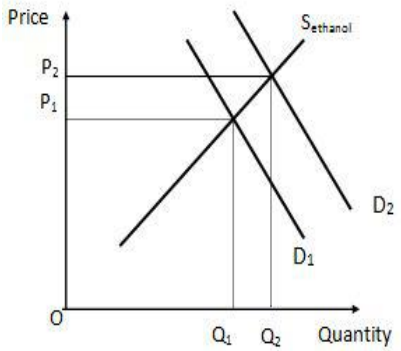


Fig 1a: Market for biofuel

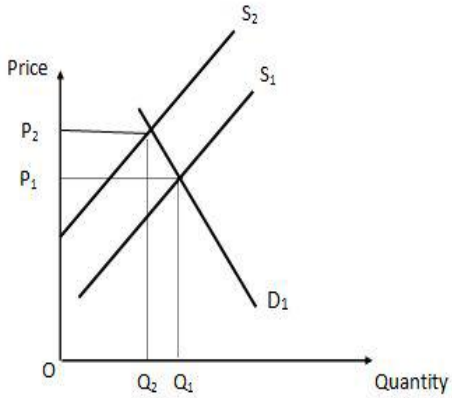


Fig 1b: Market for breakfast cereals

The rise in price of biofuel is a signal to the producers to expand their production to meet the higher demand. Producers begin to shift resources, in this case corn, away from the production of breakfast cereals to the production of biofuel. The quantity supplied of biofuel increases and more resources are used to produce biofuel and fewer resources are now available to produce food. As seen in Figure 1(b), the supply of breakfast food falls as shown by a leftward shift of the supply curve to S_2. This causes price of breakfast food to rise to a new price P_2.

Use example to explain how the price mechanism performs the allocating function – 'What to produce' à Link to allocative efficiency

Therefore through prices, consumers are able to signal to producers about their changing needs and wants. When demand is strong, higher market prices act as an incentive to raise production because the producer stands to make a higher profit and will be willing to supply more, causing quantity supplied to increase. In this way, the price mechanism performs the rationing function by rationing scarce resources to the production of goods which consumers are willing and able to pay for (effective demand).

Price mechanism performs the rationing function 'How to produce' à Link to productive efficiency

The price mechanism also answers the question of 'How to produce'. It does so based on the prices of factors of production which are determined by the demand and supply of these factors. Different combinations of factors of production will lead to different costs of production. In seeking to minimise costs, producers may choose the lowest-priced factors to produce a given product at the least-cost. For example farmers may choose to use the least-cost fertilizer for their crops. Thus, the price mechanism also ensures productive efficiency.

'For whom to produce' à Link to allocative efficiency

In allocating resources to the production of goods backed by consumers' willingness and ability to pay, the price mechanism answers the question of 'For whom to produce'. Those consumers who value a good more would be willing to pay a higher price for it. Therefore, more resources will be allocated to produce goods for these consumers than others.

Conclusion

In conclusion, prices place a value on a good or service, which helps to sieve out consumers' wants that are backed by the ability to pay.

Mark scheme

Knowledge, Application, Understanding and Analysis		
L3	For an answer that explains the workings of the price mechanism well and address the three basic economic questions with the use of examples.	7 – 10m
L2	For an answer that attempts to explains how the price mechanism addresses the three basic economic questions.	5 – 6m
L1	For an answer that contains conceptual errors and some irrelevant points.	1 – 4m

(b) Discuss the difficulties of achieving this in practice. [15]

Price mechanism helps to allocate resources efficiently. However, in real world, the assumptions of free markets, such as homogenous product, perfect information, perfect factor mobility and marketable products do not hold true. Due to the above, market failure arises. The price mechanism in free unregulated markets (i.e. markets that are not subject to government intervention) fails to achieve an efficient allocation of scarce resources so as to maximise welfare. Market failure can either be complete or partial.

Introduction
Assumptions do not hold in reality à market failure

Perspective 1: A difficulty of the price mechanism in allocating scarce resources efficiently is due to non-marketability of certain goods

<u>Perspective 1</u>
Difficulties of price mechanism in allocating scarce resources efficiently would arise due to non-marketability of certain goods (micro)

The reason why price mechanism cannot allocate resources efficiently is due to the characteristics of non-excludability and non-rivalry in consumption, hence leading to complete market failure. Complete market failure occurs when the price mechanism does not allocate any resources to the production of the good. Public goods exhibit the characteristics of non-excludability and non-rivalry in consumption. An example of a public good is street lighting.

Non-excludability means that it is technically impossible or extremely costly to exclude any individual from the benefits of a good once it is provided, in this case street lighting. The provision of the street lighting to any one person automatically makes it available to others.

Complete market failure

Since no one can be excluded from the consumption of street lighting once it is provided, consumers will not voluntarily offer payments to the producers. This means that there is no effective demand for street lighting (i.e. consumers are "unwilling" to pay for the good). If the consumption of street lighting and the enjoyment of its benefits are not made contingent upon payment, each consumer will find it in his or her interest to free-ride on others who pay. The free-rider problem exists when individuals cannot be excluded from enjoying the benefits of

Characteristics of non-marketability of goods

a good, yet these free riders pay nothing (or pay a disproportionately small amount) to cover the costs of providing the good.

The non-excludability feature of public goods makes them non-marketable. As a result, the market fails to produce public goods. No consumer is willing to indicate his or her willingness to pay for the good. There is **no effective demand** for the good.

Non-rivalry in consumption means that the consumption of street lighting by any individual does not reduce the amount of the lighting available for consumption by any other individuals. Once street lighting is made available to a single consumer, there is no additional cost in providing lighting to others. This means that the total cost of providing street lighting does not vary as the number of users varies. The cost of providing street lighting remains the same whether one or 1000 persons benefit from the street lighting. This essentially means that the marginal cost (i.e. additional cost) of providing street lighting to an additional consumer is zero. Recall that the condition for allocative efficiency is price equal to marginal cost. Since marginal cost equals to zero in this case, price equals to zero. It would be inefficient to charge a price since extra users can benefit at no extra cost to society. Charging a price would deter potential users and reduce the total welfare that can be obtained from the unit of the good. Since no price should be charged for the good, no producer would produce the good since no revenue can be generated. There is **no effective supply**. As a result, the price mechanism fails to allocate resources to ensure the production of public goods.

How the difficulties can be addressed

However, this difficulty of the price mechanism in allocating resources efficiently due to non-marketability can be addressed via direct provision by the government.

Perspective 2: Another difficulty of the price mechanism in allocating scarce resources efficiently is due to existence of externalities caused by imperfect information or ignorance.

Perspective 2
Difficulties of price mechanism in allocating scarce resources efficiently would arise due to existence of externality (Micro)

Partial market failure occurs when the price mechanism allocates some resources to the production of the good, but not at the socially optimal level. Partial market failure could be caused by the presence of either positive externality (under-allocation of resources) or negative externality (over-allocation of resources). For this essay, negative externality is discussed.

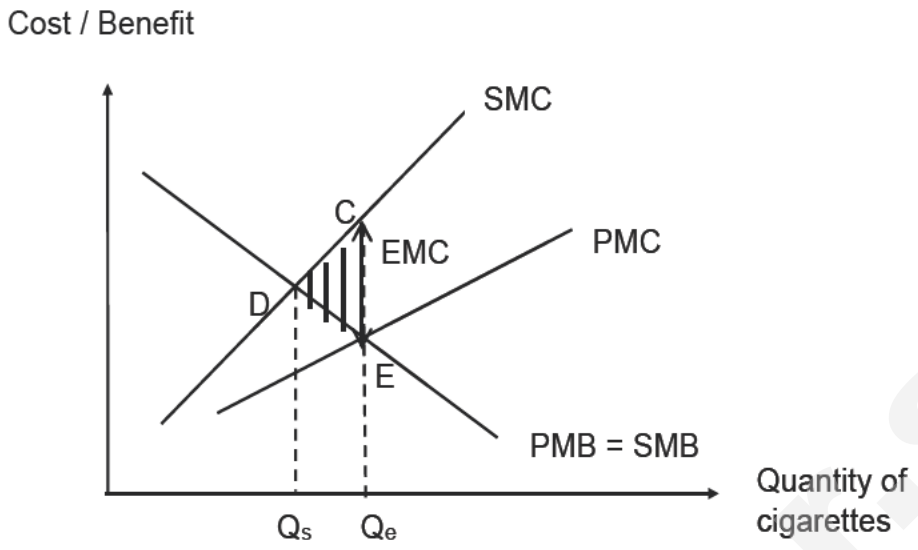


Figure 1

Partial market failure (Negative externality)

OR *positive externality*

The consumption of cigarettes generates negative externalities.

In deciding how much to smoke, smokers weigh their private marginal benefit (PMB) against private marginal cost (PMC) of smoking. Smokers' private costs include the price of a packet of cigarettes and their smoking-related health problems. Their private benefit involves the valuation of the satisfaction they can derive from smoking.

However, smokers do not consider the negative externalities that would be generated as a result of them smoking. These negative externalities include health problems borne by passive smokers and costs incurred by society from having to provide healthcare services for smoking-related health problems. The social cost of undertaking the activity is the private cost faced by the smoker as well as external costs accruing to third parties. As a result of external cost, there is a divergence between private cost and social cost, thus resulting in market failure.

Third parties have to be clear

Based on the price mechanism, the market equilibrium level of cigarettes is at Q_e as shown in Figure 1 above (where PMB = PMC). At Q_e, the private marginal cost (PMC) is equal to the private marginal benefit (PMB). Individual smokers do not take into account the negative externalities arising from their consumption of cigarettes.

Due to the presence of negative externalities as explained above, the social marginal cost is greater than private marginal cost (SMC > PMC) at Q_e, as represented by the vertical distance CE. As SMC > SMB at the market equilibrium level of cigarettes, Q_e, society values an extra unit of cigarettes less than what it would cost society to produce it. The socially optimum level of cigarettes is at Q_s,

where SMB = SMC. The price mechanism thus over-allocates resources to the market for cigarettes i.e. there is over-consumption of cigarettes where $Q_e > Q_s$.

This over-consumption of cigarettes results in a loss of welfare to society, otherwise known as deadweight loss, which is indicated by the shaded area CDE. Society as a whole could be made better off if the level of cigarettes consumed were to be reduced to the socially efficient level, Q_s.

However, this difficulty of the price mechanism in allocating resources efficiently can be managed by the government intervention through the market-oriented policies. For example, assuming that the government has perfect information, it could implement a tax that is equal to the external marginal cost at Q_s to effectively internalise the negative externality. Consumers will be induced to consume less cigarettes given the higher private marginal cost of consumption as a result of the tax imposed. The socially efficient level of cigarette consumption, Qs, will thus be achieved

How the difficulties can be addressed

Perspective 3: Another difficulty of the price mechanism in allocating scarce resources efficiently is due to government policy

Perspective 3
Difficulties of price mechanism in allocating scarce resources efficiently would arise due to government intervention itself (macro)

According to the Theory of Comparative Advantage, countries will be able to benefit from trade if they specialize in those areas they can produce at a relatively lower opportunity cost. However, some governments use protectionist measures to provide an advantage to domestic industries over foreign producers even though foreign producers are the ones having comparative advantage. This skews the allocation of resources from low-cost foreign producers to high-cost domestic producers. Hence this implies that there is allocative inefficiency.

However, this difficulty is unlikely to be a significant one since more and more countries are unwilling to adopt protectionism. With globalisation and greater interconnectedness among countries, free trade improves competitiveness and brings about greater world output, hence allowing the price mechanism to allocate resources efficiently.

How the difficulties can be addressed

(W) In conclusion, the price mechanism can, to a large extent, help to allocate resources for most types of goods. While most government intervention, in the case of public goods and goods that generate externalities, could generally help to address the difficulties and improve the allocation of scarce resources. Other government intervention could actually worsen the situation due to high administrative costs, information gaps and time lags resulting from red tapes and bureaucracy.

Evaluation

(S) Therefore, the difficulties of price mechanism in allocating scarce resources efficiently would depend on the level of development of the country which in turn

affects its ability to collect information accurately. Developed countries are able to collect information more readily and accurately as compared to developing countries. With better information, economic agents would be aware of the true costs and benefits and hence may reduce the divergence/ extent of externality which would lead to more efficient allocation of resources. So, the difficulty can be better addressed.

Knowledge, Application, Understanding and Analysis		
L3	For a comprehensive and detailed answer that provides a balanced discussion on the difficulties of price mechanism achieving efficient allocation of resources	**9-11**
L2	For an answer that provides a balanced but undeveloped discussion on the difficulties of price mechanism achieving efficient allocation of resources	**6-8**
L1	For an answer that is mostly descriptive, with some inaccuracies and is not in context. One-sided answer.	**1-5**
Allow up to 4 additional marks for Evaluation		
E2	For a judgment based on economic analysis/ adequately substantiated	**3-4**
E1	For an unexplained judgment, or one that is not supported by economic analysis	**1-2**

Question 4

a. **Explain the likely benefits and costs of globalisation. [10]**

b. **Discuss the view that the best way for a government to maximise the gains of globalisation is to adopt discretionary fiscal policy. [15]**

Globalisation is the increasing integration of the international economy and is characterised by greater global interdependence. This increasing integration may take the form of signing more Free Trade Agreements (FTAs), having free trade areas, customs unions etc. It may be defined as an expansion in the volume and variety of cross-border transactions in goods and services and in international capital flows, labour flows and technology transfers. Globalisation brings abouts many benefits. However, globalisation may also lead to possible problems.

Definition of globalisation

Globalisation increases access to goods and services which were not available at home. It also increases the variety of goods and services thus catering to a wider range of taste and preferences. This allows for the increase in standard of living in the countries involved in trade, especially for countries that can now gain access to goods that they may be unable to produce (due to the lack of technical know-how and/or resources).

Benefits in terms of increase variety of g&s and SOL

Globalisation also encourages greater international specialisation based on comparative advantage, given the integration of markets for goods and services. This will enable countries to shift consumption away from higher-cost producers to lower-cost producers. Goods that countries do not have comparative advantage in can be obtained more cheaply from other member countries and imports rise. Goods that countries have comparative advantage in will see increased exports to other member countries. A more efficient resource allocation brings welfare gains to the member countries and avail them to a greater extent of the benefits from trade. This also enables countries to reap the gains of improved resource allocation and exploit economies of scale from larger markets and increase their productive efficiency. It also increases international competition between countries which helps to lower the price of goods, helping to ensure that the **level of inflation** (i.e. general price level) in the countries involved in trade are kept under control.

Benefits in terms of trade creation and specialisation & economies of scale & of price stability

Globalisation increases cross-border transfers of resources and technology which can help boost a country's production capabilities. With the large capital inflows into the country, it helps to facilitate economic expansion beyond the country's domestic resource constraints, allowing the country to speed up its pace of **economic growth.** This in turn raises the country's national income by several times higher due to the multiplier effect and allows the country to enjoy robust economic growth and development, greater employment and thus lower cyclical unemployment due to greater utilisation of existing resources.

Benefits in terms of technology transfer and economic growth

The greater ease of foreign direct investments resulting from globalisation benefits many countries too. These foreign investors not only bring their technology and capital equipment with them when they decide to set up

Benefits in terms of employment

production plants in certain developing countries (because of their relatively lower costs of production). They will eventually require labour to begin and sustain production, hence helping to increase the **level of employment** in the developing countries.

levels

With globalisation, there are many firms and MNCs in certain countries such as the US and UK that offshore their production to countries such as Singapore to take advantage of the lower cost of production and efficient infrastructure. The influx of FDI (foreign capital and technologies), coupled with the greater labour flows such as foreign talent and their ideas, skills and expertise, will increase both AD and the economy's productivity (thus aggregate supply) in the short and long run respectively. This not only accelerates but also sustains non-inflationary economic growth (due to lower cost-push inflation) of the country and creates more employment opportunities for the people. Moreover, such FDI and talent enhance the labour productivity, allowing the average worker to earn higher income, raising his material standard of living.

Benefits in terms of higher FDI

However, globalisation brings about many challenges for countries as well. Increased ability of firms to locate different stages of production around the world to take advantage of lower costs for a certain input or service will mean that production is now more fragmented. This would mean that a problem in one country will be transmitted to another country through these links. The result is that the economies are now **more vulnerable to external shocks**. In particular, certain countries may be better able to relocate different stages of production in other low-cost countries due to the availability of capital; however, this also implies that they are more likely to be affected by disruptions in production in these countries.

Costs in terms of greater vulnerability

With the rapid rate of technological change, there is an increased rate of structural changes in the economy. Domestic firms may find it difficult to survive with increased competition from the foreign firms and leave the industry. Retrenched workers from those firms may lack the necessary skills to find employment in expanding industries, leading to **structural unemployment**. In other cases, some workers lose their jobs which have been outsourced to lower-cost countries.

Costs in terms of structural unemployment

With relocation and offshoring in many developed countries, there is an increase in demand for skilled workers and fall in demand for lower skilled workers. The result is an increase in wages for those with relevant skills while low or even no income for those who are displaced. There is thus a **greater income inequality.**

Costs in terms of widening income inequality

At the same time, some countries may over-focus their resources in a few areas of comparative advantage, sinking in valuable resources in order to maintain the comparative advantage in these areas. Recognising that the comparative advantage of these countries tends to be in relatively lower-skilled, labour-intensive industries, these countries may therefore be **locked in lower value-added production**. Their ability to move up the value chain and develop other areas of comparative advantage is thus severely impacted.

Costs in terms of being locked in lower value added production

Globalisation may also threaten to pass some countries by altogether. Many of the world's poorest countries lack the human capital, infrastructure, institutions

Costs in terms

and policies necessary to seize the trade and investment opportunities of globalization. As such, some of these countries may resort to lowering environmental as well as production standards and hence business costs so as to be able to attract companies to locate their trading and/or production activities there. This results in the **concentration of highly pollutive production activities in these countries**.

of decrease in non-material SOL

Globalisation is likely to allow easier migration of highly educated and skilled people in search of better prospects to other member countries. These people are likely to come from developing economies which will suffer a loss of precious human resource and thus face limitations to potential economic growth.

Costs in terms of brain drain

As globalisation may bring about both positive as well as negative effects, governments can strive to maximise benefits and minimise costs through fostering greater economic integration. Also, government policies can be adopted to address the problems resulting from globalisation so as to fully benefit from it.

Conclusion

Mark scheme

Knowledge, Application, Understanding and Analysis		
L3	For a comprehensive and detailed analysis explaining clearly the benefits and costs of globalization, analysing the impact in terms of the 4 macroeconomic aims.	7 – 10m
L2	For an answer that distinguishes between the benefits and costs of globalisation. Answer is lacking in the link to macroeconomic aims.	5 – 6m
L1	For an answer that shows some knowledge of the benefits and costs of globalisation but not elaborated. Answer contains some conceptual errors.	1 – 4m

b) Discuss the view that the best way for a government to maximise the gains of globalisation is by adopting discretionary fiscal policy. [13]

Suggested Answer

As explained in part (a), globalisation brings benefits such as higher employment and growth through production for export markets, and improvement of productive capacity through greater flows of foreign direct investment and foreign talent. Therefore, to maximise the gains from globalisation, policies should be geared towards boosting external demand and towards attracting capital and foreign talent. However, to fully maximise the gains from globalisation, it is also important to minimise the costs of globalisation. Fiscal policy is a policy that can be tapped on to maximise the gains from globalisation in some aspects. It will be analysed subsequently whether this is the best policy.

Introduction

Adopting discretionary fiscal policy may be a good way to maximise the gains from globalisation. The tools of discretionary fiscal policy are taxes and/or government spending. Lowering of taxes such as personal income tax helps to attract foreign talent to live and work in the country. This is because lower personal income taxes enable them to acquire higher disposable income.

Perspective 1: Show how discretionary fiscal policy

Corporate taxes can also be lowered to attract more foreign direct investment. As the after-tax profits increases with the reduction of corporate taxes, foreign investors may choose to invest in the country. This helps to increase productive capacity, achieving potential growth. Government expenditure on the economy in stimulating actual growth could also create a positive economic outlook for investors, giving them confidence to invest in the country.

may be a good way to maximise the gains from globalisation.

However, there are limitations of fiscal policy in maximising the gains from globalisation. For example, if the government borrows to finance its spending, the increase in demand for loanable funds that subsequently increases interest rates, could crowd out private domestic investment, as it makes it more costly for private investors to carry out investment projects. If such a situation persists, there may be a relatively more significant proportion of foreign direct investment (FDI) than private domestic investment spending in the country (since FDIs are less reliant on the domestic country's interest rates in their investment spending). This makes the country more vulnerable to unemployment caused by footloose foreign investors who are constantly on the lookout for locations with attractive investment prospects. Hence, this policy may not shield the economy from the costs of globalisation, limiting the effectiveness of fiscal policy in maximising the gains from globalisation.

Perspective 2: Consider the limitations of fiscal policy in maximising the gains from globalisation.

Fiscal policy also may not be a viable option particularly for countries that are already accumulating national debt. Such lowering of taxes and government spending may put further strain on the government budget and hinder efforts to effectively service the debt. Hence for these countries, other policies may be better options to maximise the gains from globalisation.

A better alternative policy that can maximise the gains from globalisation is the pursuit of even more free trade agreements. By forging more trade agreements, it enables greater flows of FDIs into the domestic economy. Hence for countries that cannot rely on fiscal policy to achieve this outcome, forging of more trade agreements is a better option. In addition, such trade agreements enable all countries in general to further maximise the gains from globalisation in aspects that fiscal policy cannot. For example, forging of more trade agreements enables countries to continue to have greater access to the global market, boosting their export sales and enhancing their employment and growth levels. In addition, signing of more trade agreements with multiple and varied trading partners enables countries to have a diversified market which they can export to, so as to reduce vulnerability to adverse demand conditions in the countries of certain trading partner.

Perspective 3: Consider the aspects in which alternative policies may be better than fiscal policy in maximising the gains from globalisation.

Trade policies to boost FDI and X

Monetary policy such as depreciation of the exchange rates also has proven to be a more important and better policy for some countries in maximising the gains from globalisation. For instance, countries like China had enjoyed significant growth rates partly as a result of its under-valued currency. Clamping down on the high appreciation pressures on its exchange rates enabled China to continue to enjoy high price competitiveness of its exports over the years, enabling it to continue to export in high quantity to external markets, boosting its employment and output levels.

Depreciation to boost X

Inadequacy of fiscal policy in boosting FDI

Discretionary fiscal policy alone may not be the best policy to maximise the gains from globalisation even for countries with strong budget balances. This is because in an increasingly competitive global market, low corporate taxes alone is just one of the many factors that influences investors' decision to invest in a particular country. There can be other more important factors that affect the decisions of foreign investors to invest in a particular country. For instance, for countries like India, despite having a corporate tax rate of 30%, still remains to be among the top FDI destinations. Hence fiscal policy alone may not be best in maximising the gains from globalisation. To fully attract FDI, various supply-side policies need to be adopted to improve the investment climate in the country. Supply-side policies geared towards improving the quality of infrastructure could attract investors more as connectivity and communications network improve. Reduction of red tape and bureaucracy could also better attract investors as ease of business workings are enhanced. The country should also craft supply-side policies that improve the quality of labour in the country such as embarking on measures to improve productivity as it would again make it attractive for investors to invest in the country. Hence supply-side policies may be viewed as more important in attracting FDIs rather than low corporate taxes alone, limiting the effectiveness of fiscal policy in maximising the gains from globalisation.

Supply-side policies to boost FDI

Supply-side policies to attract foreign talent

Similarly, low personal income taxes alone is not sufficient in attracting foreign talent to the country. Quality of living in the country may matter more to foreign talent. Hence a better policy may again be supply-side policy. Improvement in the state of living such as supply-side measures to ensure strict environmental standards are adhered to in production activities may be more important in attracting foreign talent, other than the state of infrastructure in the country.

Supply-side policies to boost X in the long term

To enjoy as much gains from globalisation, a country should also actively pursue supply-side policies to improve the price and non-price competitiveness of their goods and services. Supply-side policies such as tax incentives to encourage R&D in process and product innovation help to improve and sustain the price and non-price competitiveness of a country's goods and services. With such improvements, the export demand of a country would be high and this would contribute to actual growth and employment in the country. Countries may also need supply-side policies to actively craft new areas of comparative advantage so as to remain relevant in the global market and continue to tap on the gains of globalisation.

Supply-side and exchange rate policies to deal with the costs of globalisation

To fully maximise the gains from globalisation, there is also a need to minimise the risks/downsides of globalisation through supply-side and exchange rate policies (as fiscal policies don't help to address these costs). For example, supply-side policies such as retraining of the workers may be necessary to address structural unemployment in the country. Exchange rate policies such as appreciation may be necessary at times to deal with imported inflation.

Appreciation of the currency helps to reduce domestic price of imported key inputs, reducing cost of production in the country, increasing aggregate supply and reducing general price level, curbing imported inflation. In addition, in an increasingly globalised world, where there's higher mobility of short-term capital, it is also imperative that countries put in place appropriate regulations in the financial sector to prevent too much instability from high capital flows. This is particularly so in view of the financial crisis experienced by countries like US and EU, which could result in high capital outflow from these countries to other countries.

Evaluation

(W) However, many of the supply-side policies mentioned above do not take effect immediately. It takes time to improve infrastructure, productivity etc that are necessary to attract FDI. Hence tools of discretionary fiscal policy such as lowering corporate taxes and income taxes may still be the best policy in the short run, particularly for developing countries that are still working on improving their state of infrastructure. For countries that are facing high budget constraints, where fiscal policy is not an option in the short run, alternative policies discussed earlier such as monetary policies and market-oriented supply-side policies may be the best policy for the time period. For developed countries, however, they may be in a better position to implement the interventionist supply-side policies and it may be more important for them to do so as they lose competitiveness in labour-intensive production to developing countries and in view of increasing globalisation, may lose competitiveness in other low value-add production and hence it is more important to implement supply-side policies to support high-value add production.

(S) The policy that is deemed to be best in maximising the gains from globalisation actually also depends on the current economic conditions facing the countries in general and expectations of investors on its future economic outlook. For example, if there are expectations of sustained economic boom enjoyed by a country, there may be less consideration of corporate taxes by investors, but greater consideration of the ease in which business operations can be conducted. This would then make supply-side policies such as improvement in infrastructure and improved workings of the market to be more important in influencing the investors' decisions to invest. Hence making supply-side policies more important in this context.

Mark scheme

Knowledge, Application, Understanding and Analysis		
L3	For a competent answer that thoroughly examines how the gains from globalisation can be maximised through the use of fiscal policy AND provides strong reasons for the use of alternative policies over fiscal policy.	**9-11m**
L2	For an undeveloped answer that attempts to examine how gains from globalisation can be maximised/enhanced through the use of fiscal policy. Answer also considers (implicitly or explicitly) how alternative policies are better.	**6-8m**

L1	For an answer that lacks clarity on how gains from globalisation can be enhanced through the use of the policies. Answer may be lacking even implicit consideration of how alternative policies can be better. For a one-sided answer as well.	**1-5m**
Allow up to 4 additional marks for Evaluation		
E2	For a judgment based on economic analysis/ adequately substantiated	**3-4m**
E1	For an unexplained judgment, or one that is not supported by economic analysis	**1-2m**

ANDERSON JUNIOR COLLEGE
JC2 PRELIMINARY EXAMINATION 2013

ECONOMICS 9732/01

Paper 1

3 September 2013

Additional Materials: Answer paper **2 hours 15 minutes**

READ THESE INSTRUCTIONS FIRST

Write your name, PDG and index 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 staples, paper clips, highlighters, glue or correction fluid.

Answer **all** questions. 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 (Questions 1 and 2) 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 _____/12

Case Study Question No.	Marks
1	/ 30
2	/ 30
Sub-total	/ 60

This document consists of **7** printed pages and **1** blank page.

[Turn over

Answer **all** questions.

Question 1

The wireless telecommunications industry

Extract 1: Telecommunications as an industry

The telecommunications industry is made up of a complex set of suppliers and service providers. The key companies in the telecommunication industry include:

- Telecommunication product and equipment manufacturers
  These companies manufacture products that are used by both customers and other companies in the same industry. They include satellite and broadcast network equipment, wireless and wired landline equipment, computer networking equipment and mobile phones.

- Telecommunication service providers
  These companies, or service providers, provide voice or data services and operate wirelessly or over traditional wired land lines. The top wireless telecommunications service providers in the United States are Verizon Wireless and AT&T Mobility.

Source: http://www.technofunc.com, accessed 4 August 2013

Extract 2: AT&T to buy T-Mobile for $39 billion

AT&T announced that it had agreed to buy T-Mobile for $39 billion. The proposed deal is a "horizontal merger" that would combine two companies that had been direct competitors. The deal would leave just three major companies in the United States: AT&T, Verizon and the much smaller Sprint Nextel.

Some critics denounced the merger saying it would most likely lead to higher prices. "Consumers have borne the brunt of the increasingly concentrated market for mobile phone service," Senator Herb Kohl, who heads the subcommittee on antitrust, competition policy and consumers rights, said.

AT&T customers, though, could benefit in one notable area: service. Both AT&T and T-Mobile operate on the same technology, known as Global System for Mobile Communications (GSM), which is the de facto global standard for mobile communications. Thus the combination should provide better coverage. Their network technology fits nicely together so AT&T could better use some of T-Mobile's electromagnetic spectrum, helping to relieve some of the pressures on its network and turning its capacity constraint into "an efficient capacity-enhancing combination".

The deal would also provide significant cost savings roughly $3 billion a year for the new company. The combined company is expected to close hundreds of retail outlets in areas where they overlap, as well as eliminate overlapping back office, technical and call center staff. It may also drastically reduce advertising spending.

Scale will be critical as AT&T continues its aggressive rollout of the next generation wireless network, known as 4G. The company has been slower than rivals to deploy the 4G LTE technology. When that takes off, phone manufacturers can expect strong demand for the latest mobile phones and devices that are compatible with this wireless network.

The transaction is expected to start a fierce battle as regulators scrutinise the effect of the deal on competition and consumers. Critics contend that the proposed merger would leave Sprint as the only remaining national provider to compete with AT&T and Verizon Wireless. But Sprint would be less than half the size of either of its competitors. In addition to facing significant network scale disadvantages, it would have an increasingly difficult time securing mobile phone arrangements with manufacturers comparable to those of its two dominant rivals.

Adapted from www.nytimes.com, accessed 24 July 2013

Extract 3: Europe trails US in next-generation wireless

The mobile wireless markets in the EU are characterised by lower revenues, lower prices, lower intensity of use, lower quality, less product differentiation and consumer choice, a slower pace of innovation and lower rates of capital investment than the mobile wireless market in the United States (US). Industry analysts say that Europe has lagged behind because its telecommunications market is much more fragmented and competitive than that of the US. European consumers therefore pay much less to use mobile services in the region, with EU prices almost half that of the US on average. However, this low pricing has come at a cost to investment and innovation.

Adapted from http://www.ft.com, accessed 1 August 2013

Extract 4: Innovation and new technologies

One of the principal drivers in the growth of wireless services is the ability of mobile connections to facilitate companies' drive to cut costs and improve environmental performance through reducing energy use. Numerous opportunities exist for wireless telecommunications to reduce carbon emissions and energy costs, including mobile tele-presence, virtual offices and smart grids, meters and network monitoring. Research shows that in 2020, these new wireless opportunities, supported by mobile services, could save 2.4% of expected carbon emissions.

New technologies can make a significant contribution to the challenge of reducing greenhouse gas emissions. As more and more devices are connected through broadband networks, many companies are innovating new technologies and services to benefit from and facilitate this transition. Demand for new technologies is growing with the proliferation of smart grids, cars and cities, all of which require an enhanced 'intelligent' infrastructure of communications technologies.

Adapted from UN Global Compact-Accenture CEO Study: *Towards a new era of sustainability in the communications industry,* 2011

Table 1: Service revenues of key wireless service providers, 2008 – 2011 (millions of dollars)

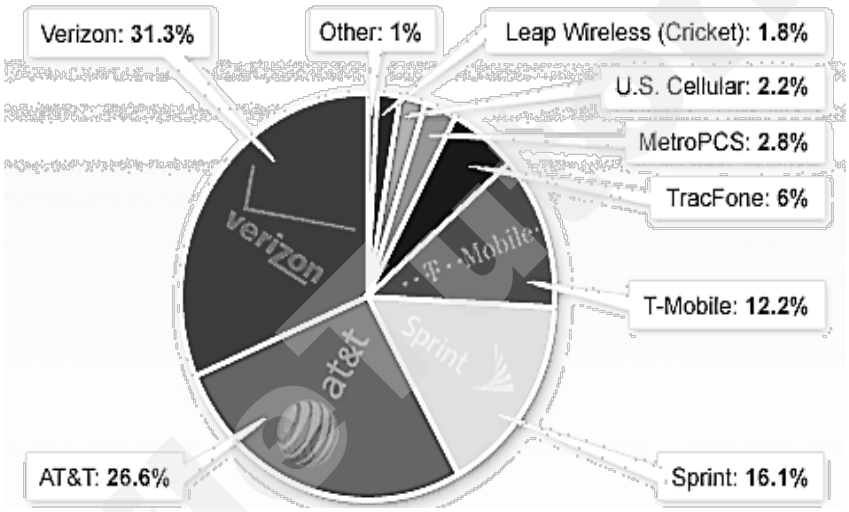
	2008	2009	2010	2011
Verizon Wireless	42,602	52,046	55,629	59,157
AT&T	44,249	48,563	53,510	56,726
Sprint Nextel	28,435	25,832	25,894	27,390
T-Mobile	19,242	18,926	18,733	18,481

Table 2: Service connections for key wireless service providers, 2008 – 2011 (thousands)

Service Provider	2008	2009	2010	2011
AT&T	77,009	85,120	95,536	103,247
Verizon Wireless	72,056	85,445	87,535	92,167
Sprint Nextel	48,338	48,133	49,910	55,021
T-Mobile	32,758	33,790	33,734	33,185

Source: 16th Wireless Competition Report, Federal Communications Commission, 21 March 2013

Figure 1: US wireless provider market share, 2011 (% of total wireless subscribers)



Source: http://money.cnn.com, accessed 30 July 2013

Questions

(a) **(i)** Compare the change in service connections of key wireless service providers between 2008 and 2011. [2]

(ii) How far does this comparison explain the difference in revenue growth of the key wireless service providers in Table 1? [4]

(b) With reference to the data where appropriate, explain the likely reasons for the proposed merger between AT&T and T-Mobile. [6]

(c) Assess how customers and different companies in the telecommunications industry may be affected by the proposed merger between AT&T and T-Mobile. [8]

(d) With reference to the wireless telecommunications industry, discuss whether more competition or more innovation is the key to achieving a more efficient allocation of resources. [10]

[Total: 30 marks]

Question 2

Japanese economy and trade

Extract 5: Japan's economy heads into freefall after tsunami

The full extent of the economic impact of Friday's earthquake and tsunami is becoming apparent with hundreds of factories shut across Japan. Toyota and Nissan said they were halting production at all of their 20 factories. Toyota, the world's largest carmaker, evacuated workers from two plants in the worst affected regions. The plants make up to 420,000 small cars each year, mostly for export. Other manufacturers have also reported major damage to their factories, with Kirin Holdings, Fuji Heavy Industries, GlaxoSmithKline and Nestlé among those to halt operations. All ports have been closed amid warnings of aftershocks to come.

Japanese firms and investors are racing to repatriate their assets, selling dollars and other foreign currencies, to prepare for the cost of rebuilding their domestic economy. It is feared this will make exports more expensive and choke off the hoped-for, export-led recovery. The huge cost of rebuilding the affected areas will also push up Japan's public debt, which is already the largest among advanced economies.

David Buik at BGC partners said: "The Bank of Japan, I am sure, will be on high alert, doing everything in its power to stop the yen becoming too strong, as well as providing the banking sector with all the liquidity it may require. Japan's economy is export-led. So with such an inordinately large budget deficit, it will be imperative to get those factories open again."

Source: *The Guardian*, 13 March 2011

Extract 6: Japan back in recession as earthquake cuts consumption

Gross domestic product in Japan shrank 0.9% in the first three months of the year and has contracted for two quarters in a row. Naomi Fink, Japan Strategist at Jefferies, said the most worrying part of the latest data was the decline in private consumption of 0.6%, as people cut their spending after the earthquake. Private consumption accounts for almost 60% of the Japanese economy. "Judging by the drop in retail sales and household expenditures over March, consumption should be one of the greater contributors to negative growth in the first quarter," said Ms Fink.

The second biggest component of the world's third largest economy is trade. Exports made up 13.5% and imports 12.7% of gross domestic product in 2009. The massive earthquake and tsunami devastated exports, while the costs of imports rose due to high commodity prices. "One issue on the export side is the ongoing struggle to restore damaged production lines and supply chains," said Ms Fink. "On the import side, the increase in demand for fossil fuels, to offset the drop in supply of nuclear energy, is unlikely to fade anytime soon," she added. Once rebuilding gathers momentum, however, it should have a positive impact on the economy. But that is only likely to happen towards the end of this year.

"Japan's economic strength is gradually declining," Bank of Japan (BOJ) governor Masaaki Shirakawa told a parliamentary committee meeting on Tuesday. Analysts say this signals that the central bank will stick to its ultra-loose monetary policy. The bank has pumped billions of dollars into the financial system to stabilise the economy since the massive earthquake. The BOJ is expected to keep the rates unchanged at the lowest level in a range of 0.0% to 0.1% to help stimulate the economy.

Source: *BBC News*, 19 May 2011

Extract 7: The Trans-Pacific Partnership negotiations

The Trans-Pacific Partnership (TPP) is a proposed regional free trade agreement (FTA) being negotiated among the United States, Australia, Brunei, Canada, Chile, Malaysia, Mexico, New Zealand, Peru, Singapore, and Vietnam. On March 15, 2013, Prime Minister Abe announced that Japan would formally seek to participate in the negotiations to establish the TPP.

In making the decision to seek participation in the TPP, Prime Minister Abe had to confront influential domestic interests that argued against the move. Among the most vocal have been Japanese farmers, especially rice farmers, and their representatives. They have argued that Japanese agriculture would be severely harmed by foreign competition as Japan would have to negotiate away high tariffs and other protective measures on imports of agricultural products. Prime Minister Abe acknowledged those domestic sensitivities, but also insisted that Japan needed to take advantage of "this last window of opportunity" to enter the negotiations, if it is to grow economically. Other Japanese business interests, including manufacturers, strongly support the TPP.

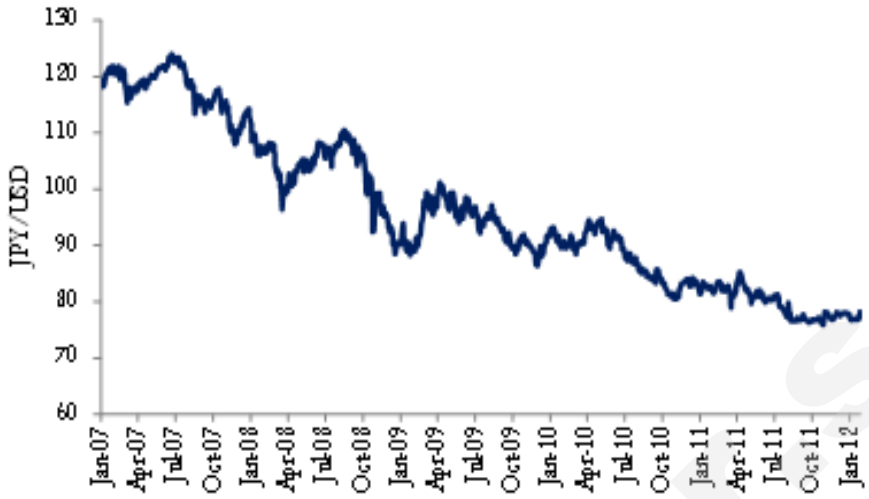
For the United States, it is negotiating market access for goods, services and agriculture with countries with which it does not currently have FTAs: Brunei, Japan, Malaysia, New Zealand, and Vietnam. Negotiations are also being conducted on intellectual property rights, investment, labour, environmental standards and other issues. As the countries that make up the TPP negotiating partners include advanced industrialised, middle income, and developing economies, the TPP, if implemented, may involve substantial restructuring of the economies of some participants while eliminating tariff and non-tariff barriers among the parties.

Source: Congressional Research Service Report for Congress, 17 June 2013

Figure 2: Japan's current account and trade balance

Sources: Haver Analytics; The Economist * The Economist's estimate

Figure 3: Japan's exchange rate



Sources: Bloomberg; KFH-Research

Questions

(a) **(i)** Compare the change in Japan's trade balance with that of its current account balance between 1985 and 2011. [2]

(ii) Explain possible reasons for the changes identified in a (i). [4]

(b) Using a diagram, explain the trend in Japan's exchange rate as shown in Figure 3. [2]

(c) Explain the economic impact of the earthquake and tsunami on Japan. [4]

(d) With reference to the data, assess the impact of forming the Trans-Pacific Partnership (TPP) on member countries. [8]

(e) Using the evidence in the data, discuss the policy options available to deal with the recession in Japan. [10]

[Total: 30 marks]

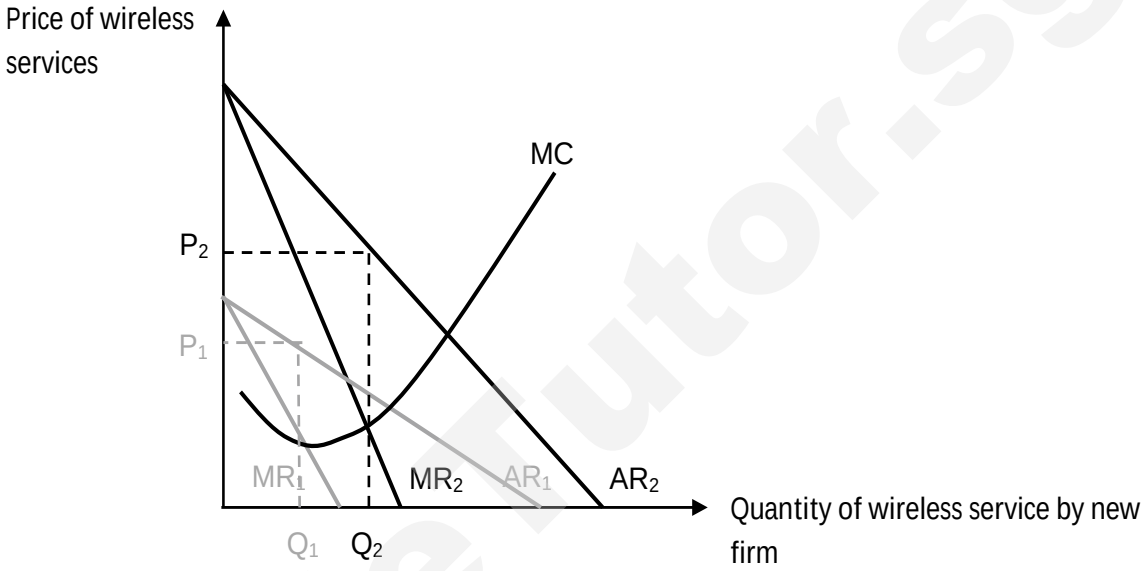
Anderson Junior College
JC2 2013 H2 Economics
Preliminary Examinations
Case Study Question 1

The Wireless Telecommunications Industry

(a)	**i. Compare the change in service connections of key wireless service providers between 2008 and 2011.**	**[2]**
	Similarity [1m] · The service connections of all the key wireless service providers have generally increased. Difference [1m] · Service connections for AT&T and Verizon Wireless increased by the greatest extent. OR · Service connections for AT&T and Verizon Wireless increased throughout the stated period but service connections for Sprint Nextel and T-Mobile dipped in 2009 and 2010 respectively.	
	ii. How far does this comparison explain the difference in revenue growth of the key wireless service providers in Table 1?	**[4]**
	Revenue is defined as the amount of money that a company actually receives during a specific period. It is calculated by multiplying the price at which goods or services are sold by the number of units or amount sold. From Table 1, service revenue grew for Verizon Wireless and AT&T but fell for Sprint Nextel and T-Mobile. Perspective 1: The comparison can explain the difference in revenue growth Verizon Wireless and AT&T reported an increase in service connections throughout the stated period. Hence a higher number of connections when multiplied with the price (assumed that it is unchanged) would give rise to a higher amount of revenue. Similarly, Sprint Nextel and T-Mobile had lower levels of connections in 2009 and 2010 respectively. This explained why they received less revenue in the same year as well. Perspective 2: The comparison cannot explain the difference in revenue growth Revenue for T-Mobile fell in 2009. This occurred despite the increase in the connections reported in the same year. This could be due to a fall in price that is of a greater extent than the increase in connections that year. In conclusion, more information such as price of wireless service charged by the companies to ascertain other factors that may be responsible for the difference in revenue growth. *2m for each perspective* ALTERNATIVE ANSWER: Perspective 1: The comparison can explain the difference in revenue growth As the service connections for AT&T and Verizon Wireless increased by the greatest extent, they also saw an increase in the revenue between 2008 and 2011. As the increase in service connections for Sprint Nextel and T-Mobile were much smaller, their revenue fell,	

	possibly due to a fall in price. <u>Perspective 2: The comparison cannot explain the difference in revenue growth</u> While the service connections of all the key wireless service providers increased between 2008 and 2011, the revenue grew for Verizon Wireless and AT&T but fell for Sprint Nextel and T-Mobile. This could be due to a fall in price that is of a greater extent than the increase in connections for Sprint Nextel and T-Mobile. *2m for each perspective*	
(b)	**With reference to the data where appropriate, explain the likely reasons for the proposed merger between AT&T and T-Mobile.**	**[6]**
	The proposed merger between AT&T and T-Mobile is a horizontal merger (Extract 2, para 1) which is a merger between 2 firms in the same industry and at the same stage of production with a similar range of services. Assuming the new merged firm aims to maximise profits, the proposed merger allows the new firm to enjoy cost and revenue advantages and increase profits. <u>Cost advantages</u> [3m] The proposed merger would increase the scale of service provision for the new firm. This gives rise to greater economies of scale which lowers the firm's long run average cost. Such economies of scale can be technical in nature. For example, both AT&T and T-Mobile operate on similar network technology (Extract 2, para 3). When these are combined, the benefits in terms of relieving current network congestions and greater capacity to support the wireless network exceed the cost of consolidating and maintaining the technology. In addition, the high costs of setting up the next generation wireless network, 4G LTE technology (Extract 2, para 5) can be spread over a larger subscriber base. Economies of scale can also be of managerial and marketing types. There can be gains from streamlining and specialisation as overlapping processes and operations such as retail outlets, back office, technical and call center staff are eliminated (Extract 2, para 4). With network scale advantages, the new firm would also be able to secure more favourable mobile phone arrangements with manufacturers (Extract 2, para 6). <u>Revenue advantages</u> [3m] If merged, the new company will take 38.8% share of the wireless provider market (Figure 1) and can rival the biggest player Verizon Wireless (which has 31.3% share) easily. Sprint Nextel having 16.1% is the smallest player and poses little threat to the new company. Almost a monopoly, the demand for wireless services provided by the new company will be more price inelastic. This allows the new company to increase price further without fear of customers switching to other firms, raising its total revenue. The possibility of earning supernormal profits given lower costs and greater revenue may also provide for greater funding to introduce newer and more efficient technology for wireless communications. This can deter the entry of potential firms who are unable to compete and further establish the monopoly power of the new firm.	
(c)	**Assess how customers and different companies in the telecommunications industry may be affected by the proposed merger between AT&T and T-Mobile.**	**[8]**
	Impact on customers <u>Perspective 1: Negative impact on customers</u>	

With the merger, demand has increased and has also become more price inelastic (AR_2). The merged firm thus is able to **raise price** of wireless services further from P_1 to P_2 thus lowering consumers' purchasing power**,** assuming no change to cost conditions. The firm is hence even more **allocatively inefficient** as the firm will charge a price (P_2) even higher than the original price (P_1). This is supported in Extract 2 whereby critics predict that the merger would most likely lead to higher prices as a result of the "increasingly concentrated market for mobile phone service". Thus, the customers place a higher value on the last unit of the service than the additional cost of providing it. Consumers may also face fewer choices and more inconveniences as the hundreds of retail outlets are closed down and less call center staff are hired to man the service hotlines.



There may be other social disadvantages to the customers. The supernormal profits earned by the merged firm may be seen as an exploitation of customers because of the transfer of income from a large majority of customers to a small minority of large producers. This leads to **inequitable income distribution**.

<u>Perspective 2: Positive impact on customers</u>

However, customers may also benefit from the merger. As explained in (b), the merged firm is able to enjoy lower costs of production of about $3 billion due to reduced advertising spending and elimination of overlapping operations (Extract 2, para 4), enabling it to **charge a lower price**, thereby improving consumer surplus and welfare. In addition, **service may improve** for customers with the enhancement of network capacity (Extract 2, para 3) so that they benefit from less dropped calls, wider coverage and faster connection speeds. In addition, it is possible for the merged firm to channel supernormal profits to fund the roll-out of the next generation wireless network, 4G LTE, (Extract 2, para 5) so that, together with the introduction of new compatible mobile phones, customers benefit from **greater dynamic efficiency**.

Impact on companies supplying the new firm equipment such as satellite, broadcast network equipment, wireless equipment.

<u>Perspective 1: Negative impact on companies</u>

The merged firm has stronger bargaining power to negotiate for lower prices of the

equipment. Thus the companies would earn less revenue and profits.

Perspective 2: Positive impact on companies
With combined resources, the merged firm is likely to be more aggressive in developing its 4G technology (Extract 2, para 5). Thus, the companies supplying the necessary technology and infrastructure would benefit from an increase in demand and thus higher revenue and profits. In addition, the companies could benefit from lower transaction costs as they have to deal with only one large firm instead of two.

Impact on companies producing mobile phones e.g. Samsung, Apple

Perspective 1: Negative impact on companies
The merged firm has stronger bargaining power to negotiate for lower prices of the mobile phones to be bundled with the wireless service. Thus the companies would earn less revenue and profits.

Perspective 2: Positive impact on companies
Wireless service and mobile phones are **goods in joint demand**. When demand for the new 4G technology increases after it is rolled out by the merged firm, demand for 4G phones will similarly increase. These companies can expect higher revenues and profits. Given that mobile phones are becoming more sophisticated and more expensive when purchased separately, they can also tie up with the new firm for attractive bundling packages to increase the appeal and sales of their mobile phones.

Companies in direct competition with the new firm e.g. Sprint, Verizon

Perspective 1: Negative impact on companies
Sprint will be less than half the size of either of its competitors and therefore find itself at a competitive disadvantage. In addition to facing significant network scale disadvantages, it would have an increasingly difficult time securing mobile phone arrangements with manufacturers comparable to those of its two dominant rivals (Extract 2, para 6), reducing the appeal of its packages, causing its demand and hence revenue to fall. It also faces the risk of being acquired by Verizon.

Perspective 2: Positive impact on companies
With the merger, Verizon would cease to be the market leader. Faced with such a threat, Verizon may be incentivised to improve efficiency and service as well as lower price to compete more fiercely with the new firm.

Evaluation
W: On the whole, the proposed merger is likely to have a more direct impact on the customers and direct competitors than other companies supplying the new firm equipment and mobile-phones. In addition, the nature of the impact is also more likely to be positive on the non-price aspect (e.g. service, marketing) but negative on the price aspect.
Suggested marks scheme for part (c)

L3	For an answer that provides a thorough discussion of the impact on customers and at least 2 different types of companies with relevant reference to the case material and evaluative comments	6-8 m

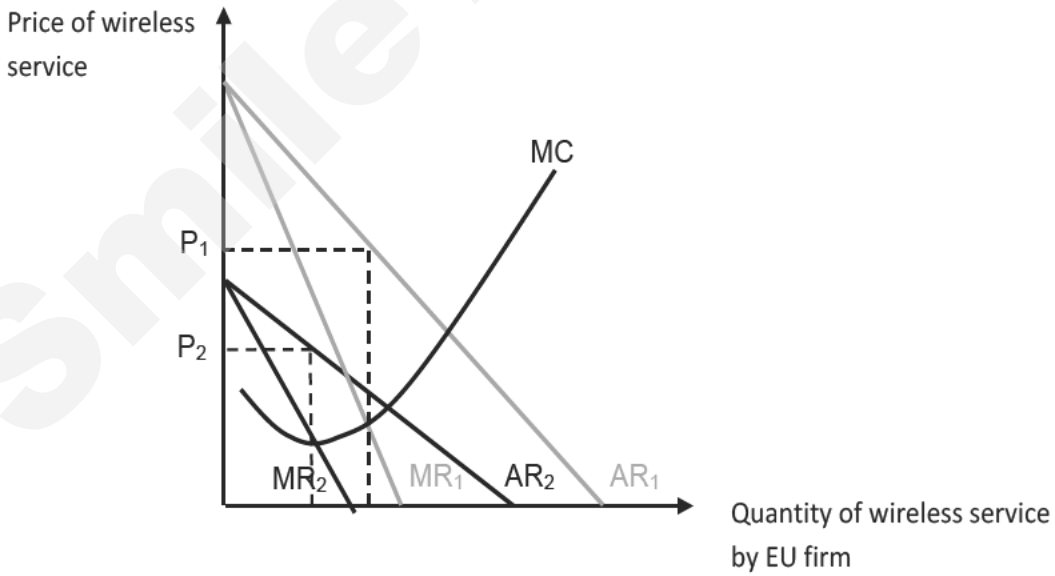
	L2	For an answer that attempts to discuss the impact on customers and companies but does not differentiate between the different types of companies. There is some reference to case material.	3-5 m
	L1	For an answer that is one-sided or lacking in economic analysis.	1-2 m

(d) **With reference to the wireless telecommunications industry, discuss whether more competition or more innovation is the key to achieving a more efficient allocation of resources.** **[10]**

Efficiency in resource allocation entails **both allocative efficiency and productive efficiency**. Allocative efficiency is achieved when it is impossible to change the allocation of resources in order to make everyone better off (i.e. cannot make someone better off without making someone else worse off.) Productive efficiency is achieved when a given level of output in the market is produced at the lowest possible cost, i.e. any point on the long-run average cost (LRAC).

<u>Perspective 1: More competition is key to achieving a more efficient allocation of resources</u>

The European wireless markets are characterized by more competition (Extract 3). This is because there are a lot more wireless service providers in the EU than in the US. When there is more competition due to the entry of new firms, firms are likely to be **less allocative inefficient**. This is because with more competition and more substitutes, demand is lower and is less price-inelastic for each firm. Firms have less monopoly power to charge very high prices.



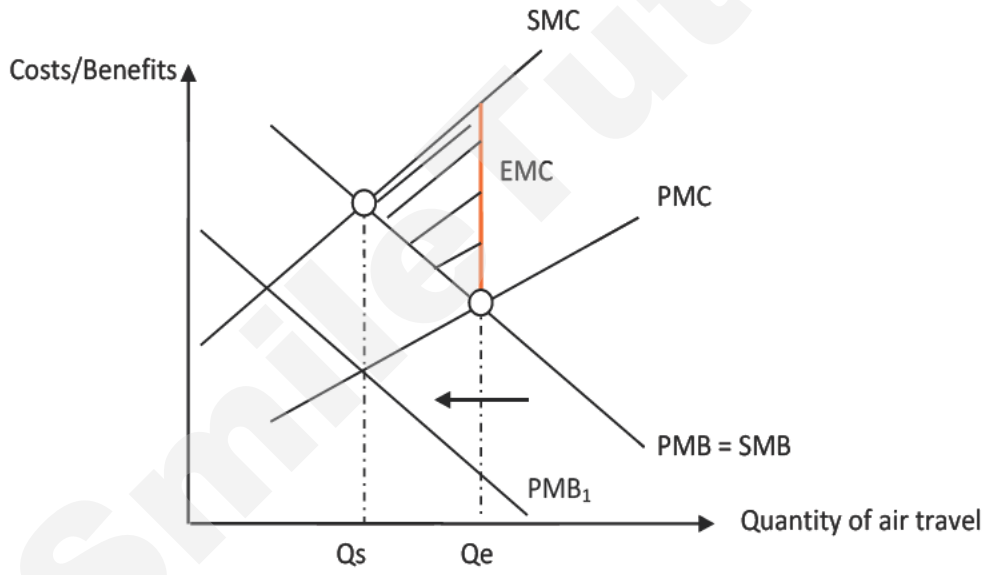
As seen from the above diagram, price (P_2) exceeds marginal cost by a smaller amount as a result of more competition. This implies that there is less under-allocation of resources. This is an improvement in terms of efficiency in resource allocation.

In addition, there is also **less productive inefficiency**. Due to greater competition or threat of entry from potential firms, the existing firms may be forced to minimise costs and put in more effort to seek the lowest-cost method of production. This also improves the allocation of resources in the provision of wireless services.

Perspective 2: More innovation is key to achieving a more efficient allocation of resources

However from Extract 3, more competition has come at a cost to investment and innovation. The European telecommunications sector is falling far behind the US because its telecommunications market, being more competitive than that of the US, earns lower revenue and thus is unable to channel sufficient funds for investment in technology development. Yet, as seen in Extract 4, these investments in wireless telecommunications technologies can potentially reduce carbon emissions and energy costs by 2.4% in 2020.

Carbon emissions generated, say from air travel, could potentially lead to global warming which imposes external cost on not just the country itself, but the rest of the world as well. As seen in the diagram below, due to the presence of negative externalities from air travel, there is a divergence between private marginal cost (PMC) and social marginal cost (SMC). The market equilibrium level of air travel is at Qe whereby private marginal benefit = private marginal cost (PMB=PMC). However, at Qe, SMC>SMB and society values an additional unit of air travel less than what it would cost society to produce it. Socially optimum level of air travel is at Qs whereby SMB=SMC, thus there is an over-allocation of resources to air travel that leads to deadweight loss to society, resulting in market failure.



When there is greater innovation in wireless communications to support areas such as mobile tele-presence, virtual offices and smart grids, meters and network monitoring (Extract 4, para 1), there is less of a need for air travel as virtual meetings can be set up easily. Therefore, advancement in technology in wireless communications can reduce the reliance on travelling and **reduce the perceived benefits of travelling** and shift the PMB curve to the left, leading to a more socially optimal level of activity at Q_S, improving the allocation of resources.

Other than reducing negative externalities, innovation in wireless communications also generates positive externalities in the form of higher labour productivity and economic growth. However, the market under-allocates resources to innovation. Hence, when more resources are channeled to innovation, this also helps to improve the allocation of resources.

In addition, innovation to develop more cost-efficient means of production and facilitate companies' drive to cut costs (Extract 4, para 1) can also bring about **greater productive efficiency**. If the firm passes on the cost savings to consumers, it would lead to lower prices for consumers and **greater allocative efficiency** too.

Evaluation

W: In conclusion, from a static point of view, there should be more competition to achieve a more efficient allocation of resources. However, from a dynamic point of view, there should instead be more innovation. The wireless telecommunications industry is unlike the standard textbook industry. It is characterised by dynamism, product differentiation, economies of scale and scope and network effects. Given such an industry, it is more important for firms in the industry to earn supernormal profits (i.e. only possible with less competition and a more concentrated market) to finance innovation.

R: Government regulation of such markets must take into account the effect on incentives for ongoing innovation and investment. Increasing the number of competitors in dynamic markets like the wireless telecommunications industry can actually lower consumer welfare by reducing the incentives of all firms in the market to innovate and invest.

Suggested marks scheme for part (d)

Knowledge, Application, Understanding and Analysis		
L3	For an answer that presents a well-discussed analysis, backed strongly by economic theories, whether more innovation or more competition is key to achieving a more efficient allocation of resources.	7-8m
L2	For an answer that is balanced but limited/underdeveloped explanation.	4-6m
L1	Very superficial analysis. Mere listing of points. Inaccurate knowledge of concepts. One-sided answer, max 3 marks	1–3m
Allow up to 2 additional marks for Evaluation		
E2	Evaluative comments with justification.	2m
E1	Evaluative comments, unexplained.	1m

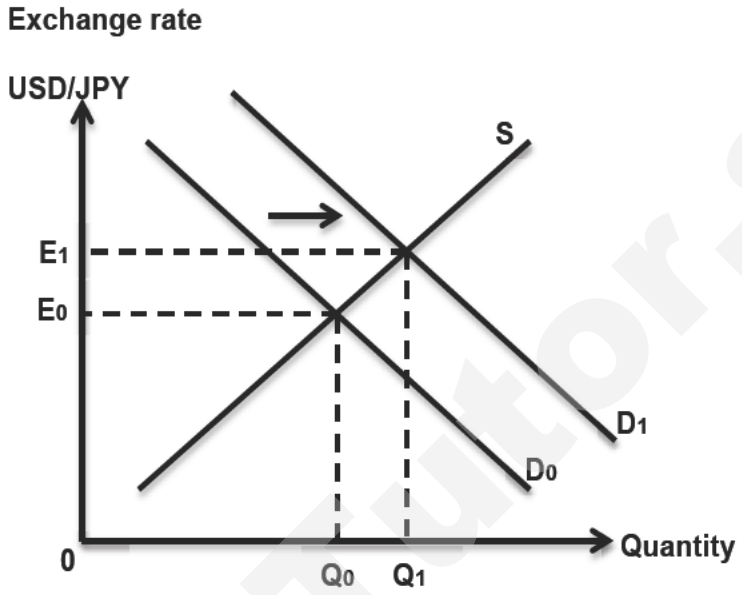
Anderson Junior College
JC2 2013 H2 Economics
Preliminary Examinations
Case Study Question 2

Japanese economy and trade

(a)	**(i)**	**Compare the change in Japan's trade balance with that of its current account balance between 1985 and 2011.**	**[2]**
		Both the trade balance and current account balance worsened between 1985 and 2011. [1m] There was a larger fall in Japan's trade balance from about 3.2% to -0.2% of GDP as compared to the current account surplus which decreased from about 3.5% to 2% of GDP. [1m] OR Despite worsening, Japan's current account balance remained positive / was in surplus throughout the period but its trade balance was estimated to turn negative / be in deficit in 2011. [1m]	
	(ii)	**Explain possible reasons for the changes identified in a (i).**	**[4]**
		It is likely that the Marshall-Lerner condition is met and the appreciation of the Japanese yen caused net exports of Japan to fall, leading to a worsening trade balance. [1m]. OR The worsening trade balance could be due to a fall in demand for Japan's exports and/or an increase in the price of imports, due to high commodity prices. This would lead to a fall in export revenue and/or a rise in import expenditure. This was made worse by the tsunami where export revenue fell and import expenditure increased. [1m] Since the trade balance is a component of the current account balance, a worsening trade balance would lead to a worsening current account balance, ceteris paribus. [1m*] *If reason was well-explained and both trade and current account balance were mentioned though link was not explicitly explained, 2 marks were still given. There was a larger fall in the trade balance compared to the current account balance possibly due to other components of the current account like the income balance or net transfers increasing. [1m] There could have been a net inflow of investment income into Japan, such as dividend payments on equities and profits on Japanese foreign direct investment holdings overseas. This would help to offset some of the fall in the trade balance, thus causing the current account to fall by less. [1m]	
(b)		**Using a diagram, explain the trend of Japan's exchange rate as shown in Figure 3.**	**[2]**

The yen has appreciated/strengthened between Jan 07 and Jan 12 from about 120 JPY:1 USD to about 80 JPY:1 USD, possibly due to an increase in the demand for yen. Especially in 2011, "Japanese firms and investors sold US dollars and other foreign currencies to prepare for the cost of rebuilding the Japanese economy." This would have increased the demand for yen, pushing up its value. [1m for correct explanation.]

Foreign exchange market for Japanese yen



[1m for diag. with correct identification of the trend of the exchange rate.]

(c) Explain the economic impact of the earthquake and tsunami on Japan. [4]

The devastation has caused hundreds of factories across Japan as well as its ports to remain closed after the earthquake and tsunami. Toyota, the world's largest carmaker, and other manufacturers, like Nestlé have also halted operations. This, with the rising commodity prices would both cause the **aggregate supply (AS) to fall**. [2m]

Optional
The fall in AS would also cause the general price level to rise, leading to cost-push inflation. [1m]
Optional
Furthermore, people cut their spending after the earthquake, with a decline in private consumption of 0.6% as mentioned in Extract 6. As private consumption (C) accounts for almost 60% of the Japanese economy, Japan would see a significant fall in its aggregate demand (AD). [1m]
OR
There was a fall in demand for Japanese exports (especially food) as people feared that the products were contaminated by the radiation from the damaged nuclear plant. This caused a fall in AD. [1m]
OR
Exports of services fell as tourists cancelled their trips to Japan, causing a fall in AD. [1m]

With the fall in AS and AD, **national output would decline**, explaining the contraction of Japan's gross domestic product (GDP) for two consecutive quarters in 2011. [1m]

		Optional The fall in NY would also likely lead to an increase in unemployment as the derived demand for labour falls with the reduction in national output. [1m] Optional As exports dropped sharply and exports made up 13.5% of Japan's GDP in 2009, the fall in export revenue would be significant. At the same time, the increase in demand for fossil fuel, to offset the drop in supply of nuclear energy would push up Japan's import expenditure. The fall in export revenue and rise in import expenditure would cause the Balance of Trade (BOT) to worsen. [1m]	
(d)		**With reference to the data, assess the impact of forming the Trans-Pacific Partnership (TPP) on member countries.**	**[8]**
		Introduction The Trans-Pacific Partnership (TPP) is a multi-lateral free trade agreement (FTA) where an association of trading nations agrees to remove tariff and non-tariff barriers among themselves. Each member, however, retains its independence in establishing trading policies with non-members and therefore maintains its own set of trade restrictions against outsiders. The agreement does not necessarily apply to all products traded among members. It can involve a mix of free trade in some products and preferential, but still protected, treatment in others. Extract 7 mentions that for the United States, it is negotiating market access for goods, services, and agriculture with countries with which it does not currently have FTAs. Negotiations are also being conducted on intellectual property rights, investment, labor, environmental standards and other issues. **Benefits** **i. Trade creation** Trade creation occurs when domestic production is replaced by cheaper import substitutes from a member country. With the removal of trade barriers among more members, a greater degree of specialisation based on comparative advantage is encouraged, shifting consumption away from higher-cost producers to lower-cost producers. Goods that countries do not have comparative advantage in can be obtained more cheaply from other members of the TPP and imports rise. Goods that countries have comparative advantage in will see increased exports to other member countries. A more efficient resource allocation brings welfare gains to the member countries and avail them to a greater extent of the benefits from trade. **ii. Improved balance of trade, greater economic growth and higher employment** Members of the TPP are now able to export more to the rest of the member countries, improving their balance of trade assuming export revenue increases faster than the increase in import expenditure. Aggregate demand increases and thus national income by more than proportionately due to the multiplier effect. With the increased national output, derived demand for labour and thus employment increases, assuming that the country is not at full-employment.	

iii. Economies of scale

With the enlarged market, firms in member countries are able to exploit more available internal economies of scale and increase their productive efficiency.

iv. Increased competition leads to greater efficiency

The TPP can also bring about greater competition between member countries as trade barriers are removed. Firms have to be increasingly cost efficient and offer higher-quality goods and services to survive. They are thus more likely to engage in research and development, stimulating new capital and innovation. Society benefits from greater productive and dynamic efficiency.

v. Greater choice, lower prices

Consumers are likely to enjoy a wider choice of goods and lower prices.

vi. Increase in foreign direct investment (FDI)

The TPP can lead to greater ease of FDI into member countries. As firms expect to enjoy greater EOS as well as increased revenue from access to enlarged markets, they increase their FDI, thereby increasing national output, income and employment in the host member countries. Furthermore, FDI can lead to a transfer of ideas, skills, expertise and technology, improving the productive capacity and increasing potential economic growth of the host country. This is especially beneficial for developing economies.

For the member country that is increasing its FDI overseas (usually advanced industrialised economies), they can benefit from an increase in exports of capital equipment and other material inputs needed to run the subsidiary overseas. In the long run, FDI can also generate a steady return flow of income for them.

vii. Improved human capital and wages

The TPP can allow greater mobility of labour, thereby leading to a larger inflow of foreign talents (usually to the advanced economies), further improving their human capital, increasing their productive capacity and thus potential growth. The mobility also allows workers to enjoy higher wages and greater job opportunities in other member countries.

<u>Costs</u>

i. Fall in output and employment

Domestic producers may find it difficult to survive with the lower price of imports (due to the removal of tariffs) and will have to lower the price of their products. There would also likely be a decrease in output or some firms leaving the industry, leading to a fall in profits and employment. Retrenched workers from those firms may lack the necessary skills to find employment in expanding industries, leading to structural unemployment. In other cases, some workers lose their jobs which have been outsourced to lower-cost countries.

As mentioned in Extract 7, Japanese farmers, and their representatives have argued that Japanese agriculture would be severely harmed by foreign competition with the TPP as

Japan would have to negotiate away high tariffs and other protective measures on imports of agricultural products. If these traditional industries (which are highly localised) are no longer protected, regional unemployment can result and lead to a mass exodus to the already overcrowded urban cities.

ii. Trade diversion

The TPP may shift production away from a lower-cost producer to a higher-cost member country. This will worsen international allocation of resources as it shifts production away from countries with comparative advantage. However, the net welfare effect on member countries is uncertain (may or may not be welfare-reducing) as it depends on the welfare gained by consumers from lower priced imports versus the loss by producers (who have to sell lower output at lower prices) and the loss of tariff revenue for the government. In general, the larger the difference between the non-distorted prices in the member country and in the rest of the world, the more likely that trade diversion will reduce national welfare.

iii. Inflation

The increase in the demand for exports could lead to demand-pull inflation if it is not met by an increase in productive capacity. Higher demand for factors of production could also lead to an increase in factor prices and thus cost-push inflation.

iv. Driving out of SMEs and crowding out of domestic investment

With greater ease of entry of foreign firms into the market, efforts to develop homegrown industry or diversify the economy may be stifled. Small-medium enterprises (SMEs) may have difficulty competing against large multi-national companies (MNCs) and be driven out while the MNCs gain monopoly power and possibly charge higher prices in the long run. In addition, foreign firms may only partially finance their investment, borrowing the rest from the host country's capital market. This drives up interest rates, crowding out domestic investment.

v. Greater instability

Foreign firms tend to be footloose and may move their investment (direct and portfolio) from one country to another to avoid losses (or make profits) from changes such as in exchange rates or economic conditions. With a greater dependence on FDI, there may be greater instability in the host country and makes it more difficult for governments to do long-term planning.

vi. Greater income inequality

With more relocation and offshoring taking place in many developed countries, there is an increase in demand for skilled workers and fall in demand for lower skilled workers. The result is an increase in wages for those with relevant skills but low or even no income for those who are displaced. This is likely to be the case for the Japanese farmers who will see their standard of living being further undermined. This can lead to rising inequality in the country.

vii. Environmental damage

The costs to developed countries from joining the TPP can include the closure of industries that re-locate to member low-wage countries where environmental regulations are less stringent. This may cause plants in the source country using cleaner but more expensive methods to close down. However, a more prosperous recipient low-wage member country could also become more able and willing to enforce environmental regulations. Greater economic integration has been associated with production that is cleaner, especially when environmental standards are negotiated as part of the agreements as mentioned in Extract 7. Fines or trade sanctions can be imposed on countries that fail to enforce environmental laws.

viii. Brain drain

The TPP is likely to allow easier migration of highly educated and skilled people in search of better prospects to other member countries. These people are likely to come from developing economies which will suffer a loss of precious human resource and thus face limitations to potential economic growth.

Conclusion

In terms of trade, the benefits from joining the TPP are more likely to be positive, the more closely the prices in the member countries approach the low-cost world price. The higher the initial tariff rate, the lesser the welfare loss from trade diversion is too. Also, the greater the number of participating countries, the more beneficial since there is a smaller group of countries from which trade can be diverted.

In terms of particular groups, taking Japan's farmer for example, the costs are actually necessary if Japan wants to benefit from freer trade. The current protectionist measures go against the principle of comparative advantage and as can be seen, may be hard to remove, perpetuating domestic inefficiency and misuse of resources. If Japan no longer has comparative advantage in farming and other industries, resources should be diverted to other more productive uses. Tariffs against low-cost producing countries will safe-guard workers in the protected industries but consumers will be denied the opportunity to buy from the cheaper source of supply. With the TPP, freer trade can lead to the expansion of other industries and the unemployed workers can find new employment there. Therefore, the **benefits to society are likely to outweigh the costs** to certain groups. It was also mentioned in extract 7 that other Japanese business interests, including manufacturers, strongly support the TPP.

L3	For an answer that provides a thorough discussion of both costs and benefits (at least 3 altogether) of forming the TPP on different member countries with relevant reference to the case material and evaluative comments.	7-8 m
L2	For an answer that attempts to discuss the costs and benefits of forming the TPP but not well-elaborated or only considers the impact on a single type of country. There is some reference to case material.	4-6 m
L1	For an answer that is one-sided or lacking in economic analysis or elaboration.	1-3 m

(e) **Using evidence in the data, discuss the policy options available to deal with the recession in Japan.** **[10]**

Introduction

Recession: 2 consecutive quarters of negative economic growth
Policy options include demand-management policies such as expansionary fiscal and monetary policy as well as trade policy (joining of the TPP).

Body

• Expansionary Fiscal Policy (↑G and ↓T)
- Increase in government expenditure (G) on rebuilding areas destroyed by the earthquake and tsunami, e.g. repairing and reopening power plants, roads and railways etc, would lead to a rise in aggregate demand (AD). With damaged production lines and supply chains being restored, aggregate supply (AS) can also increase back to its original level. As a result, national output increases and economic growth is stimulated.
- Reduction in taxation would indicate a fall in personal income and/or corporate tax rates. When there is a reduction in personal income tax, disposable income increases which in turn induces consumers to spend more on goods & services, resulting in an increase in AD. Private consumption is the largest contributor to Japan's economy, accounting for almost 60% of the GDP. As there was a drop in retail sales and household expenditures after the earthquake, the key reason for Japan's recession could be the fall in consumption expenditure (C). Thus getting the people to spend again is important. With a decrease in corporate tax, it means higher after-tax profits for firms which in turn induce them to increase their level of investment, resulting in an increase in AD. As a result, national income (NY) increases and growth is stimulated.

• Limitations of fiscal policy
- There is a limit to how much the Japanese government can increase its expenditure given that its public debt is already the largest among advanced economies.
- Continued fiscal expansion, combined with stagnating tax revenues (from negative growth) will add to its inordinately large budget deficit and increase government debt.
- The government will have to increase its public borrowing to fund its expenditure on public works, leading to more productive private sector investment being crowded out.

• Expansionary Monetary Policy (Interest Rate/money supply and/or exchange rate)
- The Bank of Japan (BOJ) is expected to keep the rates unchanged at the lowest level in a range of 0.0% to 0.1%, to help stimulate the economy. The rate of returns to savings is low, thus the opportunity cost of consumption is low. With very low interest rates, the cost of borrowing is also low or nearly negligible. This should encourage high C and investment expenditure (I), leading to higher AD and NY.
- As the BOJ sticks to its ultra-loose monetary policy, it will also pump billions of dollars into the financial system to provide the economy with all the liquidity it may require. This increase in money supply will directly increase AD, increasing NY.
- At the same time, Extract 5 mentions that the BOJ will do everything in its power to stop the yen becoming too strong. This is because a strong yen will decrease the foreign price competitiveness of Japan's exports and further reduce its net export revenue, thus decreasing AD and NY.

• Limitations of monetary policy
- As interest rates are already near zero, there is no room for the BOJ to further decrease interest rates. Also, when consumers and investors hold a pessimistic outlook

of the economy and have little confidence in it, a very low interest will still have no effect on stimulating C and I.

- It can be seen from Fig. 3. that there is little the BOJ can do to stop the appreciation of the yen too. This can be attributed to the constraint of the open economy trilemma where policy makers can only achieve two out of three policy objectives, namely that of an independent monetary policy (being able to determine interest rate), free capital flows and a managed exchange rate. Since Japan has the first two, any intervention in the foreign exchange market will only lead to short-term changes in the exchange rate and the free capital flows will automatically bring the exchange rate back to its "market rate".

Conclusion

Given that the Japanese government has already implemented expansionary fiscal and monetary policies but they are of limited effectiveness, the government will have to adopt other policies. Also, instead of an expansionary fiscal policy, the Japanese government may instead have to implement fiscal consolidation (pare down government debt and improve its public finances) to maintain market confidence in Japan's fiscal sustainability in the long term.

Thus, Prime Minister Abe argues that Japan needs to take advantage of the TPP as its "last window of opportunity", if it is to grow economically. As explained in (d), joining the TPP may help Japan export more of its goods to member countries and also benefit from increased FDI from them. This will help to boost its AD and NY, tackling recession. At the same time, such a trade policy can help Japan to deal with its longer term problems such as its ageing and declining population. If the TPP opens Japan to more foreigners, aggregate supply can increase with an increase of human capital as well as ideas which may bring much needed vitality back into its economy, thus not just dealing with recession but achieving sustained economic growth.

Knowledge, Application, Understanding and Analysis		
L3	For an answer that presents a well-discussed analysis of at least two macroeconomic policies to deal with the recession in Japan and makes good reference to the case material. Comes to a good conclusion on which policy option is more viable.	7-8m
L2	For an answer that is balanced but with some elaboration and reference to the case material.	4-6m
L1	Very superficial analysis. Mere listing of points. Inaccurate knowledge of concepts. One-sided answer, max 3 marks	1–3m
Allow up to 2 additional marks for Evaluation		
E2	Evaluative comments with justification.	2m
E1	Evaluative comments, unexplained.	1m

ANDERSON JUNIOR COLLEGE

JC2 PRELIMINARY EXAMINATION 2013
Higher 2

ECONOMICS **9732/02**

Paper 2 **16 September 2013**

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: ____**/12**

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

This document consists of **2** 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 European Union's (EU) Common Agricultural Policy (CAP) has set a price floor to help local farmers in Europe stabilise agricultural prices and to encourage them to increase output.

(*economywatch.com*, accessed 12 August 2013)

(a) With the aid of a diagram, explain whether the imposition of a price floor can help stabilise agricultural prices. [8]

(b) Discuss whether governments should use price controls to protect producers and consumers. [17]

2 'If consumers and producers pursue self-interest and make rational decisions, there is no need for government intervention'. Discuss the above view. [25]

3 In Singapore, there are many small home interior design firms in the industry. With low startup costs, these firms, such as Meng Design, usually market themselves as providing exclusive designs or affordable services. On the other hand, in the budget airline industry, Jetstar and Tiger Airways often offer lower-priced tickets.

(a) Explain why some firms remain small. [10]

(b) Discuss whether Jetstar's and Meng Design's strategies are due to the characteristics of the industry they are in. [15]

Section B

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

4 Instead of tax breaks, the Japanese will be presented with shopping coupons. These coupons will not be redeemable for cash and they will have an expiry date, thus catapulting families back into the stores and setting the tills ringing.

(*independent.co.uk*, accessed 20 August 2013)

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

(b) Assess the possible impact of an increase in autonomous consumption on the equilibrium level of national output and the general price level. [15]

5 **(a)** Explain the economic case for free trade between countries. [10]

(b) Discuss whether governments should be concerned about changes to a country's balance of payments position brought about by globalisation. [15]

6 Discuss how far a government's macroeconomic policy decisions are affected by the country's national debt. [25]

End of Paper

Question 1

The European Union's (EU) Common Agricultural Policy (CAP) has set a price floor to help local farmers in Europe stabilise agricultural prices and to encourage them to increase output.

a. **With the aid of a diagram, explain whether the imposition of a price floor can help stabilise agricultural prices. [8]**

b. **Discuss whether governments should use price controls to protect producers and consumers. [17]**

A price floor is defined as a legally established minimum price that buyers are required to pay for a good or service. Producers are prohibited from selling below the stipulated price but prices can rise above it. For price floor to be effective, it must be set at a price above the market equilibrium price. Government may want to use a price floor to protect the income of the producers from falling, especially in periods of very low prices.

Introduction: Define Price floor, condition for it to be effective, reasons for implementation of price floor

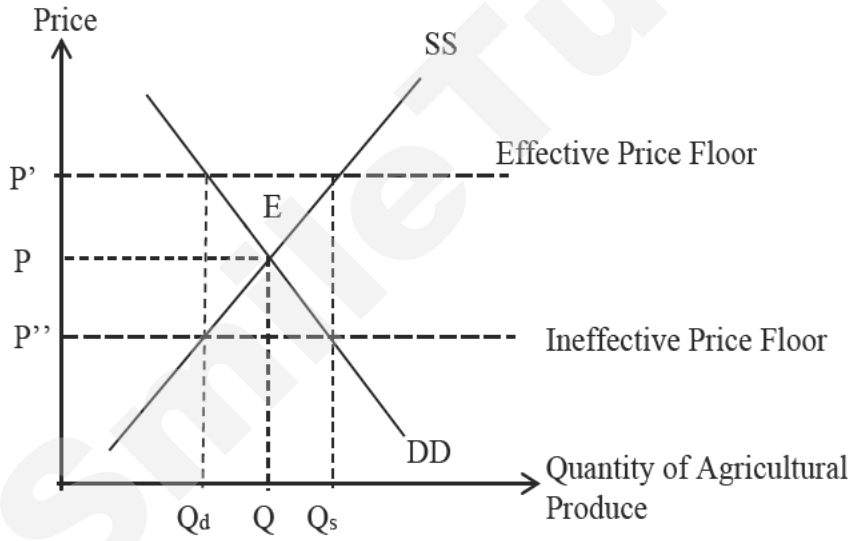


Figure 1: Market for agricultural products

For a minimum price to be effective, it must be set above equilibrium. In **Figure 1**, the minimum price must be set above the market equilibrium price of P, for example, at P'. At prices below P (e.g. at P"), the price floor is ineffective.

Explain how a price floor works

At the price floor P', the consumers are unwilling and unable to consume as much quantity as before, they will only consume the amount corresponding towhere the demand curve intersects the price floor line at Qd. On the other hand, since the price is higher than what it would be at the equilibrium, the producers are willing and able to supply more than the equilibrium quantity. They will supply up to the point where the supply curve intersects the price floor line at Qs. Thus at the price floor P', the quantity demanded (Qd) is less than the quantity supplied (Qs). There is a surplus of agricultural products with the implementation of price floor.

Suppose there is a bumper harvest. The supply of agricultural products will increase, leading to a fall in the price. As the demand for agricultural products is likely to be relatively price inelastic due to them being necessities and taking up a small proportion of consumers' income, the fall in price will be significant relative to quantity demanded. With the implementation of a price floor, it will ensure that the price of agricultural products will not fall considerably, thereby stabilising agricultural prices and protecting farmers' incomes. In addition, the government will also step in to buy up and store the surplus of agricultural products.

Explain how the price floor will aid in stabilising the price.

However, a price floor may not be able to stabilise prices of agricultural products when there are adverse supply shocks. Bad weather conditions like droughts will cause a fall in supply of agricultural products, which will lead to a significant increase in price as the demand is price inelastic. As the price floor allows producers to sell their products above the stipulated price, therefore it fails to stabilise the price of the agricultural products.

Explain how the price floor will not aid in stabilising the price

In conclusion, having a price floor will help to stabilise agricultural prices when there is a positive supply shock since prices will not fall below a certain level. Although it is less effective in preventing prices from rising significantly when there is a negative supply shock, the release of excess stocks stored in times of good harvest can actually help to reduce the upward pressure on prices.

Mark scheme

Knowledge, Application, Understanding and Analysis		
L3	Balanced and comprehensive explanation of how price floor may stabilise price due to changes in DD or SS conditions. Clear references to diagram are required.	7-8
L2	Underdeveloped explaination on the workings of price floor with elaboration and some references to diagram. One-sided answer on how price floor will stabilise price due to changes in DD or SS conditions.	4-6
L1	Superficial explanation of price floor. Serious conceptual errors.	1-3

(b) Discuss whether governments should use price controls to protect producers and consumers. [17]

Price controls are defined as government-mandated maximum or minimum price that can be charged for specified goods, which are known as price ceiling or price floor respectively. Price ceiling is defined as a legally established maximum price that sellers can sell for the good or service. Sellers are prohibited from selling above the stipulated price but prices can fall below it. In order to protect producers, price controls should aim to increase price so as to increase their revenue and hence profits. In order to protect consumers, price controls should aim to decrease price so as to increase consumer surplus.

Define price controls, price ceiling and state how consumers and producers will be protected.

Firstly, in the context of agricultural products, a price floor may help to protect the producers. The demand for agricultural products is price inelastic as expenditure on these products tend to take up a small proportion of most consumers' income. With a higher price due to the implementation of a price floor, it will lead to a less than proportionate fall in quantity demanded. Producers of agricultural products will have an increase in their total revenue due to the higher price. Assuming that total cost remains constant, an increase in total revenue will lead to higher profits (where profits = total revenue-total cost) earned for the producers.

P1: How Price floor can protect agricultural products producers' profits

However, the implementation of a price floor may not always be able to protect the producers. If the price elasticity of demand for agricultural products is more than one due to the availability of close substitutes from other countries, a higher price due to the price floor will lead to a more than proportionate fall in quantity demanded for agricultural products, resulting in a fall in total revenue for the producers. Assuming total cost remains constant, there will be a fall in the profits earned for the producers.

P2: How price floor cannot protect agricultural products producers' profits

In addition, a price floor may also give rise to certain problems. From **Figure 2**, with the implementation of the price floor above the market equilibrium price, the market will only consume up to the point (Qd) where the demand curve intersects the price floor line at Pf. Due to the lower amount of agricultural products consumed, there will be a loss of consumer surplus, shown by the shaded area ABD. On the producers' side, due to the fall in the amount of agricultural products consumed by the consumers, there is a fall in the amount of goods sold, leading to a fall in their producer surplus as shown by the shaded area BCD. The total deadweight loss to the society with the implementation of the price floor is shown by the shaded area of ACD, assuming that the government does not buy the surplus AE.

Deadweight loss incurred from the implementation of price floor

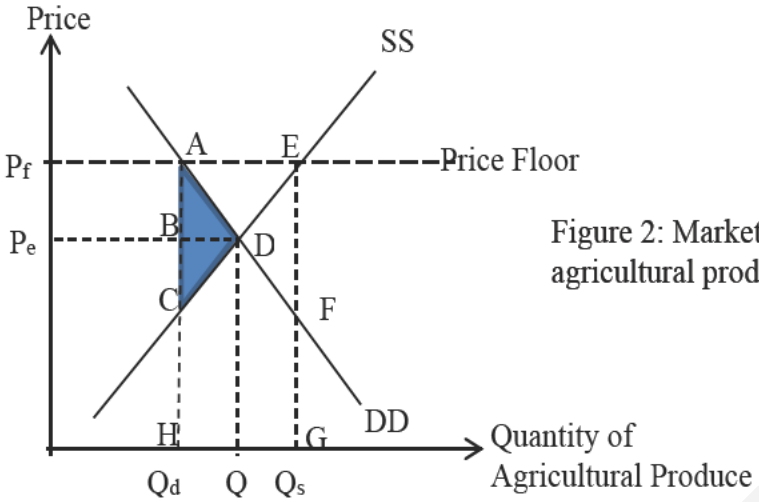


Figure 2: Market for agricultural products

Therefore, in order for the price floor to be effective in the market for agricultural products, the government will have to buy back the surplus so that the producers can continue their production. This will increase producer surplus by ACE but incur government expenditure equal to AEGH, thereby leading to an additional deadweight loss of the area ECHG. Thus, there will be a total deadweight loss of ADEGH to the society with the implementation of the price floor on the market for agricultural products.

Deadweight loss to the society if government buys the surpluses

The government will also have to incur higher expenditure in order to maintain the stockpile for the producers and it will be wasteful if the surpluses are disposed of or destroyed especially if these are perishables which cannot be stored for long. These surpluses represent a misallocation of resources in the country as scarce resources are used to produce unused goods. In addition, financing the annual surpluses of agricultural products will impose heavy tax burden on the taxpayers which renders such schemes unsustainable in the long run.

Other problems that will arise with price floor

Moreover, with the implementation of the price floor, producers are less motivated to look for cheaper and more efficient methods of production as they now have a minimum guaranteed price and their profits are being protected by the high mandatory price, leading to productive inefficiency. Due to this, more producers may also be attracted into the market for agricultural products, thereby creating an even greater surplus of agricultural products.

Due to the costs incurred from the implementation of the price floor, there may be other ways to protect the producers. The government may provide subsidies for the producers to seek more productive ways which will aid them in reducing their cost of production, leading to a rise in their profits, ceteris paribus. In addition, the government may also want to implement import-substitution policies which advocate replacing foreign imports of agricultural products with domestic production, thereby increasing the demand for local agricultural products and the profits for the producers.

EV: How government can implement other polices to protect the producers

Next, the implementation of a price ceiling may help to protect consumers in terms of increasing their consumer surplus and the quality and variety of goods and services.. Let us consider the market for rental housingwhere the consumers

Introduction to price ceiling. Whether price ceiling will

are the tenants and producers are the landlords.

protect consumers' surplus will need to depend on PED and PES

From Figure 3, the original consumer surplus is area (A+B). With the implementation of a price ceiling, the new consumer surplus is area (A+D). The change in consumer surplus will be area (D-B). Consumers can experience a net loss or gain depending on the relative size of areas B and D, which in turn requires us to look at the relative values of price elasticity of demand and supply.

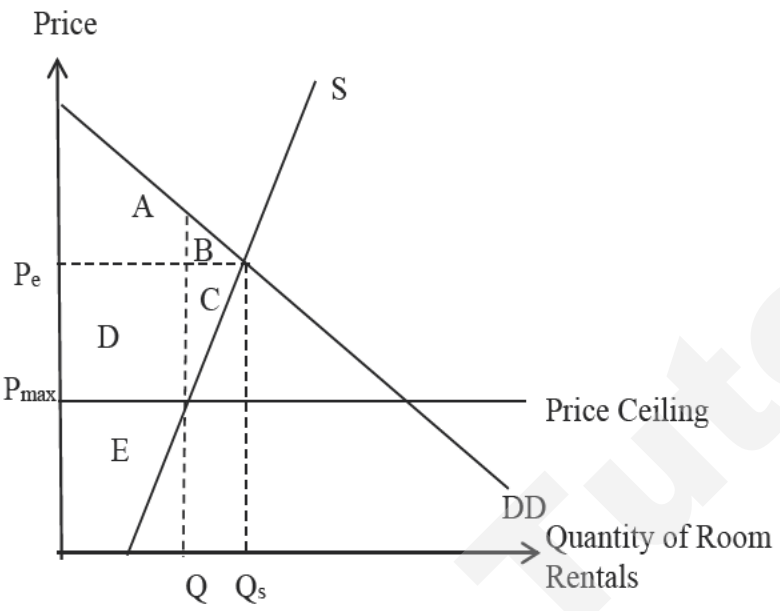


Figure 3: Market for rental housing

Demand for rental housing is price elastic due to it taking up a large proportion of consumers' income. Supply of rental housing is price inelastic as it takes time for producers to convert apartments for rentals. With the price ceiling implemented, the lower price will lead to a larger area of consumer surplus of (A+D). Thus, when demand is relatively more price elastic as compared to supply, the price ceiling will lead to an increase in consumers' surplus.

P1: How price ceiling can protect consumers – increase consumers' surplus

However, price ceiling may not protect the consumers as the implementation of price ceiling will lead to a shortage of rental housing available as the quantity demanded will be higher than the quantity supplied. From Figure 3, the original area for producer surplus is area (C+D+E). With the price ceiling, the new area for producer surplus is area E. Producers experience a loss of area (C+D). Thus the total change in surplus will be a summation of the change in consumer surplus and a change in producer surplus, area (D-B) + (-)(C+D)= - (B+C). This area (B+C) is known as the deadweight loss to the society and it represents inefficiency that results from the price ceiling imposed by the government.

P2: How price ceiling cannot protect consumers – Deadweight loss incurred

In addition, producers who are unable to sell their good, in this case rent out their apartments, at the maximum price will then seek to reduce costs by providing lower quality like poorer maintenance of the apartments. This will render the price ceiling ineffective in protecting the tenants as there will be a fall in quality of rental apartments available.

Other problems arising from implementation of price ceiling

With lower profits earned due to the implementation of price ceiling, some landlords may need to exit from the industry, thereby reducing the variety of rental apartments available for the tenants. Basic rental housing will be left in the market whereas the luxury apartments will no longer be available for rental as landlords may no longer have the profits to differentiate themselves, thus there will be a fall in a variety of rental apartments available for the tenants.

Due to a fall in the quantity and quality of rental apartments, tenants may turn to the black market to bypass the price restrictions, government will thus have to incur higher costs to ensure compliance. There will be more wastage of resources diverted to monitor and prevent illegal renting, leading to higher level of allocative inefficiency.

There may be other ways to protect consumers in the market for rentals. Government may provide subsidies to producers to reduce their cost of production (cost of maintaining the apartments or price of the apartments), thereby increasing the supply of rental apartments at a lower price. This will help to increase consumer surplus.

EV: Other policies which government can implement to protect consumers

T: In conclusion, price controls can be implemented in the short run to address unexpected demand or supply shocks as they have implemented in a short period of time and the effects can been seen in a shorter period of time. For example, in the short run, a poor harvest can lead to high prices and this may lead to low-income households not being able to purchase food. In this case, price controls should be implemented in order to achieve equity among the rich and the poor quickly. However, once harvest has stabilized, the governments should aim to remove the price controls as soon as possible in order to prevent the negative consequences of the price controls.

Mark scheme

Knowledge, Application, Understanding and Analysis		
L3	Balanced and detailed analysis of impact of price controls on producers in terms of profits, and consumers in terms of consumer surplus, quality and variety. Good use of examples.	10-13
L2	Underdeveloped but balanced analysis of impact of price controls on producers in terms of profits, and consumers in terms of consumer surplus, quality and variety. Minimal use of examples.	7-9
L1	Superficial analysis on price controls. Serious conceptual errors	1-6
Allow up to 4 additional marks for Evaluation		
E2	For a judgment based on economic analysis/ adequately substantiated	3-4
E1	For an unexplained judgment, or one that is not supported by economic analysis	1-2

2. 'If consumers and producers make rational decisions and pursue self-interest, there is no need for government intervention.'

Discuss the above view. [25]

In economics, consumers and producers are assumed to be self-interested individuals who make rational decisions. For consumers, this means allocating their income in such a way that maximises their expected levels of satisfaction. For producers, this means allocating their resources that maximise expected profits.

Introduction: Explain what does it mean for consumers and producers to pursue their self-interest – seek to maximize utility and profits respectively

P1: If consumers and producers make rational decisions and pursue their self-interest, there is no need for government intervention.

In a perfectly competitive (PC) market, rational decision making and the pursuit of self-interest by both consumers and producers can help to achieve economic efficiency. Economic efficiency entails both allocative efficiency and productive efficiency. Allocative efficiency is achieved when the value consumers place on a good or service (reflected in the price they are willing to pay) equals the cost of the resources used up in production (i.e. P = MC). Productive efficiency is achieved when a given level of output in the market is produced at the lowest possible cost, i.e. any point on the long-run average cost (LRAC).

Consequences of pursuing self-interest: Allocative and productive efficiency

In a PC market, there are a large number of buyers and sellers, with the individual buyer and seller having insignificant market power and both parties being price takers. The product being transacted is also homogeneous i.e. every firm's product in the market is a perfect substitute of another's. There is also perfect information and perfect factor mobility, which means the cost of production facing all firms, is both transparent and similar. In addition, the product is also excludable and rivalrous in consumption. Excludability means that non-payers can be excluded from enjoying the product, while rivalry in consumption means that the consumption of one unit of the product will reduce the amount left to subsequent consumption. There are also no barriers to entry and exit, which means that firms are free to leave and join the industry.

Characteristics of perfect competitive firms (assumptions which are not met will lead to market failure)

Consumers, in pursuit of their self-interest, will bid up the price of the good that they value more. As they expressed their valuation of a good through price, price increases. In a PC market where producers are price-takers, a higher price is equivalent to higher marginal revenue (MR). Producers, in the pursuit of their self-interest, would therefore be willing to produce more of this good as higher marginal revenue implies greater profits to be made. Hence more firms will enter the industry and more resources will be

How Allocative efficiency is achieved

channelled to produce this good. This will continue until marginal cost (MC) is equal to marginal revenue (MR) of producing one more unit of the good. Since price is equal to MR as explained above, thus the price will also be equal to MC and a PC firm achieves allocative efficiency as shown in Figure 1 below.

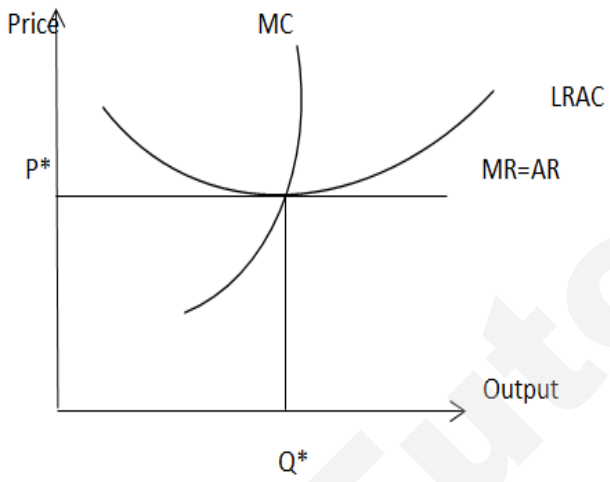


Figure 1: Perfectly competitive firm achieving allocative and productive efficiency

How Productive efficiency is achieved

In producing more of the goods that fetch relatively high prices in the market, there's also a need to decide which factor input combination to adopt to produce the desired output. Producers, in the pursuit of their self-interest, would adopt the least-cost production technique so that for a given price, they would get the maximum profit. So labour and capital would be employed in a combination that incurs the least opportunity cost to produce a given output. This ensures productive efficiency.
Therefore, in the PC market, since AE and PE are both achieved, there seems to be no need for the government to intervene to improve economic efficiency.

P2: Government intervention is needed even if consumers and producers make rational decisions.

Issue of equity which perfect competitive market is unable to achieve

However, although a PC market is able to achieve economic efficiency, it is still not able to address the issue of equity. Equity is a normative economic issue and it is concerned about fairness of distribution. In the PC market, the interaction between demand and supply ensures that those who are most willing and able to pay will be allocated the good or service, while those who are only willing and but able to pay below the market price will not be allocated any of the good or service. However, high-income consumers tend to be those who are most able to pay, thus if left to the free market to allocate resources, high income consumers will be the ones who will be

allocated most of the resources, including basic necessities such as food and water. On the other hand, low-income consumers may not be allocated such resources because they are not able to afford it. The presence of income inequality, which exists in every society, can lead to basic necessities required for human survival made unavailable to certain groups of consumers. This will be deemed unfair in many societies, thus leading to inequity.

Government intervention to solve equity issue – progressive income tax, price controls on necessities
Issue of complete market failure – public goods

Government intervention is thus needed to ensure that resources are distributed equitably. For example, most governments set up a progressive income tax system, where higher income individuals are taxed at a higher rate than lower income individuals. The tax revenue collected from these high income individuals will thus be reallocated to the lower income individuals in the form of subsidies or handouts. This will help to ensure that the ability to pay between high and low income consumers are not too diverse. Similarly, governments in some countries also control the prices of vital goods and services, such as rice and education, to ensure that they are still affordable to the low income individuals.

In addition, it is very often, if not always, the case of these assumptions of a PC market not met in reality. In the case of public goods, government intervention is definitely needed. Public goods are goods which are non-excludable and non-rivalrous. An example a public good is national defence. National defence is non-excludable as non –payers cannot be excluded from enjoying the protection accorded by national defence. For example, a person living in Singapore will still be protected by the Singapore Armed Forces even though he did not pay to be protected. Since non-payers cannot be excluded, consumers, who pursue their self-interest, will not be willing to pay for protection and want to free-ride on other people's payment for national defence. There will therefore be no effective demand for national defence.

In addition, the protection gained by one person from national defence will not diminish the quantity that is available to another person. Thus, national defence is non-rivalrous in nature. Since the quantity available does not diminish with consumption, the cost of providing an additional unit of national defence to one more person is zero, which means that the marginal cost of providing national defence is zero. Since P=MC for allocative efficiency, the social optimal price to charge is thus zero. However, producers pursuing self-interest will not want to produce something whereby it has to be free of charge. There will therefore be no effective supply. This leads to a missing market for national defence.

Due to these characteristics of public goods, the private market will not provide any quantity of the good, leading to complete market failure. In this situation, governments will need to step in to ensure that the good is

provided. In the case of national defence, government usually engages in direct provision and finances the provision from tax revenue.

Government intervention to solve complete market failure – direct provision and finances

Other than public goods, government intervention may also be needed in markets where imperfect information exists. Imperfect information may occur when consumers and producers are unaware of the true costs and benefits of their consumption and production activities. Since they are not aware of the true costs, their actions will result in socially sub-optimal outcomes. This can be illustrated in the market for healthcare.

Issue of imperfect information – partial market failure

When consuming healthcare, such as getting a vaccination against infectious illnesses, consumers in pursuing their own self-interest will weigh the perceived benefits against the perceived costs from the consumption of healthcare. These perceived benefits may include better health by being vaccinated against deadly diseases and prevention of loss of future income. The perceived costs include the price of the vaccination. However, when deciding whether to get vaccinated or not, consumers will not consider others peoples' interest, so they are unlikely to take into account benefits accruing to third parties. For example, vaccinations also help to lower the probability of the family members being infected with the disease. These benefits accruing to third parties are also known as positive externalities.

Cost-benefit analysis of partial market failure on consumption of vaccination

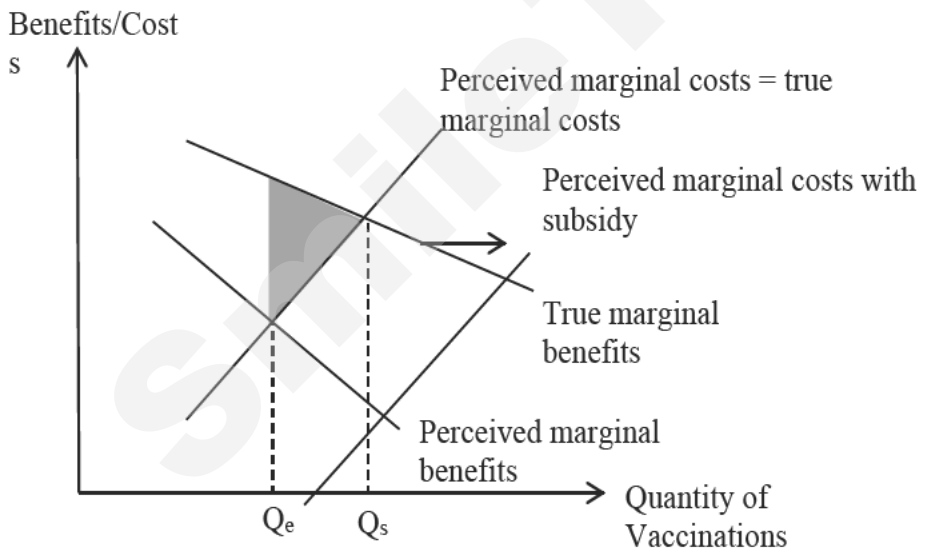


Figure 2: Market failure for the consumption of vaccinations.

As shown in the diagram above, consumers of vaccinations only consider their perceived marginal costs and perceived marginal benefits in the consumption of vaccinations. Due to the presence of positive externalities, there is a divergence between perceived benefits and true benefits of vaccinations. As rational individuals, they will consume Q_e quantity of vaccinations as they only consider their own perceived costs and benefits.

However, at Q_e, the true marginal benefits exceed the true marginal costs i.e. the consumption of an additional unit of vaccination will result in more benefits than costs incurred. Thus, society will be better off if more resources were allocated to the consumption of vaccinations. Society incurs a deadweight loss as shown by the shaded area and there is under-consumption of vaccinations, leading to allocative inefficiency.

Under-consumption of vaccination à allocative inefficiency

In such situations, governments will need to intervene in order to correct the market failure. For example, subsidies can be given to consumers to lower the costs of vaccination. This policy will lower the marginal cost of consuming healthcare, effectively internalizing the positive externality. With a lower cost of consumption, individuals will increase their consumption of healthcare up till the socially optimal quantity, thereby removing the allocative inefficiency.

Government intervention to resolve partial market failure – subsidies (how it works)

Suggested Evaluation (A): In real world markets, the assumptions of a PC industry can never be met. Thus, there is always a case for government intervention to improve economic efficiency. However, government intervention is not without costs. For example, implementing a subsidy effectively will require an accurate measurement of the external benefit and this will require the use of more resources. Thus, although there may be a need for government interventions in markets, these interventions may not always turn out to be beneficial.

Other acceptable answers include:

3. Market dominance

à Explain the characteristics of a monopoly

à Downward sloping demand curve due to market power (single firm + high barriers to entry)

à In pursuing self-interest to maximize profits, monopoly sets P>MC. (Allocative inefficiency)

à Productive inefficiency can also occur due to lack of competition (complacency etc)

Governments can intervene by P=MC pricing, setting up a regulatory watchdog

Knowledge, Application, Understanding and Analysis		
L3	Provides different perspectives on the need for government intervention with well-developed analysis of microeconomic objectives of efficiency and equity. Good use of relevant examples.	**15 – 21**
L2	Provides different perspectives on the need for government intervention with under-developed analysis of microeconomic objectives of efficiency or equity. Limited use of relevant examples.	**10 – 14**
L1	For a one-sided answer with superficial analysis and minimal reference to microeconomic objectives of efficiency or equity. No use of relevant examples.	**1– 9**
Allow up to 4 additional marks for 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**

Question 3

In Singapore, there are many small home interior design firms in the industry. With low startup costs, these firms, such as Meng Design, usually market themselves as providing exclusive designs or affordable services. On the other hand, in the budget airline industry, Jetstar and Tiger Airways often offer lower-priced tickets.

a. **Explain why some firms remain small. [10]**

b. **Discuss if Jetstar's and Meng Design's strategies are due to the characteristics of the industry they are in. [15]**

All firms aim to maximize profits. Since profit is equal to total revenue minus total costs, profits can be increased by either increasing total revenue or reducing total costs. Thus, firms such as home interior design firms will remain small due to demand and supply factors.

Introduction: Aim of producers is to profit maximize

One supply factor why some firms choose to remain small is related to the law of diminishing marginal returns in the short run and diseconomies of scale in the long run. In the short run, every firm will have at least a factor of production that is fixed and this leads to diminishing returns as more variable factors of production are employed. For example, a hawker food seller can increase the quantity supplied of food by employing more chefs and helpers. However, since his food stall is of a fixed size, the extra helpers and chefs will start getting into each other's way as more and more of them are employed. This will lead to fall in marginal returns (in terms of quantity of food) with each additional unit of labour employed. This means that the increase in the quantity of food being produced will start to diminish. Total costs will start to increase faster than total output. Assuming prices remain constant, this will lead to a fall in profits. Thus, hawker food sellers may choose to remain small in order not to suffer a fall in profits.

Explain supply side reasons for firms to remain small.

SR: LDMR

In the long run, all factors of production are variable. For small firms, diseconomies of scale can set in at relatively low levels of output. For example, home interior firms, such as Meng Design, will need to purchase land to build a new showroom when they decide to expand. If land cost is high, the expected increase in revenue from expansion might not be able to cover the increase in average costs. Thus, these firms will choose to remain small.

LR: DEOS at higher output

Lastly, some entrepreneurs may choose not to maximize profits but might have other objectives such as revenue target setting. For example, some food hawkers just choose to reach a certain revenue target for the day before closing. Thus even if expanding the size of the firm may increase profits, they might choose not to do so and thus remain small.

Different firm objectives.

Other than supply side considerations, firms may also choose to remain small if there are demand side reasons for doing so. For any given market, there is a demand curve which is made up of a finite number of consumers. In certain markets, the size of the market means that increasing production beyond a certain quantity is not justified.

Explain demand side reasons for firms to remain small.

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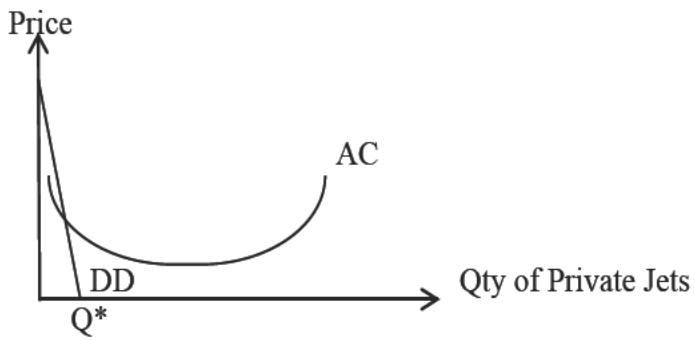

For example, in the market for private jets, there are very few consumers who are able to afford private jets. As shown in the diagram above, there is no point for a firm to expand beyond Q* even though it can enjoy internal economies of scale and lower costs of production if it chooses to so. This is because the market size is only limited to Q*. Thus, for firms with a limited market size, firms will choose to remain small.

Small market size → Small Demand

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Some markets may face uncertainty and unpredictability in market demand. For example, the market for home interior design is highly susceptible to changes in income of consumers as it may be considered a luxury good, which consumers can do without if they have lower income. This is especially so if the economy goes into a downturn. Demand for interior design will fall, leading to a fall in revenue and hence losses for the firms. Thus firms might choose to remain small as the gain in revenue is not certain.

Uncertain demand leading to uncertain profits.

Mark scheme

Knowledge, Application, Understanding and Analysis		
L3	Well-developed economic analysis on why firms remain small with clear reference to demand **and** supply side reasons. Good use of relevant examples.	7-10
L2	Underdeveloped economic analysis on why firms remain small with reference to demand **or** supply side reasons. Limited use of relevant examples.	5-6
L1	Superficial economic analysis on why firms remain small without reference to demand **or** supply side reasons.	1-4

(b) Discuss if Jetstar's and Meng Design's strategies are due to the characteristics of the industry they are in. [15]

Firms engage in different strategies to maximize profit or to prevent a fall in profits. In order to determine if a firm's strategies are due to the characteristics of the industry it is in, there is a need to first identify the type of industries that the respective firms are operating in.

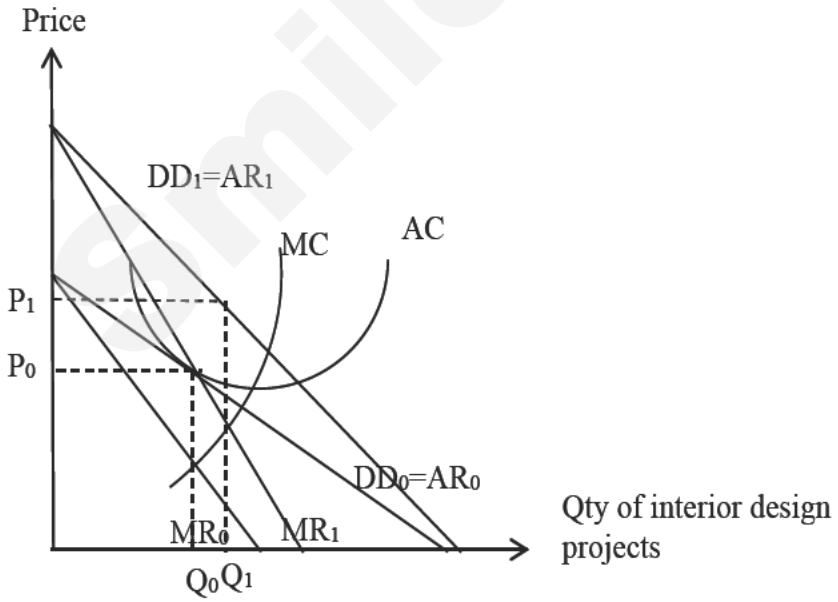
Introduce the aims of firms.

The home interior design industry is likely to be a monopolistic competitive one. As stated in the preamble, there are many small firms in the industry which indicate a large number of sellers. In addition, the products sold by the interior design firms are differentiated in terms of actual and perceived quality. There are also low barriers to entry due to low startup cost, which means that the firms who wish to enter the market do not face prohibitively large costs. Thus, firms will only be able to earn normal profits in the long run as new firms will join the industry and compete away any supernormal profits.

Explain that MD is in a MPC industry with reasons from preamble

Since firms are likely to earn normal profits in the long run, they may engage in non-price competition in order to earn short run supernormal profits. In the case of Meng Design, it has tried to differentiate itself from its competitors by marketing its firm as providing exclusive or affordable designs. One impact of this strategy is to increase the demand for its design products as more consumers will be willing to purchase the product due its perceived higher quality. This will result in a rightward shift of the demand curve. These actual or perceived differences will also make the demand for its design products more price inelastic as they will be perceived as less substitutable from its competitors

P1: MD engage in non-price competition to earn SR profits



As shown in the diagram above, prior to its marketing strategy, Meng Design produces at Q_o where MC = MR_0 and charges price P_0. In this state, Meng Design will be making normal profits where P=AC. Due to its marketing strategy, the demand curve shifts rightwards from DD_0 to DD_1 and this also results in a rightward shift of the marginal revenue curve from MR_0 to MR_1. Again, Meng Design will produce at MC=MR_1 in order to maximize profits. It will produce

quantity Q_1 and charge price P_1, and be able to make a supernormal profit in the short run as P_1 is greater than AC. In the long run however, the supernormal profits will not persist as new firms will join the industry in search of profits due to the low barriers to entry. Thus, firms in a monopolistically competitive industry may frequently engage in non-price competition in order to capture short run supernormal profits. Therefore, the characteristics of the home interior design industry may be able to explain the strategies undertaken by Meng Design.

P2: MD's strategies might not be due to the industry's characteristics as non-price competition involved costs.

However, product differentiation is not without costs. For example, Meng Design will have to incur costs in advertising and the gain in short run revenue due to the higher demand may not be able to cover the costs of product differentiation, leading to lower profits or even losses. Thus, Meng Design might not have engaged in product differentiation even though it might have resulted in higher revenue for the firm.

P2: MD's strategies might be due to changing economic conditions.

On the other hand, Meng Design might also have engaged in production differentiation due to other reasons such as changing economic conditions. For example, if there is an economic boom, the income and purchasing power of consumers would increase. When there is an increase in income, demand for luxury goods will increase more than proportionately. This is because consumers will switch away from lower quality products to more luxurious and quality products when they have higher purchasing power. By marketing its services as exclusive, Meng Design might have the desire for its products to be seen as higher quality and luxurious. With a more than proportionate increase in demand due to the economic boom, this will result in a large increase in revenue and profits. Similarly during a time of economic recession, where consumer's income and purchasing power is falling, marketing its products as affordable might make Meng Design seem like an inferior good. This will lead to an increase in demand for Meng Design's products and subsequently, an increase in revenue and profits.

Explain that Jetstar is in an oligoply industry with prior knowledge

In contrast to the home interior design industry, the budget airline industry is likely to be oligopolistic. The industry is made up of a few big firms, such as Jetstar and Tiger Airways, which means that each firm has significant market power. In addition, there are high barriers to entry such as the large costs involved in the purchase of planes and also the operational costs such as maintenance of the fleet. The presence of high barriers to entry allow these budget airline firms to make supernormal profits in the long run as new firms will find it difficult to enter the industry to compete away the profits. The product offered by the industry, budget air travel, is also highly substitutable as the routes offered by these budget airlines are often overlapping. Moreover, the quality of service being offered by the various airlines is often of comparable standards. In such an industry where there are just a few dominant firms offering essentially the same product, firms are especially mutually interdependent in their pricing and output decisions.

P1: Jestar engage in price competition in response to the actions of its rivals

This mutual interdependence of firms can help to explain the strategy taken by Jetstar, which is to offer low price tickets, which may be in response to a decrease in price of budget air travel by other firms in the industry. In the preamble, it is stated that Tiger Airways also offers low priced tickets. As budget air travel is highly substitutable, the cross price elasticity of demand (XED) for Jetstar's budget air travel is likely to be highly positive. Thus, a reduction in the price of budget air travel by Tiger Airways will result in a more than proportionate

decrease in demand for Jetstar's air travel as consumers will switch to purchasing from Tiger Airways. This will lead to a large fall in revenue and profits. In order not to suffer a loss of market share and profits, Jetstar will have to follow Tiger Airways in reducing the price of budget air travel. Thus, the strategy undertaken by Jetstar can be explained by the mutual interdependence of firms in an oligopolistic market structure.

P1: Jetstar engage in price competition to drive out compeitors if it is one of the bigger firms in the industry.

If Jetstar is one of the bigger firms in the budget air travel industry, they may also choose to reduce prices in order to capture more market share and to drive out the smaller firms. Since budget air travel is highly substitutable as explained above, the demand for budget air travel is likely to be price elastic. Thus, a reduction in price of budget air travel will result in a more than proportionate increase in quantity demanded as consumers switch from other firms to Jetstar. If Jetstar is one of the biggest firms in the industry, it may also be able to enjoy higher economies of scale (EOS) compared to smaller firms. These EOS may be in the form of better borrowing rates from financial companies due to its strong reputation. As such, competitors may not be able to match Jetstar's reduction in prices and they might be driven out of the industry. With few competitors in the market, Jetstar will then be able to increase its price due to a more price inelastic demand, leading to an increase in revenue and profits.

P2: Jetstar lowered ticket prices in order to increase the demand for its complementary goods.

However, the strategy undertaken by Jetstar can also be explained by other factors. One possible reason for offering low priced tickers is to increase the demand for the complement goods of budget air travel, such as tour packages and in flight dining, which are other possible business arms of Jetstar. Complements are goods that are consumed together to generate satisfaction. A fall in the price of budget air travel will lead to an increase in the quantity demanded for budget air travel. This will in turn increase the demand of the above mentioned products as more consumers will purchase them in order to generate more satisfaction. This will then lead to an increase in revenue gained from these complementary goods. Thus, even though a fall in the price of budget air travel may lead to a fall in revenue, the additional revenue gained from its complementary goods may help Jetstar increase its overall profits.

Evaluation

A/T: It is extremely difficult to distinguish if a firm's strategies are due to the characteristics of its industries or due to other factors. In the short run, a firm's may engage in both pricing and non-pricing actions in response to changes in demand and supply conditions. However, in the long run, as these external shocks average out, it is more likely that the structure and characteristics of the industry plays a bigger role in determining if a firm engages in non-price or pricing strategies.

In addition, we assumed that the actions of both firms are strategies taken actively. However, these actions could just be market outcomes. For example, the fall in air ticket prices might be due to a fall in demand for air travel as a result of a worldwide recession and not a deliberate action by Jetstar to cut prices.

Mark scheme

Knowledge, Application, Understanding and Analysis		
L3	Balanced and well-developed analysis on the strategies adopted by the firms. Analysis makes clear linkages to the characteristics of the respective industry.	9-11
L2	Balanced but under-developed analysis on the strategies adopted by the firms. Analysis makes limited linkages to the characteristics of the industries.	6-8
L1	One-sided answer that makes merely identifies the characteristics of the industries without link to the strategies adopted by the firms.	1-5
Allow up to 4 additional marks for Evaluation		
E2	For a judgment based on economic analysis/ adequately substantiated	3-4
E1	For an unexplained judgment, or one that is not supported by economic analysis	1-2

Question 4

Instead of tax breaks, the Japanese will be presented with shopping coupons. These coupons will not be redeemable for cash and they will have an expiry date, thus catapulting families back into the stores and setting the tills ringing.

(*independent.co.uk*, accessed 20 August 2013)

a. Explain the possible causes of an increase in autonomous consumption. **[10]**

b. Assess the possible impact of an increase in autonomous consumption on the equilibrium level of national output and the general price level. **[15]**

Part (a)

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 non-income determinants will lead to a change in autonomous consumption and is illustrated by a shift of the consumption function upwards or downwards.

Possible non-income determinants:

- Wealth
  Wealth refers to the value of assets, both physical (e.g. houses, cars, art pieces, etc.) and financial (e.g. shares, bonds, etc.), held by households at a particular point in time. 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 increase in purchasing power. Individuals will thus increase consumption of goods and services.

- Expectation of future income and prices
  Consumers' expectations about the economic outlook in the future will affect their willingness to consume. 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, thus consumption spending will increase.
  If households expect a higher rate of inflation, they will tend to buy consumer durables ("big-ticket" items) sooner rather than later when they become more expensive. If this happens, current consumption will increase.

- Government policies

Ø Fiscal policy
  - A reduction in personal income taxes will increase households' disposable income leading to higher purchasing power and thus a higher level of autonomous consumption.
  - Provision of shopping coupons as mentioned in the preamble.
  - A redistribution of income from the rich to the poor through transfer payments will increase autonomous consumption. The marginal propensity to consume of the rich is lower than that of the poor, thus an additional dollar transferred from the rich to the poor will result in a higher level of consumption.

Ø Monetary policy
- With a reduction in interest rate, cost of borrowing will fall. At the same time, the rate of return on savings will fall, thus the opportunity cost of consumption falls. Consumption, especially of big ticket items which are often financed with loans will then increase.

· Taste and preferences
The level of consumption can be influenced by the mindset and lifestyles of households. There will be an increase in level of consumption when an economy become more consumerist and materialistic. This change in mindset could be the result of greater access to information on consumer goods and services.

Knowledge, Application, Understanding and Analysis		
L3	For a comprehensive and detailed answer explaining the causes of an increase in autonomous consumption.	**7 – 10**
L2	For an answer that shows understanding of the causes of an increase in autonomous consumption but is lacking in elaboration.	**5 – 6**
L1	For an answer that shows some knowledge of the causes of an increase in autonomous consumption but does not elaborate. Answer contains conceptual errors.	**1 – 4**

4b) Assess the possible impact of an increase in the level of autonomous consumption on the equilibrium level of national output and the general price level. [15]

An increase in autonomous consumption will lead to an increase in aggregate demand, illustrated by a shift of the AD curve upwards. This will result in a possible change in the equilibrium level of national income and general price level. The change in national income and general price level will depend on various factors such as state of the economy, nature of the economy and time period.

Short run impact:

· State of the economy

- Economy is operating below full-employment level
  At the original level of national output, there is excess capacity and hence unemployed resources. With an increase in autonomous consumption, aggregate demand will be greater than national output leading to unplanned inventory depletion. The decline in stocks will encourage producers to increase production in the next time period. Firms involved in the production to meet the increase in demand will employ more factors of production. The people employed will then spend part of their income based on their marginal propensity to consume and firms will produce more goods and employ more factors of production. This increases the income of another group of people and so on. However, each subsequent round of consumer spending becomes smaller as the increase in income generated becomes smaller. The process will stop when there is no further change in income. The change in national income will be a multiple of the autonomous change in consumption i.e $\Delta Y = k.\Delta C$ where k is the value of the multiplier. Given that the economy is operating below full-employment, there will be an increase in output with no or little change in the general price level.
- Economy is operating near full-employment level
  With the increase in AD, there is increased competition for the limited resources as producers increase output. Factor prices will increase leading to increase in cost of production, illustrated by the movement up along the aggregate supply (AS) curve. At the same time, higher prices would reduce the level of aggregate demand, illustrated by the movement leftwards along the AD curve. A new equilibrium is reached where the general price level (GPL) and national output are both higher. If the economy is at full employment, the increase in autonomous consumption will lead to a sharp increase in the GPL with no change in real national output though nominal output will increase.

Nature of economy

Differences in the nature of the economy will result in different multiplier values thus the extent of the impact of increase in autonomous consumption will differ.

· Different value of MPS due to difference in attitude towards saving and government policies – e.g. Singapore – high savings due to the compulsory savings scheme for retirement (CPF), countries that have consumerist attitude will have a lower savings ratio, etc.
· Different value of MPM – Singapore has limited resources and is thus dependent on imports for production and consumption. For every additional dollar of consumption, there is limited impact on domestically produced goods as most of the expenditure is on imports.
· Different MPT due to different tax policies adopted by different countries.

The change in national income is a multiplied amount of the autonomous change. Hence, if the value of the multiplier is small, an increase in the level of autonomous consumption would lead to a relatively smaller multiplied amount of change to national income.

Long run

- A persistent increase in autonomous consumption will mean more resources are devoted to the production of consumer goods. At a given point in time with given amount of resources and state of technology, fewer resources will be available for production of capital goods. If the level of investment is low, potential growth will be slowed down leading to slower improvement in standard of living. If the level of investment is less than the value of depreciation of capital goods, capital stock will decline leading to a fall in productive capacity of the economy.
- A persistent increase in autonomous consumption could be a source of growth. With the persistent increase in AD due to the increase in consumption, rate of return on investments may increase especially if the economy has a large population with growing purchasing power like China. Investment may thus increase to take advantage of the increase in demand from consumers and productive capacity of the economy will increase, allowing the economy to experience growth from an internal source
- A persistent increase in autonomous consumption may result in lower savings. Other things unchanged, there is less loanable funds available for investment. However, this can be offset by attraction of FDI to cater to the growing domestic consumption.

Possible evaluation:

- Impact of increase in autonomous consumption differs because of the multiple factors that may affect the final impact.
- Increase in autonomous consumption in an economy could be desirable as this internal source of growth will allow the economy to reduce dependency on exports thus reducing the vulnerability of the economy to external shocks.

Knowledge, Application, Understanding and Analysis		
L3	For a comprehensive and detailed answer that provides a balanced discussion of the impact on national output and GPL.	**9-11**
L2	For an answer that provides a balanced but under-developed discussion of the impact on national output and GPL.	**6-8**
L1	For an answer that is mostly descriptive, with some inaccuracies and is not in context.	**1-5**
	Allow up to 4 additional marks for Evaluation	
E2	For a judgement based on economic analysis/ adequately substantiated	**3-4**
E1	For an unexplained judgement, or one that is not supported by economic analysis	**1 -2**

5a) Explain the economic case for free trade between countries. [10]

Suggested answer:

Free trade refers to the free movement of goods and services between countries. Trade takes place because of different factor endowments in countries. As a result the opportunity cost of producing goods and services differ, and the law of comparative advantage shows that all will benefit through specialisation and trade.

To illustrate the gains from trade, consider the case of specialisation based on comparative advantage of the countries. The principle of comparative advantage states that even where a country has absolute advantage over another in the production of goods, specialisation and trade can still benefit both countries, as long as each has different opportunity costs in the production of the goods. A country is said to have comparative advantage over another in the production of a good if it incurs lower opportunity cost in producing the goods.

Key assumptions:
1. There are only 2 countries and they each produce only 2 goods.
2. There are constant opportunity costs of production.
3. There are no barriers to trade.
4. There are no transport costs.
5. All resources are fully employed and perfectly mobile within the country.

The production pattern before specialisation of the 2 countries is given in table 1 below.

Table 1

	Wheat	Cloth
Country A	100	50
Country B	5	10
World total	105	60

Country A has absolute advantage over B in the production of both goods, but the margin of advantage differs in the two products. Country A can produce 20 times more wheat than B using the same amount of resources but only 5 times more for cloth. In terms of opportunity costs, it can be seen from table 2 below that country A's opportunity cost in the production of wheat is lower than that of country B while the opportunity cost of producing cloth is lower in country B than in country A. This means that country A has a comparative advantage in wheat production while B has a comparative advantage in cloth production.

Table 2

	Wheat	Cloth
Country A	0.5 cloth	2 wheat
Country B	2 cloth	0.5 wheat

Assuming that country A decides to transfer 1/10 of her resources from cloth production to wheat production and then trade, the production pattern with specialisation will be as in Table 3 below.

Table 3

	Wheat	Cloth
Country A (partial specialisation)	110	45
Country B (complete specialisation)	0	20
World total	110	65

Total world output has increased by 5 units each. Both countries can stand to enjoy more goods. However, the gain to individual countries will depend on the terms of trade. In order for trade to be mutually beneficial, the terms of trade must lie between the two domestic opportunity costs. Since country A will not pay more than 2 wheat for 1 cloth from country B and country B will not exchange 1 cloth for anything less than 0.5 wheat, 0.5 wheat represents the lowest international price of cloth while 2 wheat represents the highest international price of cloth. Assuming that the TOT settles at 1wheat : 1 cloth, the consumption level after trade will be as shown in Table 4.

Table 4

	Wheat	Cloth
Country A	100	55
Country B	10	10
World total	110	65

It can be seen that country A gains 5 units of cloth while country B gains 5 units of wheat after specialisation and trade.

Other reasons for trade:

- Economies of scale refer to the lowering of long run average cost of production as a result of an increase in the scale of production both internal (due to the increase in the scale of production of the individual firm) or external (due to the increase in the scale of production of the whole industry). The lowering of average costs results from the greater efficiency in the utilisation of resources given the larger output. The decreasing cost reason for trade is particularly relevant for small countries where the domestic market is not large enough to support large-scale industries.

- Trade as an engine of growth
  For many developing countries with a small domestic market, trade allows for a higher level of demand for goods thus boosting aggregate demand. With an increase in aggregate demand, production and employment of resources will increase leading to an increase in national output and an improvement in standard of living.

Knowledge, Application, Understanding and Analysis		
L3	For an answer that fully explained the principles of trade including the theory of comparative advantage.	**7 – 10**
L2	For an answer that shows adequate explanation of the various principles of trade.	**5 – 6**
L1	For an answer that shows some knowledge of basis for free trade. Answer contains conceptual errors.	**1 – 4**

5b) Discuss whether governments should be concerned about the changes to a country's balance of payments position brought about by globalisation. [15]

Balance of payments refers to the record of the transactions of the country with the rest of the world. There are two main accounts in the balance of payments. The current account records transaction in goods and services while the capital account records the transaction in money flow.

Globalisation refers to the increase in trade flows and movement of factors across national boundaries resulting in greater integration of economies. The increase in trade flow results from the reduction in trade barriers and changes in technology. These events have brought changes to trade pattern and factor movement leading to changes in balance of payments position.

Globalisation has allowed many developing countries to enjoy higher rates of economic growth which were not possible as they were previously constrained by either their small domestic market, population with limited purchasing power or lack of capital and entrepreneurs. With the opening up to trade and capital flows, there is an increase in utilisation of resources, resulting in a higher level of economic activity. Exports and inflow of FDI resulted in surpluses in balance of payments.

However, developed countries like US and European economies might find that the areas in which they used to have comparative advantage are no longer competitive in the international market. The relocation of plants to the low-cost countries and availability of cheaper alternatives from trading partners have led to a fall in exports. Together with the increase in outward investment in the emerging economies, these changes have led to the worsening of their balance of payments.

<u>Perspective 1:</u> Governments need to be concerned about the changes in the position of balance of payments because of the undesirable consequences.

Possible consequence of a persistent deficit on the balance of payments

- The financing of the persistent deficit in the balance of payments is a source of concern. Governments may need to borrow to finance the deficit. Borrowing to finance a BOP deficit is problematic as it will lead to an accumulation of foreign debt. This means that the earnings of the country will have to be diverted to service the debt, as a part of income will be used to pay the foreign loan and interest, leaving less income for consumption. Payment to foreigners may have intergenerational effects and put future prosperity at risk.

- A BOP deficit implies that the supply of domestic currency exceeds the demand for domestic currency in the foreign exchange market. This causes the domestic currency to depreciate. The depreciated currency means an increase in the domestic price of imported goods as more of the domestic currency is required to purchase the imported goods. The country will than face inflationary pressures due to higher prices for imported goods.

- A persistent deficit on the current account of some of the developed countries reflects the loss of international competitiveness. The deficit will be persistent if the loss of comparative advantage is permanent and labour is occupationally immobile. As a result of the loss of

comparative advantage, there is a rise in structural unemployment. Workers retrenched from the declining industries are unable to move into other expanding areas as they may not have the relevant skills required. If the declining industries employ a large proportion of workforce, it will result in massive structural unemployment due to the mismatch of skills and jobs. As there is no automatic stabiliser (self-correcting mechanism), there is a need for government action.

Possible consequence of a persistent surplus

- A persistent current account surplus may result in demand pull inflation. The increase in net exports will increase AD. This will result in demand pull inflation if the economy is operating near full employment.
- If a country is experiencing a persistent current account surplus, e.g. China, it means that its trading partners are experiencing current account deficit. As a result, there is a likelihood that trading partners will impose protectionist measures in order to correct the deficit. This will result in the worsening of the trade position in the future.
- A persistent BOP surplus may lead to a loss of export competitiveness. Under a freely fluctuating exchange rate system, a balance of payments surplus will cause the exchange rate to appreciate. This will thus raise the foreign price of its exports and so reduce the competitiveness of the country's exports, while decreasing the domestic price of imports. The fall in quantity demanded for its exports may lead to a decline of its manufacturing industries.

Perspective 2: Governments may not be too concerned about the changes in the position of the balance of payments.

- Globalisation may lead to a deficit on the current account due to import of capital goods. This is the case for developing countries during the early stages of industrialisation as a country may have to run a deficit on the current account because it needs to import large volumes of capital goods. This will increase the country's productive capacity which may eventually increase the country's exports of industrial goods. As such, the deficit is not a serious problem as the increase in productive capacity and export will remove the current account deficit subsequently.

- Governments may not be too concerned if the size of the deficit in relation to GDP is small. Changes in trade flow and/or capital flows may also have limited impact on the economy. The extent of impact will depend on the level of openness in terms of trade in goods and services and capital flows. In a country which is less open and where the capital market tends to be limited, the changes will tend to be limited thus there is less need to be concerned.

- A long term deficit on the capital account may not be a serious problem if the deficit is the result of outward foreign direct investment. These capital outflows will gain future returns in the form of profits or dividends thus improving the current account in the future.

- The deficit in the balance of trade due to loss of comparative advantage in the labour intensive and low-technology industries may provide the incentive for the developed economies to move into high value-added industries. The rates of return in these industries are higher leading to greater growth leading to eventual improvement in the balance of payments.

Possible evaluation

The changes in the balance of payments brought about by globalisation are often permanent. Given the impact that these changes have on other macroeconomic objectives, there is a need for government to take action.

Knowledge, Application, Understanding and Analysis		
L3	For a comprehensive and detailed answer that provides a balanced discussion on when government should/shouldn't be concerned about the BOP position caused by globalisation.	**9-11**
L2	For an answer that provides a balanced but undeveloped discussion on whether governments should be concerned about the BOP position caused by globalisation.	**6-8**
L1	For an answer that is mostly descriptive, with some inaccuracies and is not in context.	**1-5**
	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**

Question 6

Discuss how far a government's macroeconomic policy decisions are affected by the country's national debt. [25]

Most governments aim to achieve the various macroeconomic objectives of sustained economic growth, price stability, full employment, healthy balance of payments and stable exchange rate. To do so, governments need to adopt various policy instruments. The main ones are:

- fiscal instruments: changes in government expenditure, changes in types of taxes and tax rates.
- monetary instruments: changes in money supply, interest rate, exchange rate
- supply-side policies
- trade policies

National debt refers to the total amount of government borrowing. Whenever the government adopts a budget deficit (government expenditure is greater than tax revenue), the government may need to borrow to finance the difference between revenue and expenditure. The budget deficit indicates the debt that the government incurs in one year. If the government runs persistent deficits over many years, these debts will accumulate. The accumulated debt is known as the **national debt**. The national debt can be measured by the absolute amount or as a percentage of the GDP.

Perspective 1: A huge national debt will affect government's macroeconomic policy decisions

Government's choice of policy may be affected by the national debt. Consider the case of an economy which is experiencing a recession due to a fall in aggregate demand. An expansionary fiscal policy comprising an increase in government expenditure and/or reduction in direct taxes could help to increase AD. An increase in government expenditure will increase AD directly. A reduction in personal income tax rate will increase disposable income thus allowing households to increase consumption expenditure. A reduction in corporate tax rate will increase the level of after tax profit and the rate of return on investment thus leading to an increase in investment level. The increase in G, C and I will increase the level of aggregate demand thus resulting in an increase in production and national income, lifting the economy out of recession.

However, with a huge national debt, expansionary fiscal policy may not be an option that the government can adopt. This is because:

- A high debt/GDP ratio means that government indebtedness is large relative to the ability to raise tax revenue given that GDP is a rough measure of the government's tax base. Reduction in tax rate may not be feasible because high tax rates will be needed to meet its debt interest burden. Increase in government expenditure may not be possible as it may be difficult to get parliament approval.

- Economy may be seen to have a greater risk of default, leading to loss of credit worthiness. Lenders will require a higher rate of interest on borrowing in order to

compensate for the higher risk of default. The higher interest rate will result in higher debt servicing problem. Reduction in tax rate may not be feasible.

- Economy may have to resort to borrowing from international organisations such as IMF to finance the debt. One of the conditions of loans is the need for the country to adopt austerity measures to reduce government expenditure and increase in tax revenue thus increasing G and reducing T may not be possible.

- Supply-side policies which require huge government expenditure will also be restricted given a national debt.

All these will mean that governments with a huge national debt may have limited use of government expenditure and tax changes to influence the level of aggregate demand and aggregate supply to achieve the various macroeconomic objectives.

Perspective 2: There are other factors that governments need to take into account when making macroeconomic policy decisions. National debt will not be a factor under considerable if the size is relatively small.

- Cause of the macroeconomic problems
  In order to resolve the various macroeconomic problems that an economy may face, it is necessary to identify the cause of the problem. The possible cause of a macroeconomic problem can be analysed using AD/AS framework. An appropriate policy to resolve the problem must address the cause of the problem. If the cause of the problem is aggregate demand, policy implemented must focus to change the level of aggregate demand. Take for example the case of demand pull inflation which results from excessive aggregate demand in relation to aggregate supply. As the economy has reached full employment, the economy lacks resources to increase production to meet the increase in aggregate demand. Competition among the producers for the limited resources will lead to an increase in factor prices leading to an increase in costs of production. This increase in costs is passed on to the consumers leading to demand-pull inflation. Thus, to resolve demand-pull inflation, the government will need to adopt either contractionary fiscal or monetary policy to reduce the level of aggregate demand. If the cause of the inflation is cost-push inflation, price and income policies supplemented by supply-side policies must be adopted. Thus, the decision on policy choice will depend on the cause of the problem.

- Nature of economy
  Economies which have a small domestic market often have to depend more on exports to boost their aggregate demand. Domestic consumption is small in relation to total aggregate demand. At the same time, if the small economies lack natural resources to produce, there will be a high dependence on imports both for production and consumption. With the high dependence on imports, there is high marginal propensity to import thus reducing the value of multiplier. Example of such an economy is Singapore. As such, an expansionary fiscal policy to correct demand deficient unemployment will have limited impact on the economy.
  Due to the small relative size of domestic consumption and domestic investment and the openness to capital flows, changes in interest rate will also have limited impact on aggregate demand.

In the case of Singapore, her dependency on imports for production and consumption has thus led to the adoption of exchange rate-based monetary policy to control imported inflation so as to maintain price competitiveness of exports. G and T are also used largely as supply-side policies to create new areas of growth in exports to maintain the export competitiveness of the economy.
In contrast, large economies like USA with relatively large consumption expenditure and investment adopt demand management policies such as fiscal and monetary policy based on interest rates.

- State of the economy
  The state of the economy may result in certain policies being more effective than others. Take for example a situation of a severe recession due to a fall in aggregate demand. During this period, an expansionary monetary policy in the form of lower interest rate may not stimulate consumption and investment sufficiently. Given the severity of the recession, households will not be willing to spend because of the high level of uncertainty regarding future income and employment. Firms are also uncertain of future demand and rate of returns on investment projects. As a result, the reduction in interest rate will not generate the expected increase in consumption and investment. In such a situation, a direct injection of government expenditure (pump priming) will be more effective to achieve the increase in aggregate demand compared to monetary policy. Thus, choice of the policy is influenced by the state of the economy.

- Time lags of various policy instruments
  Fiscal tools such as changes in level of government expenditure, tax rates, changes in types of taxes have to be approved through parliamentary process. As a result these tools suffer from longer time lags compared to monetary policy instruments such as interest rates which will take less time for changes to take place. As such, there is a need to consider the speed at which a problem needs to be addressed. In some cases, a short term policy may be implemented in order to reduce the impact due to the urgency of the problem before long term policies are undertaken in order to resolve the underlying cause of the problem.

Possible conclusion/ evaluation:

- Government policy decisions are based on a multitude of factors thus national debt is not the sole factor. However, the Eurozone debt crisis may have increased the attention of governments to the importance of national debt.
- Choice of policy may even be influenced by political interests such as political objectives of ruling parties.

Knowledge, Application, Understanding and Analysis		
L3	For an answer that shows thorough discussion of the extent of influence of the national debt and other factors on the choice of macroeconomic policies to resolve the various macroeconomic problems. Shows clear ability to illustrate with examples.	**15 – 21**
L2	For an answer that shows adequate discussion of the extent of influence of national debt and other factors on the choice of macroeconomic policies to resolve the various macroeconomic problems. Able to illustrate with some examples.	**10 – 14**
L1	For an answer that shows knowledge of the different macroeconomic policies but limited attempt to link national debt to the macroeconomic policy decisions. One-sided answer. (Answer only shows how national debt would/ would not affect macroeconomic policy decisions.)	**1 – 9**
Allow up to 4 additional marks for 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**

ANGLO-CHINESE JUNIOR COLLEGE

2013 JC2 PRELIMINARY EXAMINATIONS

ECONOMICS
Higher 1
Paper 1

8819/01
28 Aug 2013

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 for Section A and Section B **separately** using the cover sheets provided.

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

Answer **all** questions in this section.

Question 1 Beyond the Oil Market

Extract 1: Oil price may hit $150, warns International Energy Agency

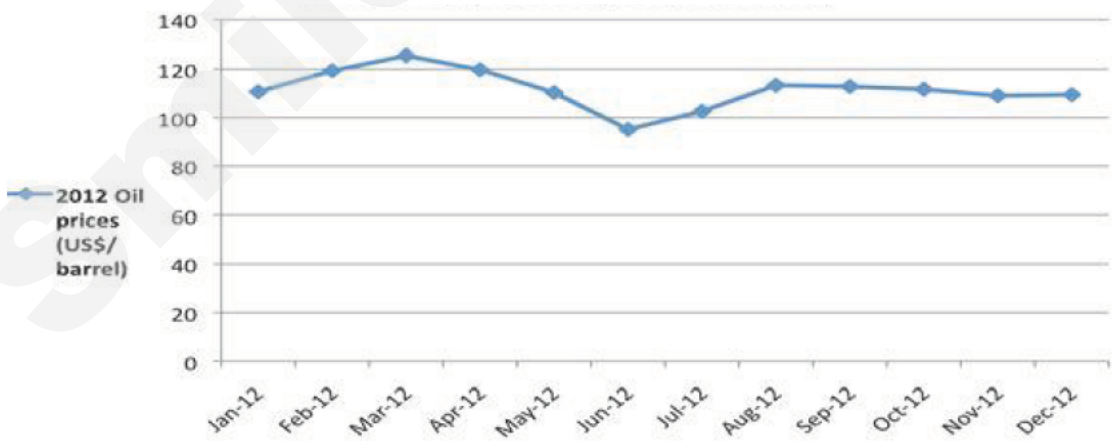
The world's leading energy thinktank, Paris-based International Energy Agency (IEA) has warned that oil prices could spiral above $150 (£93) a barrel from 2012 to 2015, if political unrest in Africa and the Middle East leads to inadequate investment over the coming years. The Middle East and North Africa produce more than one-third of the world's oil. Libya's turmoil shows that a revolution can quickly disrupt oil supply. Libya's oil output has halved, as foreign workers flee and the country fragments. The spread of unrest across the region threatens wider disruption.

Despite a drop in the cost of crude on 9 November prompted by the deepening crisis in the eurozone, IEA said the high cost of crude posed a threat to the global economy and said there was a risk of prices exceeding the previous peak of $147 a barrel seen in 2008.

The thinktank is expecting demand for energy to grow by a third between 2010 and 2035, with two thirds of the increase coming from the fast-growing emerging countries, and says enormous investment in exploration, drilling and refining will be needed for supply to keep pace. Fears that the outlook for global growth will be affected by Europe's sovereign debt problems prompted oil prices to fall by $2 a barrel as dealers anticipated weaker demand. Analysts said the fall would have been larger had it not been for the ratcheting up of international pressure against Iran over its nuclear programme.

Source: *The Guardian,* 9 November 2011

Figure 1: 2012 Oil Prices (US$ / barrel)



Source: *US Energy Information Administration (EIA),* 2012

Extract 2: Global economy learns to absorb oil price hike

Despite the increase in oil prices over the past decade, the world has absorbed the price hikes with relatively little disruption due to fundamental changes in the workings of the global economy. IMF economists attribute this resilience to diversification.

Countries have increasingly diversified their energy sources over recent decades. They import energy from more places than in the 1970s. They also use more varied forms of energy. This makes them less vulnerable to disruptions from any one supplier or source of energy. By 2030, it is

expected that energy use will be even more diversified. Oil, coal, and gas are predicted to each have a 30 percent world market share, with hydro, nuclear and renewable accounting for the remaining 10 percent.

However, oil supplies remain a concern. Despite the reduced impact of high oil prices in recent years, large and abrupt price changes remain difficult to absorb, particularly if they come from supply disruptions.

Source: *International Monetary Fund (IMF)* 25 May 2012

Figure 2: Fossil Fuel Consumption Subsidy Rates in 2011

Country	Average Rate of subsidy (%)	Total subsidy as share of GDP (%)
Iraq	64.3%	19.3%
Saudi Arabia	79.5%	10.6%
India	18.6%	2.4%
Indonesia	23.2%	2.5%
Taiwan	3.9%	0.3%
South Korea	0.3%	0%

Source*: International Energy Agency (IEA),* 2011

Extract 3: Global carbon-dioxide emissions increase in 2011 to record high

Global carbon dioxide (CO2) emissions from fossil-fuel combustion reached a record high in 2011, according to International Energy Agency (IEA). This represents an increase of 1.0 gigatonnes (Gt) in 2010. Coal accounted for 45 percent of total energy-related CO2 emissions in 2011, followed by oil (35 percent) and natural gas (20 percent).

In 2011, a 6.1 percent increase in CO2 emissions in countries outside the Organisation for Economic Co-operation and Development (OECD) was only partly offset by a 0.6 percent reduction in emissions inside the OECD. China made the largest contribution to the global increase, with its emissions rising by 9.3 percent. India's emissions rose by 8.7 percent, moving it ahead of Russia to become the fourth largest emitter behind China, the United States, and the European Union.

With energy-related carbon dioxide (CO2) representing the majority of global greenhouse gas (GHG) emissions, the fight against climate change has become a defining factor for energy policy-making – but the implications are daunting. Much additional investment will need to be directed towards lower- CO2 technologies, on supply and end-use sides alike. The benefits that society would reap from these measures would be of an equal if not larger magnitude than the cost to the energy sector.

Source: *International Energy Agency (IEA), 24 May 2012*

Extract 4: Alternative Energy Market to Soar in Singapore

Singapore's aim is to be a global hub where clean energy solutions are developed, tested, and exported overseas. Singapore's clean energy push centres on solar energy, given its strategic location in the tropical Sunbelt. Besides solar, resources are also being channeled towards wind

energy, electric mobility, smart grids, biomass, fuel cells, energy efficiency, and carbon services. By 2015, the clean energy industry is expected to contribute S$1.7 billion to Singapore's gross domestic product and employ around 7,000 people.

The Clean Energy Programme Office (CEPO) has since launched several complementary programmes such as The Solar Capability Scheme (SCS) and Clean Energy Research and Test bedding (CERT) Programme to develop the solar energy industry in Singapore. The S$20 million SCS seeks to encourage innovative design and integration of solar panels into green buildings. The objective is to build up the capabilities of its solar energy systems integrators through increased adoption by lead users in Singapore. The S$17 million CERT is targeted at the public sector and complements the SCS. CERT aims to provide opportunities for companies to develop and test clean energy applications and solutions using government buildings and facilities in Singapore. Another CEPO programme is the S$50 million Clean Energy Research Programme that supports R&D efforts in academia and industry.

Manufacturing solar wafers, cells and modules has many parallels with semiconductor and electronics manufacturing processes. Singapore's position as a major semiconductor hub, coupled with all-round capabilities from the precision engineering and chemicals industries, provides the nation with a head start in the solar industry. In addition, Singapore is an efficient base for companies given its excellent supply chain capabilities and linkages to the Asia region.

Source: *Singapore Economic Development Board (EDB),* 28 May 2013

Questions

(a) Extract 1 and Figure 1 refer to the changes in oil market.

(i) Describe the trend in oil prices in 2012 as shown in Figure 1. [2]

(ii) Using demand and supply diagram, account for the International Energy Agency's prediction of the oil prices for 2012. [4]

(iii) How far is International Energy Agency (IEA) accurate in its prediction of the oil prices? [2]

(b) Using the concept of elasticity of demand, explain why the world has become more resilient to oil price hikes as mentioned in Extract 2. [2]

(c) **(i)** Compare the total subsidy of fossil fuel subsidy as a share of the GDP for Iraq and Taiwan. [1]

(ii) Comment on the possible effects of such a subsidy on Iraq's economic growth. [5]

(d) With the help of a diagram, explain how 'fossil fuel combustion' (Extract 3) can result in market failure. [6]

(e) As a consultant economist, what options would you recommend to the Singapore government to overcome the challenges of 'large and abrupt oil price changes' (Extract 2)? Justify your answer. [8]

[Total: 30]

Question 2 Uncertain Future for the UK Economy

Extract 5: UK not out of the woods yet

At one level, today's UK trade figures were encouraging. Exports to countries outside the European Union were up 2% to a record high as UK firms started to penetrate some of the world's faster-growing markets. The share of British exports going to the EU dropped to just over 45%, its lowest level since modern records began in 1988. Overall export volumes fell in the first quarter while imports rose, strongly suggesting that trade was a drag on UK growth in the first three months of the year.

This makes it easier to point the finger at the Eurozone as the reason for Britain's stuttering economic recovery. However, a breakdown of GDP showed that weak private consumption shaved 0.5 points off growth and lower government consumption a further 0.3 points - it has been the domestic side of the economy that has been holding the UK back, not overseas demand.

Adapted from Guardian.co.uk, 2012

Figure 3: UK Real GDP Growth Rate

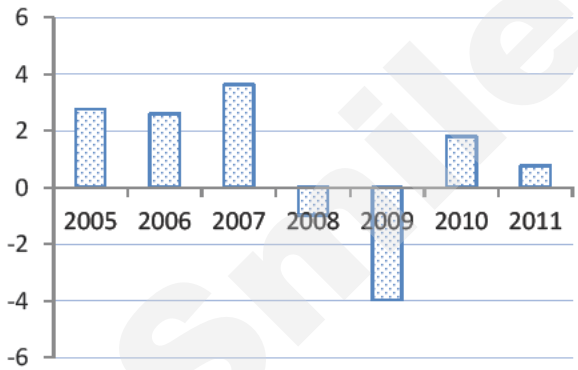
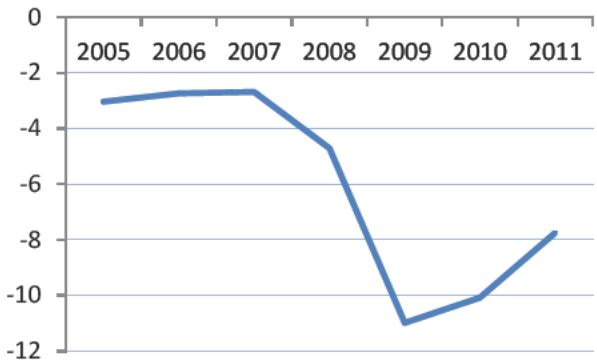
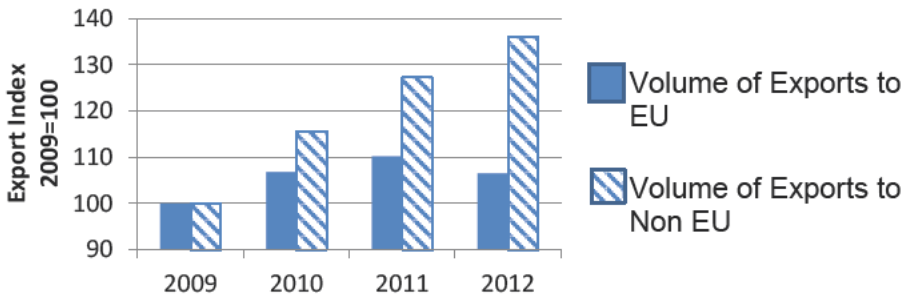


Figure 4: UK Government Budget Balance (as percentage of GDP)



Source: The World Bank

Figure 5: Volume of UK Exports to EU and non EU Countries



Source: Office of National Statistics, 2012

Table 2: Selected macroeconomic indicators for South Korea and UK

Country		United Kingdom					South Korea				
Year		2007	2008	2009	2010	2011	2007	2008	2009	2010	2011
Total Unemployment (%)		5.3	5.3	7.7	7.8	7.8	3.2	3.2	3.6	3.7	3.4
Youth unemployment[1] (%)		13.3	16.0	19.0	19.9	21.8	8.8	9.3	9.8	9.8	9.6
Real GDP (US$ Billion)		2110	2090	2006	2043	2063	1212	1240	1244	1322	1371
Composition as percentage of GDP	Private Consumption	61.1	60.7	61.3	61.0	59.7	66.6	65.4	67.9	65.5	65.7
	Government Consumption	22.7	23.2	24.5	24.1	24.2	4.8	4.2	4.3	4.2	4.1
	Investment	18.8	17.8	15.0	16.2	16.0	27.1	27.0	24.6	22.5	22.2
	Exports	27.7	28.3	27.1	28.2	29.3	43.5	46.4	45.7	50.2	51.4
	Imports	30.3	30.0	27.9	29.5	29.2	42.0	43.0	42.5	42.4	43.4

[1] Youth Unemployment is the percentage of 15-24 year olds who are part of the labour force but are unemployed

Source: The World Bank, OECD

Extract 6: A generation left behind

Youth unemployment is rising perniciously across much of the developed world. Poor growth, widespread austerity programmes and the winding up of job-creating stimulus measures threaten further unemployment overall. The young jobless often get a particular bounce in recoveries: first out, they are often also first back in. However the lack of a sharp upturn means such partial recompense has not been forthcoming this time round.

Youth unemployment has direct costs in much the same way all unemployment does: increased benefit payments; lost income-tax revenues; wasted capacity. In Britain a report puts the cost of the country's 744,000 unemployed youngsters at £155m ($247m) a week in benefits and lost productivity. Some indirect costs of unemployment, though, seem to be amplified when the jobless are young. One is emigration: ambitious young people facing bleak prospects at home often seek opportunities elsewhere more readily than older people with dependent families.

Youth unemployment leaves a “wage scar” that can persist into middle age. After a period of unemployment, the temptation to take any work can be strong. Wage scarring is one of the reasons to think this has lasting effects. Young people unemployed for a long time are usually channelled into “non-regular” jobs where pay is low and opportunities for training and career progression few. Employers seeking new recruits for quality jobs generally prefer fresh graduates over the unemployed, leaving a cohort of people with declining long-term job and wage prospects.

Adapted from the Economist, 2011

Extract 7: The great mismatch

A big part of the youth unemployment problem is that educators and employers operate in parallel universes. The best way to bring these two universes together is to revamp vocational education. Some far-sighted countries such as South Korea have reinvented vocational schools to reduce the country's shortage of machine operators and plumbers; counteracting the country's obsession with academic laurels.

Adapted from the Economist, 2011

Extract 8: Will growth give them a job?

The most obvious way to tackle unemployment is to reignite growth. That is easier said than done in a world plagued by debt, and is only a partial answer. The countries where the problem is worst (such as Spain and Egypt) suffered from high youth unemployment even when their economies were growing. Throughout the recession companies have continued to complain that they cannot find young people with the right skills. This underlines the importance of two other solutions: reforming labour markets and improving education.

Youth unemployment is often at its worst in countries with rigid labour markets characterised by cartelised industries, high taxes on hiring, strict rules about firing and high minimum wages. Closing the skills gap will also require a change of attitude from business. Some companies (e.g. IBM & McDonald's) are revamping their training programmes, but the fear that employees will be poached discourages them from investing in the young. However, some employers have begun to co-operate with colleges to design training courses. Technology is also reducing the cost of training: online courses can help apprentices combine on-the-job training with academic instruction.

Adapted from The Economist, 2013

Questions

(a) With reference to figures 3 and 4,

(i) Describe the trend in the government budget balance as a percentage of GDP in the UK between 2007 and 2011. [2]

(ii) Explain how GDP growth rate could have affected the government budget balance. [3]

(b) **(i)** Compare the trend of the volume of UK's exports to EU and non EU countries between 2009 and 2012. [2]

(ii) Explain whether the trend observed in b(i) can be used to conclude that UK's export revenue has increased between 2009 and 2012. [2]

(c) Using the data, explain the relative importance of private consumption and net exports on UK's economic recovery in 2011. [3]

(d) In Extract 6, wage scarring is considered one of the reasons why youth unemployment has lasting effects.
Discuss the impact of youth unemployment on present and future economic growth. [8]

(e) With reference to the data, assess whether "reinventing" vocational education is the key to reducing unemployment in the UK. [10]

[Total: 30]

Section B

Answer **one** question

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

3 **(a)** Explain the economic justification for the government intervention in the provision of public goods. **[10]**

(b) Discuss, to what extent, should private goods be left entirely to the private sector to achieve an efficient allocation of resources? **[15]**

4 **(a)** Explain how a country may benefit from free trade. **[10]**

(b) Discuss the view that protectionistic measures should not be undertaken to correct the current account deficit. **[15]**

H1 Economics Case Study 1 (Beyond the Oil Market)

Extract 1 and Figure 1 refer to the changes in oil market.

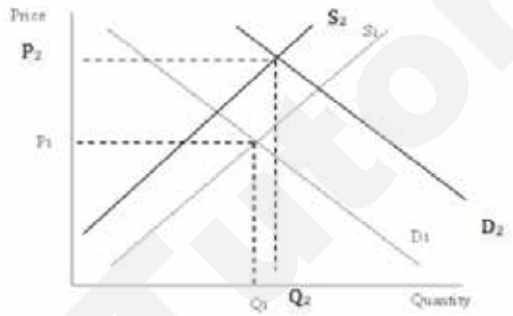
(a)

(i) Describe the trend in oil prices in 2012 as shown in Figure 1. [2]

- Oil prices remain steady in 2012 at around US$ 110 per barrel. [1m]
- There was a sharp fall in oil price from March to June 2012. [1m]

(ii) Using demand and supply diagram, account for the International Energy Agency's prediction of the oil prices for 2012. [4]

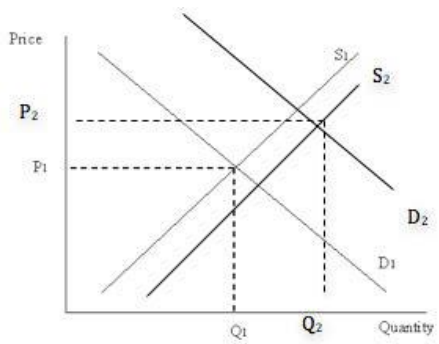
International Energy Agency predicted that oil price will increase and it may hit $150 per barrel. There are both demand-side and supply-side reasons:
Possible option 1:



Supply side reason (supply falls):
There is political unrest in Africa and Middle East (oil producing countries) and this will disrupt investments in oil production in the near future. Supply of oil is expected to be disrupted and hence fall.

Demand-side reason (demand rises):
Demand for energy is expected to increase, especially from fast-growing economies such as China and India due to the increase in economic activities in these economies. Demand for oil is expected to rise.

Combined effect:
With the expected fall in supply and increase in demand for oil, this will cause a shortage in the market and hence causing an upward pressure in the price. Hence IEA predicted that oil prices will likely to spiral above $150 per barrel in the short term.
Possible option 2:
If students mention rise in supply, answer should include that rise in supply < rise in demand. Hence, accounting for IEA's prediction of oil price increase.



Supply side reason (supply rises):

Improvement in technology in sourcing for new sources of oil reserves and better and more

effective oil extraction methods such as drilling and refining of crude oil (Extract 1) are developed insourcing for new sources of oil. Supply is expected to rise.

Demand-side factor – 1m
Supply-side factor – 1m
Diagram explaining combined effect of demand and supply factors AND linking to IEA's prediction of higher oil price – 2m

(iii) How far is International Energy Agency (IEA) accurate in its prediction of the oil prices for 2012? [2]

- Stand: Inaccurate prediction by IEA
  In figure 1, oil prices remain relatively stable and in fact fell in the first half of 2012 while IEA predicts that oil prices will rise significantly above $150 per barrel. [1m]

- Reason: Demand fell (in the first half of 2012) rather than rose due to pessimistic economic outlook caused by global financial crisis. (Extract 1). [1m]

(Students indicating supply fell due to disruption in middle east should mention that fall in demand outweighs the increase in supply.)

(b) Using an elasticity concept, explain why the world has become more resilient to oil price hikes as mentioned in Extract 2. [2]

- PED: Demand for oil is more price elastic [1m]
- Greater availability of substitutes for oil; such as coal, natural gas and renewable energy sources (Extract 2). [1m]
  OR
- Hence, even as price of oil increases, most consumers are able to switch to alternative energy sources. This results in a larger than proportionate fall in quantity demanded. Thus explaining for the greater resilience to oil price hikes. [1m]

(c) (i) Compare the total subsidy of fossil fuel as a share of the GDP for Iraq and Taiwan. [1]

- Subsidy as a share of GDP is higher for Iraq than that of Taiwan. [1m]

(ii) Comment on the possible effects of such subsidy on Iraq's economic growth. [5]

Positive effect [2m]:

(+) Subsidising fossil fuel consumption for production of oil related products will increase the affordability of fossil fuel and benefit producers as it lowers the cost of production of oil related products. This encourages investment leading to the increase in Aggregate Demand and national income.

Negative effect [2m]:

(-) As a share of its GDP, Iraq has the highest subsidy for fuel consumption. Subsidising fossil fuel consumption can lead to over-consumption and increase the government expenditure which is not a sustainable approach à the expenditure spent on provision of subsidy could have been used for other alternative purposes; developing infrastructure, improving quality of labour force etc (opportunity cost involved), which can boost investment to increase efficiency and productive capacity, sustaining growth in the long run. à slowdown actual and potential growth

Judgment [1m]:

Given that Iraq is still developing its economy, substantial subsidy of fossil fuel consumption will involve a large opportunity cost which may not be in the best interest of its nation's

economic growth.

(d) With the help of a diagram, explain how 'fossil fuel combustion' (Extract 3) can result in market failure. **[6]**

Source of market failure: negative externality [1m]

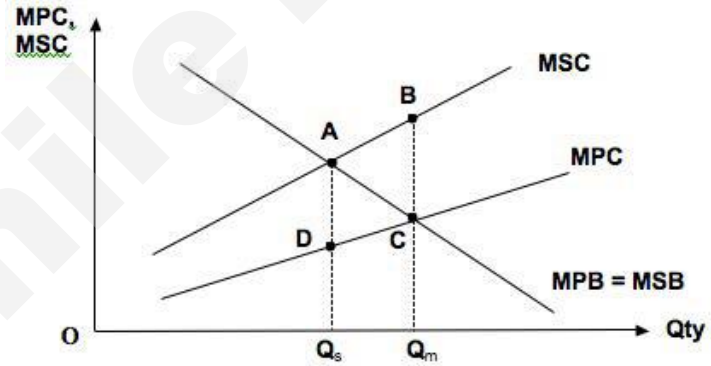
Explain the cost curves in the given context [4m]:

- Individuals will only take into account his marginal private cost and marginal private benefit.
- The external cost is due to the fossil fuel combustion. This causes harmful environmental effects when the chemical toxic is released into the atmosphere and the CO2 emitted can result in climate change such as global warming (Extract 3).

- Since individuals do not consider the negative externalities that would be generated (i.e. the marginal external cost, MEC) to the third parties, there is a divergence between the marginal social cost, MSC and marginal private cost, MPC, and as a result, MSC lies above that of MPC (I.e. MSC= MPC + MEC). The market equilibrium is at Qm where MPB= MPC where energy producers maximise their profit.

- The socially efficient level is where MSB = MSC i.e. the external costs are taken into account and society's welfare is maximised Given the market equilibrium outputs is at Qm while social optimal output level is Qs, the price mechanism has thus over-allocated resources to the usage of oil; DWL: Area ABC)

- Accurately drawn diagram (with reference to explanation) [1m]:



Society as a whole could be made better off if the level of oil usage was to be reduced to the socially efficient level, Q_s.

L3	· *Accurately identified the source of market failure* · *Well- developed explanation of market failure in the given context* · *Accurate diagram and with reference to explanation*	5-6
L2	· *Accurately identified the source of market failure* · *Under- developed explanation of market failure in the given context* · *Accurate diagram and some reference to explanation*	3-4
L1	· *Inaccuracy in identification of the source of market failure* · *Explanation of market failure consists of conceptual errors and has inaccurate/no diagram*	1-2

(e) **As a consultant economist, what options would you recommend to the Singapore government to overcome the challenge of 'large and abrupt oil price changes' (Extract 2)? Justify your answer.** **[8]**

Policy options:

1. **Oil subsidy to oil importers (firms)**
   - Oil subsidy by the government enables producers to cope with large and abrupt oil price increases that could otherwise raise firm's cost of production and hence erode profit margins. With subsidy, firms can continue financing its investment projects or continue in operation, thus minimizing disruption to Singapore's economic growth and employment rate.
   - Policy evaluation:
     - Increase govt. expenditure that can result in rising future tax-payers burden or reduction in other public projects; not a long-term sustainable policy

2. **Maintain the use of modest and gradual appreciation**
   - Gradual and modest appreciation will reduce the price of imports relative to domestic currency (SGD), hence help to address rising imported oil prices (curb imported inflation)
   - Enables production firms (especially exporting industries) that rely on imported factors of production to face a lower cost of production (assumption: demand for imports is price inelastic; given Singapore has little natural resources and thus imports the factor of production extensively)
   - Policy evaluation:
     - Fast and easy to be implemented while able to address the root issue - imported inflation and also able to contain the rising cost of production for firms importing materials.
     - However, there is a limit to how much the currency can be allowed to appreciate à too high an appreciation can erode Singapore's export competitiveness.

3. **Encourage development of sustainable energy industry (alternate energy sources) à reduce vulnerability to large and abrupt oil price rises**

· **Govt can provide subsidy to producers of clean energy industries**
   - Cleaner energy firms face lower costs of production, hence encouraging the development of cleaner energy (supply of sustainable energy industry increases) à Extract 4: "S$20 million Solar Capability Scheme (SCS) to encourage innovative design and integration of solar panels into green buildings" à Singapore can be less dependence on oil-related production (less vulnerable to large and abrupt oil price changes)
   - Policy Evaluation:
     - However, difficult to make an accurate valuation of the correct amount of subsidy. Also, government expenditure is required to finance the subsidy. This may result in an increase in taxes or a reduction of spending in other public projects.

• **Government provision & funding of R&D**
   - Lower costs of doing research and providing incentive to carry out R&D into alternative energy methods à Extract 4: "CERT to provide opportunities for companies to develop and test clean energy applications and solutions using government buildings and facilities and S$50 million Clean Energy Research Programme which supports R&D efforts in academia and industry"
   - Policy Evaluation:
     - Firms have the freedom to make the decisions. However, outcome is uncertain; depends on success of R&D.
     - Nevertheless, what may be more important is whether a country has the appropriate infrastructure and environment to support the research work;

Conclusion:
Policies needed should consist of both long-term and short-term measures to enable Singapore to better cope with the immediate challenges of imported inflation, large and abrupt oil price hike while also looking into the development of more sustainable long-term alternatives to reduce Singapore's vulnerability towards future oil price changes.

L3	· *Clear and developed explanation of three policies to overcome the challenges of oil price hike (policies recommended should include the development of sustainable energy industry)* · *Appropriate usage of data provided to support explanation*	*5-6*
L2	· *Under-developed explanation of the policies (two or more policies) in overcoming the challenges of oil hike.* · *Some usage of data provided but not the most relevant.*	*3-4*
L1	· *Irrelevant explanation of policies or explanation is conceptually incorrect.* · *Little relevance or no usage of data provided.*	*1-2*
E2	*Reasoned judgment –*	*2*
E1	*Unreasoned judgment –*	*1*

Case study Question 2

A

(i) With reference to Figs 3 and 4, [2]
Describe the trend in the government budget balance as a percentage of GDP in the UK between 2007 and 2011.
There is an increasing budget deficit from 2007 to 2011 [1]. The government budget is in a deficit throughout 2007 to 2011 [1].
OR
There is an overall worsening budget deficit, however from 2007 to 2009 while the deficit increased, there was a reduction in the deficit after 2009.

(ii) Explain how GDP growth rate could have affected the government budget balance? [3]

From 2008 to 2009 when there was negative GDP growth, there was a larger budget deficit. However from 2005 to 2007 and 2010 to 2011 where UK experienced positive GDP growth, the government budget deficit was reduced. [1]

- As the economy grows, household incomes and firms' profits are higher; there is higher tax revenue from personal income and corporate taxation, and indirect tax revenue. [1]
- The government expenditure on welfare payments for unemployment benefits could have fallen with positive economic growth. [1]

Students can use automatic stabilisers or discretionary fiscal policies to explain.

(b) (i) Compare the trend of UK's exports to EU and non EU countries between 2009 and 2012. [2]

Similarity: Both have an increasing trend [1].
Difference: However the UK's exports to non EU increased faster than the UK's exports to EU countries. [1]

(ii) Explain whether the trend observed in bi) can be used to conclude that UK's export revenue has increased between 2009 and 2012. [2]

Since the data is given in index form, it shows the volume of change compared to 2009 has increased. However, there is not enough data given to conclude that trade export revenue has increased. [1]

Export revenue is the product of the price and volume, however, the data for the price index of exports is not available. [1]

(c) Using the data, explain the relative importance of private consumption and net exports on UK's economic recovery in 2011. [3]

UK's economic recovery in 2011 is due more significantly to an increase in the net exports compared to private consumption. From table 2, although private consumption forms the highest component of GDP, it has fallen as a percentage of GDP while net exports improved from a deficit to a surplus in 2011 due to the increase in volume of exports to non EU countries (fig 2). Hence, there is an increase in the relative importance of net exports while private consumption played a less significant contributor to UK's recovery.

Reference to the data [1]; explanation [2]

(d) In Extract 6, wage scarring is considered one of the reasons why youth unemployment has lasting effects.

Discuss the impact of youth unemployment on present and future economic growth. [8]

Effect of youth unemployment on present growth

- Fall in consumption due to falling incomes and less youths who are gainfully employed will cause AD to be negatively affected, hence growth in the short run will be slowed by youth unemployment.
- Impact on the government budget and hence ability to undertake fiscal policy.
    - Direct costs incurred in terms of unemployment benefits. The longer youths are unemployed, the more government expenditure per individual required. In Britain, the cost of unemployed youths to the government and to the economy is estimated to be 155m pounds a week in benefits and lost productivity.
    - Fall in current incomes of the youths will lead to a loss of tax revenue due to fewer youths in unemployment.

Effect of youth unemployment on potential capacity which affects sustained future growth.

- Wasted capacity due to the loss of man hours and hence the fall in the maximum amount of output that UK can generate, which will limit future growth.
- If youth unemployment persists and causes talented youths to migrate to other countries in search of employment (extract 6), this could result in a large brain drain and fall in the labour resource of Britain, affecting the long run aggregate supply and productive capacity of the economy adversely.

Effect of youth unemployment on future sources of growth

- Impact on consumption and investment in the future
- Wage scarring could occur leading to a permanent and persistent loss of earning power as the training of skills, and career progression of individuals is disrupted largely by periods of youth unemployment.
- Prolonged structural unemployment leads to atrophy of skills over time. Firms may choose to invest elsewhere with a more dynamic and relevant workforce. With a slower growth in investment, this will slow both potential growth and actual growth in the future.

The extent of the negative impact of youth unemployment depends largely on how the skills and technical know-how of the youths is affected, and how long such youths remain unemployed after graduation.

L3	Balanced analysis on the consequence of youth unemployment on both present and future growth, incorporating various data as evidence to substantiate analysis. The analysis is contextualised to the UK economy.	5-6
L2	One-sided analysis on the present effect of youth unemployment. Or Balanced analysis attempted but argument is limited in elaboration or use of the AD/AS analysis. For analysis that consist of interpretation of explanations of unemployment instead of youth unemployment. [max 3]	3-4
L1	Listing of effects of the impact of youth unemployment.	1-2
E2	Well-reasoned judgement	2
E1	Some attempt to make judgement but is not well supported.	1

(e) With reference to the data, assess whether "reinventing" vocational education is the key to reducing unemployment in the UK [10] **[10]**

Introduction:
Explain the main type of unemployment in the UK: Structural especially amongst the youths (periods of positive growth does not cause a reduction in youth

unemployment from 2009 to 2011, in fact evidence of increasing youth unemployment despite growth of the economy in Table 2), and cyclical unemployment (sharp increase in unemployment in 2009 during the economic recession). Recognise that reducing total unemployment involves not only measures targeting youth unemployment, but also for workers above the age of 24.

Assertion that "reinventing" vocational education as **key** to reduce unemployment especially among the youths.

- Reinventing vocational education is necessary to equip both youths and adults with the relevant skills and knowledge in accordance to the needs of the industry. As suggested in Extract 7, this means to encourage collaboration and partnerships between educators and employers in the design of training courses (extract 8) which facilitates better information sharing regarding the type of workers the employers require, more targeted training and enable the movement between vocational schools to the workplace more seamless. This could have the additional benefit of reducing frictional employment.
- As in South Korea (Extract 7), improvements made in vocational training can enable the economy to better meet specific industry needs in areas that require specialised knowledge and skills such as machine operators and plumbers.

Counter Argument that vocational education may not be sufficient to address all the root causes of unemployment in the UK, especially cyclical unemployment.

Stimulating growth could be more important to reducing unemployment in the UK (Extract 8 suggests that reigniting growth is the key).

- This could be done by undertaking expansionary demand management policies to stimulate domestic consumption which has been dampening UK growth, and also to incentivise firms to invest. Fiscal policies may not be viable due to the austerity drives to cut down public debt, and given that the budget balance as a percentage of GDP has been in a deficit from 2005 to 2011 (Figure 4).
- Trade policies with focus on non EU destinations to take advantage of growth in emerging economies (Figure 5) which has been a significant contributor to UK's recovery. This could help UK develop new areas of comparative advantage, leading to creation of jobs and fall in unemployment.

Suggestion of other measure(s) to argue that reinventing vocational training is only one part of the solution to reduce unemployment.

- Retaining of talented young individuals by identifying them earlier to prevent the emigration and brain drain.
- Reforming labour markets and reducing supply-side rigidities (extract 8)
- Government intervention in the allocation of university places to better manage investment in human capital for the long-term needs of the economy. This addresses the perception of academic qualifications being more important than having the right skills set to undertake jobs in the future.

Conclusion

In light of possible measures assessed, reinventing vocational training is key in targeting the skills mismatch in a sustainable manner which also has benefit in building more synergy between employers and educators to better anticipate and meet the labour needs of the economy..

Level	Descriptors	Marks
L3	· For a comprehensive and justified explanation on the use of revamping vocational education and other policies in	7-8

	reducing unemployment in the UK. Referencing to the data and contextualising is done by incorporating data to substantiate analysis.	
L2	· One-sided argument regarding the use of vocational training in addressing the mismatch of skills. · Discuss both vocational training and measures to counter cyclical unemployment but argument is limited in elaboration or with inaccuracies, or inconsistent in the discussion.	4-6
L1	Answers with many inaccuracies, listing of measures with little explanation.	1-3
E2	Well-reasoned judgement on the importance of re-inventing vocational training, based criterion	2
E1	Attempt to justify if reinventing vocational training is key or not, but is not well supported.	1

Total Marks [30]

H1 Prelims Essay Question Mark Scheme

3(a) Explain the economic justification for the government intervention in the provision of public goods. [10]

(b) Discuss, to what extent, should private goods be left entirely to the private sector to achieve an efficient allocation of resources. [15]

Suggested Approach

3 (a)

Introduction:

- Public goods: non-excludable and non rivalrous
- Examples of public goods: national defence, street lighting

Development:

Non-excludable:

- not able to exclude people who do not pay for the goods from consuming/using the good. An example is national defence, once it is provided, it is impossible to prevent any single person (whether paying or not paying) from benefitting from the defence provided.

Producers are not able to exclude people who do not pay from consuming the good, it will give rise to free-rider problem, whereby a person can receive the benefit of the good without paying for it. à no consumer is willing to reveal their price signals since they can stand to benefit even without paying à no market demand curve à hence, to be at the allocative efficient consumption level, P must be equal to zero, which is not profitable for producers to produce

Even if there are some consumers who are willing and able to pay for these public goods, the market will still have insufficient demand from these few consumers à lacking in profitability for the producers à producers will not be willing and able to provide for such goods.

Non-rivalry:

- one person's use of a public good does not reduce another person's usage/satisfaction of using the same good.
- For example, once the national defence is provided, the amount of defence/security one enjoys does not diminish with each additional user.
- The marginal cost of additional unit of such good like street lighting is zero. To satisfy the allocative efficient condition, consumption has to be where P=MC, since MC = 0, P has to be zero to be allocative efficient, and that would mean private producers would not find it profitable to produce these public goods.

Essential Need/Positive Externality:

- Most public goods are needed to meet the essential needs of the people/country.
- For example: national defence is a critical service against threats from other countries. In addition, it also provides the sense of security for the people.

Together, the free ridership problem and the MC of each additional unit of good means

there is not profitable to be produced by the private markets. Henceforth, there is a missing market for the public goods like national defence. At the same time, these public goods have to be provided as they exhibit positive externality and are essential to the running of the country. These public goods are meant for collective consumption, so even if it is profitable for the private sector to provide, the private market may not have sufficient funding to provide for the masses. Hence, the government must directly provide for the good since the government can use government taxation to finance the provision of such public goods meant for collective consumption.

3(b)

Introduction

- Meaning of private goods à excludable (able to exclude non-payers from consuming the goods) and rivalrous (one's consumption can reduce the other person's consumption level), à presence of demand and price signals à makes the good profitable to be produced by the private markets à therefore can and will be provided by the private sector

How the private sector is able to achieve an efficient allocation of resources

Private sector takes the price signals as an indication to how much resources should be allocated for the production of the private goods.

When the demand of the private good increases à shortage at the existing eqm price à puts upward pressure on the prices à price increase, less consumers will be willing and able to buy hence, qty dded drop. With the price increase, producers respond by allocating more resources to increase the production of such goods since they can gain more revenue from selling at a higher price à increases the qty supplied à clears the shortage to reach the new eqm of a higher eqm price and higher eqm qty

At the new eqm, the consumer and producers surplus is maximized à indicating an efficient allocation of resources. This efficiency is also the social efficiency if the assumptions of no externalities and perfect information hold.

True to a large extent that the private goods should be left to the private sectors as it is able to maximise the private interests of the consumers and producers, but in the real world, the assumptions of no externalities and perfect information may not hold for all private goods, for example, in the case of merit goods like healthcare and education.

These types of merit goods gives off the large positive externalities when consumed, hence the government will most likely provide for such merit goods, instead of leaving it entirely to the provision by the private sectors.

How some private goods, namely merit and demerit goods should not be left entirely to the private sector to achieve an efficient allocation of resources/government should intervene

In the case of **merit** good à explain how the consumption of the merit goods (healthcare, education) may lead to under-allocation of resources/under consumption.
Positive externalities in the consumption of healthcare (for example) à lower risks of getting the virus, healthier workforce, more productive workforce.

Imperfect information: consumer could have under estimated their own private costs & benefits of consuming healthcare
If left entirely to the private sector, the market equilibrium is below the social eqm à indicating inefficient allocation of resources, not maximizing the welfare of the society.

Diagram to illustrate

In the case of **demerit** good à explain how the consumption of demerit (cigarettes) may lead to over-allocation of resources/over consumption.
Negative externalities in the consumption of cigarettes (for example) à second hand smoking, respiratory health problems to other non-smokers who may have inhaled the second hand smoke, worsen environmental condition due to littering of cigarettes buds and the air pollution
Imperfect information: consumer could have under estimated their own private costs of consuming cigarettes
If left entirely to the private sector, the market equilibrium is above the social eqm à indicating an over allocation of resources in the consumption and production of cigarettes, not maximizing the welfare of the society.

In the cases of merit and demerit, they cannot be left to the private sector entirely as it would not be able to achieve efficient allocation of resources itself. The government should intervene to help achieve an efficient allocation of resources, which will maximize the society welfare. Some examples of government intervention include market-based solutions, legislation or even direct provision.

Briefly explain how government intervention can work towards an efficient allocation of resources. Students can choose to just use **either** the case of demerit **or** merit goods to explain how the government can intervene to help achieve an efficient allocation of resources.

Explain how even in cases of government intervention in some private goods, efficient allocation of resources may not be reached/government failure

This does not mean that efficient allocation of resources will always be reached with government intervention for the demerit and merit goods. The government may lack the necessary information to accurately gauge the amount of EB/EC to determine how much to subsidise or tax. With inaccurate gauge of the EC/EB, there may still be inefficient allocation of resources for these private goods.

(varying degree of government intervention: more govt intervention for merit goods like housing and education as the EB of consumption of it is larger + also needs to ensure affordability; less so for demerit goods like cigarettes, where the deviation of the market level from the socially ideal level of consumption is smaller)

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4 (a) Explain how a country may benefit from free trade. [10]

(b) Discuss the view that protectionistic measures should not be undertaken to correct the current account deficit. [15]

4(a)

A brief explanation of comparative advantage and pattern of trade.

- a country should specialise in producing those goods that she has a comparative advantage in and export them and import those goods that she had a comparative disadvantage in.
- apply to two real countries like China and US or Singapore and Malaysia or …

Free trade promises the potential for higher (compared to a case of a self-sufficient country) and rising standard of living:

- Countries achieve consumption above their production possibility curves (Comparative Advantage Principle).
- Imports of domestically-unavailable raw materials extend country's production capabilities (eg. Singapore)
- Imports of capital with higher technology to increase productivity of labour and capital to increase or sustain economic growth
- Imports will provide competition for domestic producers, firms will thus improve to be more efficient. To sustain comparative advantage, firms in each county will consistently lower costs and improve. These production dynamics will push the boundary of countries' production possibilities outwards (i.e increases economic growth).
- Cost reduction and lower prices arising from the gain of economies of scale. i.e. free trade means larger market for firms à firms able to increase production, hence enjoy large economies of scale à lower production costs à hence consumers enjoy lower prices.
- Consumers also benefit from greater choices and larger consumer surplus (from purchase of cheaper imports. Cheaper imports also cause local producers to offer lower prices).
- As an "engine of growth" – in a growing world economy, the demand for a country's exports is likely to grow, especially when these exports have a high income elasticity of demand. This provides a stimulus to growth in the exporting country.

Hence, free entry of imports makes domestic markets more competitive – positive effects on efficiency and domestic production costs.

4(b)

Explain what a current account deficit is and in general, how it can be corrected.

- current account consists of
  - trade in goods and services account (Value of exports and value of imports)

- o incomes flow account: wages, interest and profits flowing into and out of the country
- o current transfers of money: between governments, international organisations, firms and individuals

§ deficit in current account is usually caused by a deficit in the trade and services account
- o value of export earnings less than her value of import expenditures

§ correction of current account deficit will require a country to either decrease her import expenditure or increase her export earnings or both

§ Explain how some common protectionistic measures can reduce import expenditures to correct current account deficit
- § tariff
- § import quotas
- § subsidies (for export or domestically produced import substitutes)

§ counter-arguments for adopting protectionistic measures to correct current account deficit
- § conditions for measures to work may not be present
- § effectiveness of measures debatable
- § incur welfare loss (deadweight loss) to society
- § financial burden to government in the case of subsidies
- § possible retaliation from trade partners
- § misallocation of resources and increase inefficiencies

When a government adopts protectionistic measures to correct her current account deficit, she is basically trading off short term gains for long term losses.

Therefore, there is much truth in the view that protectionistic measures should not be undertaken to correct a current account deficit.

In fact, there are other policies that the government can take to correct a current account deficit without incurring such high long term costs.

Besides, government should first identify the source of current account deficit before deciding what measures to take to correct it.

For example, if the source of current account deficit is due to excessive imports resulting from strong economic growth à policy response can be expenditure reduction through contractionary policies (explain how the policy works and compare outcome with protectionistic measures)

For example , if it is due to loss of export price competitiveness (resulting from surge in hot money inflow or higher domestic inflation or less cost efficient methods), policy response could be depreciation of currency, anti-inflationary measures

If the government persists in undertaking protectionistic measures in the above cases, the limited short term gain will incur a very high long term loss, especially if the deficit persists.

Protectionistic measures are last resort policy options and should be avoided as far as possible as the cost to society is high and long term. Improving real export competitiveness and creating comparative and competitive advantage should be the overall approach to achieving a healthy and favourable current account balance.

ANGLO-CHINESE JUNIOR COLLEGE

2013 JC2 PRELIMINARY EXAMINATIONS

ECONOMICS **9732/01**
Higher 2 28 Aug 2013
Paper 1

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

At the end of the examination, fasten your answers to Question 1 and 2 **separately** using the appropriate cover sheets provided.

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

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

Answer **all** questions

Question 1 Public Transport in Singapore

Extract 1: Oil price may hit $150, warns International Energy Agency

The world's leading energy thinktank, Paris-based International Energy Agency (IEA) has warned that oil prices could spiral above $150 (£93) a barrel from 2012 to 2015, if political unrest in Africa and the Middle East leads to inadequate investment over the coming years. The Middle East and North Africa produce more than one-third of the world's oil. Libya's turmoil shows that a revolution can quickly disrupt oil supply. Libya's oil output has halved, as foreign workers flee and the country fragments. The spread of unrest across the region threatens wider disruption.

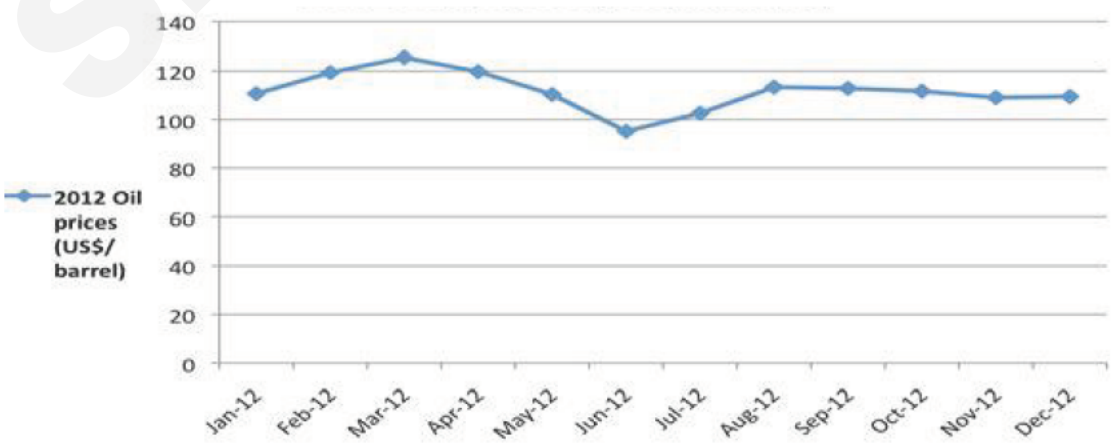
Despite a drop in the cost of crude on 9 November prompted by the deepening crisis in the eurozone, IEA said the high cost of crude posed a threat to the global economy and said there was a risk of prices exceeding the previous peak of $147 a barrel seen in 2008.

"In 2011, $102 is the average price through to today which means the global economic recovery is at risk. We are in the danger zone for the global economy at current levels," IEA economist Fatih Birol told a news conference. "There is a possibility that production growth from the Middle East and North Africa (Mena) region may not be what the consumers would like to see.

The thinktank is expecting demand for energy to grow by a third between 2010 and 2035, with two thirds of the increase coming from the fast-growing emerging countries, and says enormous investment in exploration, drilling and refining will be needed for supply to keep pace. Fears that the outlook for global growth will be affected by Europe's sovereign debt problems prompted oil prices to fall by $2 a barrel as dealers anticipated weaker demand. Analysts said the fall would have been larger had it not been for the ratcheting up of international pressure against Iran over its nuclear programme.

Source: *The Guardian,* 9 November 2011

Figure 1: 2012 Oil Prices (US$ / barrel)



Source: *US Energy Information Administration (EIA),* 2012

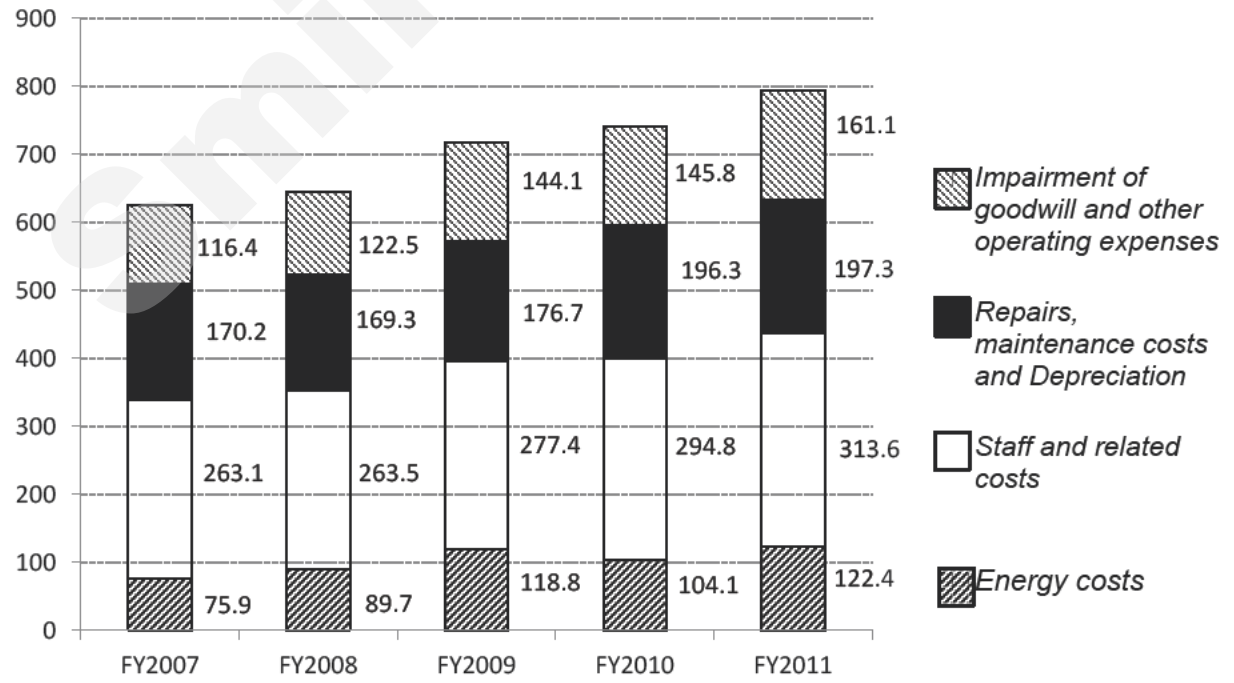
Extract 2: SBS Transit, SMRT apply for fare increases

Public transport operators SMRT and SBS Transit are seeking to increase the total bus and rail fares collected by up to 2.8 per cent. The application for the fare adjustments came even as both SMRT and SBS made huge profits last year. SMRT posted net earnings of $162.1 million for the year up to March. SBS Transit's net profit was $54.3 million for the year ending last December. Both operators submitted their applications for fare adjustment to the Public Transport Council (PTC) on Monday. The increase is calculated using the annual fare adjustment formula recommended by the Government-appointed Fare Review Mechanism Committee. The formula takes into account the consumer price index, wage index and productivity gains. PTC is tasked with the twin responsibilities of safeguarding the interests of the public and ensuring the long term viability of public transport operators.

Operators said they continue to face increasing costs, in spite of efforts to manage costs and increase productivity. Other than cost pressures from fuel and energy prices, SBS Transit said it is spending S$268 million to purchase 600 new buses, scheduled for delivery in 2011 and 2012. For the financial year 2011, SMRT's energy cost increased 17.5 per cent to S$122.4 million due mainly to higher electricity and diesel prices, as well as the expansion of the rail network with the opening of Circle Line Phase 1 and 2, said the operator. Its manpower costs have also increased because of a 0.5 percentage point increase in employer CPF contribution rate to 15 per cent in September 2010 and to 15.5 per cent in March 2011.
Writing on her Facebook page, Member of Parliament Denise Phua said, "I am concerned that the transport operators are asking for permission from the PTC for fare increase." While there are good reasons like the rise in operating costs, Phua suggested that it could be time for stakeholders to "deeply study the underlying assumptions on how this industry is structured and how prices are fixed and applied".

Source: *Yahoo News,* 11 July 2011

Figure 2: SMRT's Operating Expenses Breakdown (S$m)



Source: *SMRT Annual Report* 2011

Table 1: SBS Financial Summary

	2007	2008	2009	2010	2011
Revenue ($' mil)	670.7	731.3	697.1	720.9	751.1
Operating profit ($' mil)	53.2	47.1	62.2	64.7	45.7
Operating expenses ($' mil)	617.5	684.2	634.9	656.2	705.4

Source*: SBS Transit Annual Report* 2011

Extract 3: Tallinn becomes "capital of free public transport"

On 1 January 2013, Tallinn, Estonia became the first European capital to extend free public transport to all of its residents. The results so far have been encouraging. The Tallinn authorities believe that, if done right, free public transport schemes can encourage a shift from cars to buses and trams, can cut congestion and traffic emissions, and can boost economic development.

The introduction of free public transport in Tallinn follows on from a number of schemes in other countries, usually in smaller towns. One of the trailblazers was the Belgian town of Hasselt, which in 1997 made all buses within the city limits free. The scheme was successful in persuading people to use public transport - passenger numbers rose from about 1000 per day in 1997 to 12,600 ten years later. However, the cost of the service increasingly burdened the budget, and Hasselt has said that the scheme will stop at the end of 2013.

For Tallinn, the motivation was a careful consideration of the budgetary implications, balanced against social, environmental and fiscal benefits. Allan Alaküla, head of the Tallinn EU Office, says that the city's annual public transport budget was €53 million, but ticket revenues amounted to only €17 million, €5 million of which was contributed by non-city residents.

By introducing free transport for Tallinners, the city thus stood to incur an additional cost of €12 million. This was judged to be a reasonable price to pay when considered against the benefits of the scheme.

Source: *European Commission, Environment Eco-Innovation Action Plan,* 17 June 2013

Extract 4: Maybe buses should be free

A few years ago a group of engineers at New York's Metropolitan Transit Authority (MTA) calculated the amount of time wasted as passengers waited to board and pay fares on a single run of the Bx12 Limited bus route in the Bronx. The answer was 16 minutes and 16 seconds, or over a quarter of the entire run. A proof-of-payment system in which fares are enforced by inspectors who levy steep fines when they catch you without a proper ticket would save much of that. However, making the buses free could work even better.

It is not as crazy as it sounds. Fares bring in a lot of money, but they cost money to collect—6% of the MTA's budget, according to a 2007 report in *New York* magazine. Fare boxes and turnstiles have to be maintained; buses idle while waiting for passengers to pay up, wasting fuel; and everyone loses time. Proof-of-payment systems do not solve the problem of fare-collection costs as they require inspectors and other staff to handle enforcement, paperwork and payment processing. Making buses and subways free, on the other hand, would increase passenger numbers, opening up space on the streets for essential traffic and saving time by reducing road congestion.

In New York, the idea of free buses and subways dates back to at least 1965, when Ted Kheel, a lawyer, first floated the idea—and pushed for a doubling of bridge and tunnel fares to make up for lost revenue. Kheel died in 2010, but the modern version of his plan, which would include a congestion charge for cars and trucks entering the Manhattan business district, lives on.

Source: *Economist, 19 June* 2013

Questions

(a) **(i)** Using economic analysis, account for International Energy Agency's prediction of the oil prices for 2012 to 2015. [4]

(ii) How far is International Energy Agency (IEA) accurate in its prediction of the oil prices for 2012? Explain your answer. [3]

(b) Identify which component of SMRT's operating expenditure showed the largest increase between FY2007 and FY2011. [1]

(c) Explain the market structure which the train industry operates in Singapore and how it can be a source of market failure. [4]

(d) With reference to the data, assess whether the Public Transport Council should approve the two public transport operators' application for price adjustments. [8]

(e) Extract 3 expressed the view that introducing free public transport, while incurring additional cost is a reasonable price to pay when considered against the benefits of the scheme.

Discuss the costs and benefits of providing free bus and rail service in Singapore. [10]

[Total: 30]

Question 2 Uncertain Future for the UK Economy

Extract 5: UK not out of the woods yet

At one level, today's UK trade figures were encouraging. Exports to countries outside the European Union were up 2% to a record high as UK firms started to penetrate some of the world's faster-growing markets. The share of British exports going to the EU dropped to just over 45%, its lowest level since modern records began in 1988. Overall export volumes fell in the first quarter while imports rose, strongly suggesting that trade was a drag on UK growth in the first three months of the year.

This makes it easier to point the finger at the Eurozone as the reason for Britain's stuttering economic recovery. However, a breakdown of GDP showed that weak private consumption shaved 0.5 points off growth and lower government consumption a further 0.3 points - it has been the domestic side of the economy that has been holding the UK back, not overseas demand.

Adapted from Guardian.co.uk, 2012

Figure 3: UK Real GDP Growth Rate

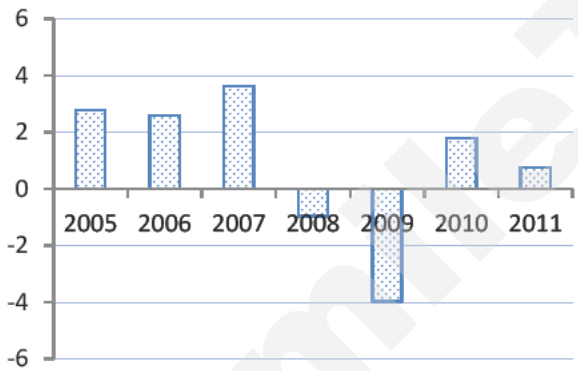
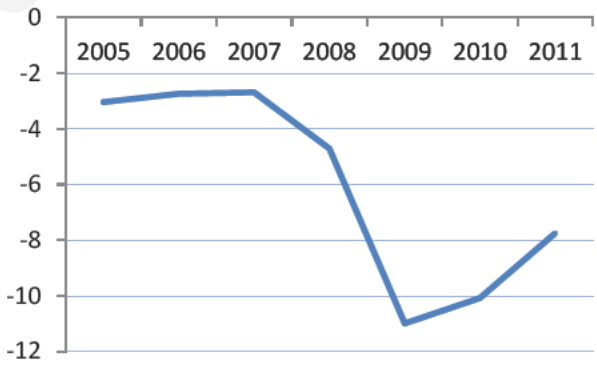
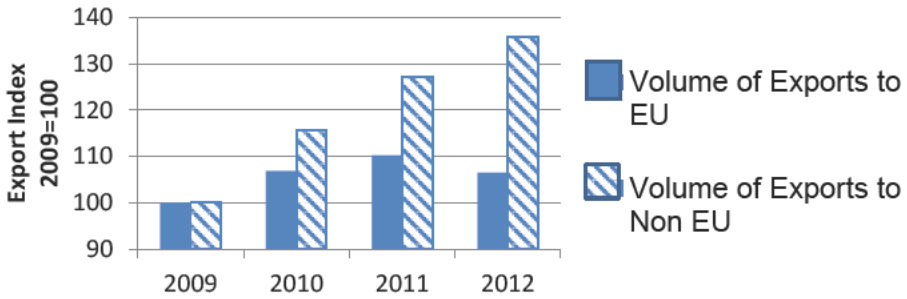


Figure 4: UK Government Budget Balance (as percentage of GDP)



Source: The World Bank

Figure 5: Volume of UK Exports to EU and non EU Countries



Source: Office of National Statistics, 2012

Table 2: Selected macroeconomic indicators for South Korea and UK

Country		United Kingdom					South Korea				
Year		2007	2008	2009	2010	2011	2007	2008	2009	2010	2011
Total Unemployment (%)		5.3	5.3	7.7	7.8	7.8	3.2	3.2	3.6	3.7	3.4
Youth unemployment[1] (%)		13.3	16.0	19.0	19.9	21.8	8.8	9.3	9.8	9.8	9.6
Real GDP (US$ Billion)		2110	2090	2006	2043	2063	1212	1240	1244	1322	1371
Composition as percentage of GDP	Private Consumption	61.1	60.7	61.3	61.0	59.7	66.6	65.4	67.9	65.5	65.7
	Government Consumption	22.7	23.2	24.5	24.1	24.2	4.8	4.2	4.3	4.2	4.1
	Investment	18.8	17.8	15.0	16.2	16.0	27.1	27.0	24.6	22.5	22.2
	Exports	27.7	28.3	27.1	28.2	29.3	43.5	46.4	45.7	50.2	51.4
	Imports	30.3	30.0	27.9	29.5	29.2	42.0	43.0	42.5	42.4	43.4

[1] Youth Unemployment is the percentage of 15-24 year olds who are part of the labour force but are unemployed

Source: The World Bank, OECD

Extract 6: A generation left behind

Youth unemployment is rising perniciously across much of the developed world. Poor growth, widespread austerity programmes and the winding up of job-creating stimulus measures threaten further unemployment overall. The young jobless often get a particular bounce in recoveries: first out, they are often also first back in. However the lack of a sharp upturn means such partial recompense has not been forthcoming this time round.

Youth unemployment has direct costs in much the same way all unemployment does: increased benefit payments; lost income-tax revenues; wasted capacity. In Britain a report puts the cost of the country's 744,000 unemployed youngsters at £155m ($247m) a week in benefits and lost productivity. Some indirect costs of unemployment, though, seem to be amplified when the jobless are young. One is emigration: ambitious young people facing bleak prospects at home often seek opportunities elsewhere more readily than older people with dependent families.

Youth unemployment leaves a “wage scar” that can persist into middle age. After a period of unemployment, the temptation to take any work can be strong. Wage scarring is one of the reasons to think this has lasting effects. Young people unemployed for a long time are usually channelled into “non-regular” jobs where pay is low and opportunities for training and career progression few. Employers seeking new recruits for quality jobs generally prefer fresh graduates over the unemployed, leaving a cohort of people with declining long-term job and wage prospects.

Adapted from the Economist, 2011

Extract 7: The great mismatch

A big part of the youth unemployment problem is that educators and employers operate in parallel universes. The best way to bring these two universes together is to revamp vocational education. Some far-sighted countries such as South Korea have reinvented vocational schools to reduce the country's shortage of machine operators and plumbers; counteracting the country's obsession with academic laurels.

Adapted from the Economist, 2011

Extract 8: Will growth give them a job?

The most obvious way to tackle unemployment is to reignite growth. That is easier said than done in a world plagued by debt, and is only a partial answer. The countries where the problem is worst (such as Spain and Egypt) suffered from high youth unemployment even when their economies were growing. Throughout the recession companies have continued to complain that they cannot find young people with the right skills. This underlines the importance of two other solutions: reforming labour markets and improving education.

Youth unemployment is often at its worst in countries with rigid labour markets characterised by cartelised industries, high taxes on hiring, strict rules about firing and high minimum wages. Closing the skills gap will also require a change of attitude from business. Some companies (e.g. IBM & McDonald's) are revamping their training programmes, but the fear that employees will be poached discourages them from investing in the young. However, some employers have begun to co-operate with colleges to design training courses. Technology is also reducing the cost of training: online courses can help apprentices combine on-the-job training with academic instruction.

Adapted from The Economist 2013

Questions

(a) With reference to figures 3 and 4,

(i) Describe the trend in the government budget balance as a percentage of GDP in the UK between 2007 and 2011. [2]

(ii) Explain how GDP growth rate could have affected the government budget balance. [3]

(b) **(i)** Compare the trend of the volume of UK's exports to EU and non EU countries between 2009 and 2012. [2]

(ii) Explain whether the trend observed in b(i) can be used to conclude that UK's export revenue has increased between 2009 and 2012. [2]

(c) Using the data, explain the relative importance of private consumption and net exports on UK's economic recovery in 2011. [3]

(d) In Extract 6, wage scarring is considered one of the reasons why youth unemployment has lasting effects.
Discuss the impact of youth unemployment on present and future economic growth. [8]

(e) With reference to the data, assess whether "reinventing" vocational education is the key to reducing unemployment in the UK. [10]

[Total: 30]

H2 Economics Case Study 1 (Public Transport in Singapore)

(a) (i) Using economic analysis, account for the International Energy Agency's prediction of the oil price for 2012 to 2015. **[4]**

International Energy Agency predicted that oil price will increase and it may hit $150.

There are both demand-side and supply-side reasons:

Supply side reason -
There is political unrest in Africa and Middle East (oil producing countries) and this will disrupt investments in oil production in the near future. Supply of oil is expected to be disrupted and hence fall.

Demand-side reason:
Demand for energy is expected to increase, especially from fast-growing economies such as China and India due to the increase in economic activities in these economies. Demand for oil is expected to rise.

Combined effect:
With the expected fall in supply and increase in demand for oil, this will cause a shortage in the market and hence causing an upward pressure in the price. Hence IEA predicted that oil prices will likely to spiral above $150 in the short term.

Correct identification price rise -1 m
DD factor - 1 m
SS factor - 1 m
Combined effect: DD and SS factors linking to IEA's prediction of higher/sharper increase oil price –1 m

(a) (ii) How far is International Energy Agency (IEA) accurate in its prediction of the oil prices for 2012. Explain your answer. **[3]**

IEA's prediction of oil price rising significantly above $150 / barrel is inaccurate for 2012.
Evidence from Fig 1
- oil prices remain relatively stable OR oil prices fell in first half of 2012

Reason
Lack of / Slow economic recovery due to economic pessimism due to Euro Debt crisis à DD fell OR SS fell (due to disruption in middle east) but fall in DD > fall in SS

IEA's inaccurate prediction – 1m (judgment can also be: accurate to some extent only)
Evidence from fig 1 – 1m
Reason - 1m

(b) Identify which component of SMRT's operating expenditure showed the largest increase between FY2007 and FY2011. **[1]**

Energy costs showed the largest increase – increased by 61.3% -1m

(c) Explain the market structure which the train industry operates in Singapore and how it can be a source of market failure. **[4]**

Oligopoly
- High barriers to entry
  - 2 operators- SMRT SBS Licences issued by the govt
  - High fixed overhead costs of rail network such as Circle Line

Market dominance à pricing above MC (allocative inefficiency) e.g. Collusion in the form of collaborative behavior in seeking price increase from PTC à reducing consumer surplus and welfare.

Correct identification of oligopoly market structure with evidence – 2m
(note: 0 mark awarded for this part if student identified that the market structure is a

monopoly)
Explanation of how it results in market dominance (market failure) - 2m

(d) With reference to the data, assess whether the Public Transport Council should approve the two public transport operators' application for price adjustments. [8]

Thesis: Economic justification for the approval of the application for price increase

Rising operating costs

Evidence from Fig 2 & Table 1:
- ü increase in energy cost since 2007 – 61%
- ü Two operators' operating expenses have been rising from 2007 and 2011 – 14.2%.

Evidence from Extract 2:
- ü rise in fuel and energy prices (energy cost in 2011 rose by 17.5%)
- ü labour costs have also risen due to an increase in employer CPF contribution rate by 0.5 percentage point increase.
- ü Overhead expenses (SBS : new bus fleet - $268m) (SMRT – Circle Line)
  There are also reasons to believe that operating and overhead expenses will continue to rise. Labour costs may continue to rise in the tight labour market. Fuel prices (as predicted by IEA) will continue to rise.

Evaluation: This will add on to the operators' operating cost significantly. Operators profit has dipped by 30% in 2011; if trend continues, operators may make losses and have less ability to maintain or improve quality of bus and rail rides- the main reason for fare increase.

Anti-thesis: PTC should not approve the application of the two public transport operators for price rise

- SMRT and SBS Transit continue to make operating profits. No justification to raise price as raising price will reduce consumer surplus, worsen consumer welfare à more allocative inefficient

  Evidence from Extract 2:
  "SMRT posted net earnings of $162.1 million for the year up to March. SBS Transit's net profit was $54.3 million for the year ending last Dec" *(2011)*.

  Evidence from Fig 2, Table 1
  - SBS Transit continues to make operating profits despite the rise in operating expenses from 2007 to 2011.

- Worsen income inequity
  SBS Transit and SMRT provides basic bus and rail transport – basic service necessity / transportation mode for low and middle income group. Demand is price inelastic (PED < 1) à fares must remain affordable à income equity reasons

  Evidence from Extract 2
  MP Denise Phua :reinforced the point that although it may be justifiable for public operators to seek for increases in fares due to rising costs, it is important to price the fares *appropriately* due to the nature of the public transport industry

Evaluation: However, according to Table 1, SBS Transit had a 30% dip in her profits in 2011. This was possibly due to the rising operating expenses. If SBS Transit profits continue to dip, raising fares could be justifiable to maintain the long-term quality of service to commuters

L3	Developed answer giving a balanced economic justification why PTC should and should not approve operators' application for price fare rise	**5-6**
L2	· Undeveloped answer on why PTC should and should not approve operators'	**3-4**

	application for price fare rise. · Developed answer on only one-sided economic analysis	
L1	For a superficial or irrelevant answer which shows some knowledge of the reasons for PTC's approval / disapproval of price fare rise but without any use of economic analysis	**1-2**
E2	Reasoned judgement weighing the reasons for PTC decision.	**2**
E1	Unreasoned judgement	**1**

(e) Extract 3 expressed the view that introducing free public transport, while incurring additional cost is a reasonable price to pay when considered against the benefits of the scheme.

Discuss the costs and benefits of providing free bus and rail service in Singapore. [10]

Benefits

· Reduce firms' operating costs of fare collection and other administrative costs such as payment processing (e.g. printing of fare cards, fare collection hardware and software systems), inspector enforcement costs.

· Reduce external costs of traffic congestion and traffic emissions
Free transport *(Extract 3 free bus transport in Tallinn, passenger number rose 12.6%)* à price is zero à encourage motorists to switch to public transport à reduce consumption of roadspace from market optimum (Qm) to social optimum (Qs) à reduce traffic congestion à reduce external costs (e.g. manhours lost, accident rate) *(diagram not required)*

Less traffic congestion à less traffic emissions à reduce external costs (e.g. healthcare costs, manhours lost, lost of productivity)

· Reduction in traffic congestion à help lower business costs à attractive destination for FDI à economic growth and employment creation

· Improve income distribution / reduce inequity
Zero price à higher consumer surplus à higher consumer welfare à Ensure affordability of basic essential transport for low and middle income group à reduce income inequity.

Costs

· Loss of total revenue from fare collection. Operators risk making losses, bankruptcies (without govt subsidy) à loss of jobs à unemployment

· Fall in profit (revenue only earned from advertisements / retail space). Operators may even make losses à lower govt tax revenue collected from operators.

· Overconsumption à commuters take advantage of free service à fall in quality of service, maintenance (e.g. overcrowded, frequent breakdown, long wait time), à fall in consumer welfare

· Operators may need government subsidy (like in Tallinn Extract 3) à burden on government budget à possibility of need to raise tax in the future to finance free transport.

Synthesis (Evaluation):

Basis of provision of free good / service ; students should explain the rival and excludable nature of rail and bus transport in their assessment / weighing the benefits and cost.

Public transport operators are not able to provide free transport indefinitely without making losses. Hence they need government subsidy
Provision of government subsidy for free public transport à not sustainable in long run. It should be at best short run measure

L3	Developed answer on the benefits and costs of providing free bus and rail transport in Singapore using economic analysis and supported with evidence from the data.	**7-8**
L2	· Undeveloped or theoretical answer on the benefits and costs of free bus and rail transport with little or no evidence from the data · Developed answer (with supporting evidence) but only one-sided argument. · Developed answer without any reference to Singapore max 5m)	**4-6**
L1	For a superficial answer which shows some knowledge of the benefits and costs but without using economic analysis. Any reference to economic analysis seems incidental.	**1-3**
E2	· Reasoned judgement weighing the benefits and costs of providing free transport in Singapore	**2**
E1	Unreasoned judgement	**1**

H2 Case Study Question 2

With reference to figures 3 and 4

(a) (i) Describe the trend in the government budget balance as a percentage of GDP in the UK between 2007 and 2011. [2]

There is an increasing budget deficit from 2007 to 2011 [1]. The government budget is in a deficit throughout 2007 to 2011 [1].
OR
There is an overall worsening budget deficit, however from 2007 to 2009 while the deficit increased, there was a reduction in the deficit after 2009.

(ii) Explain how GDP growth rate could have affected the government budget balance? [3]

From 2008 to 2009 when there was negative GDP growth, there was a larger budget deficit. However from 2005 to 2007 and 2010 to 2011 where UK experienced positive GDP growth, the government budget deficit was reduced. [1]

- As the economy grows, household incomes and firms' profits are higher; there is higher tax revenue from personal income and corporate taxation, and indirect tax revenue. [1]
- The government expenditure on welfare payments for unemployment benefits could have fallen with positive economic growth. [1]

Students can use automatic stabilisers or discretionary fiscal policies to explain.

(b) (i) Compare the trend of UK's exports to EU and non EU countries between 2009 and 2012. [2]

Similarity: Both have an increasing trend [1].
Difference: However the UK's exports to non EU increased faster than the UK's exports to EU countries. [1]

(ii) Explain whether the trend observed in bi) can be used to conclude that UK's export revenue has increased between 2009 and 2012. [2]

Since the data is given in index form, it shows the volume of change compared to 2009 has increased. However, there is not enough data given to conclude that trade export revenue has increased. [1]

Export revenue is the product of the price and volume, however, the data for the price index of exports is not available. [1]

(c) Using the data, explain the relative importance of private consumption and net exports on UK's economic recovery in 2011. [3]

UK's economic recovery in 2011 is due more significantly to an increase in the net exports compared to private consumption. From table 2, although private consumption forms the highest component of GDP, it has fallen as a percentage of GDP while net exports improved from a deficit to a surplus in 2011 due to the increase in volume of exports to non EU countries (fig 2). Hence, there is an increase in the relative importance of net exports while private consumption played a less significant contributor to UK's recovery.

Reference to the data [1]; explanation [2]

(d) In Extract 6, wage scarring is considered one of the reasons why youth unemployment has lasting effects.

Discuss the impact of youth unemployment on present and future economic growth. [8]

Effect of youth unemployment on present growth

- Fall in consumption due to falling incomes and less youths who are gainfully employed will cause AD to be negatively affected, hence growth in the short run will be slowed by youth unemployment. .
- Impact on the government budget and hence ability to undertake fiscal policy.
    - Direct costs incurred in terms of unemployment benefits. The longer youths are unemployed, the more government expenditure per individual required. In Britain, the cost of unemployed youths to the government and to the economy is estimated to be 155m pounds a week in benefits and lost productivity.
    - Fall in current incomes of the youths will lead to a loss of tax revenue due to fewer youths in unemployment.

Effect of youth unemployment on potential capacity which affects sustained future growth.

- Wasted capacity due to the loss of man hours and hence the fall in the maximum amount of output that UK can generate, which will limit future growth..
- If youth unemployment persists and causes talented youths to migrate to other countries in search of employment (extract 6), this could result in a large brain drain and fall in the labour resource of Britain, affecting the long run aggregate supply and productive capacity of the economy adversely.

Effect of youth unemployment on future sources of growth

- Impact on consumption and investment in the future
- Wage scarring could occur leading to a permanent and persistent loss of earning power as the training of skills, and career progression of individuals is disrupted largely by periods of youth unemployment.
- Prolonged structural unemployment leads to atrophy of skills over time. Firms may choose to invest elsewhere with a more dynamic and relevant workforce. With a slower growth in investment, this will slow both potential growth and actual growth in the future.

The extent of the negative impact of youth unemployment depends largely on how the skills and technical know-how of the youths is affected, and how long such youths remain unemployed after graduation.

L3	Balanced analysis on the consequence of youth unemployment on both present and future growth, incorporating various data as evidence to substantiate analysis. The analysis is contextualised to the UK economy.	5-6
L2	One-sided analysis on the present effect of youth unemployment. Or Balanced analysis attempted but argument is limited in elaboration or use of the AD/AS analysis. For analysis that consist of interpretation of explanations of unemployment instead of youth unemployment. [max 3]	3-4
L1	Listing of effects of the impact of youth unemployment.	1-2
E2	Well-reasoned judgement	2
E1	Some attempt to make judgement but is not well supported.	1

(e) With reference to the data, assess whether "reinventing" vocational education is the key to reducing unemployment in the UK [10] **[10]**

Introduction:
Explain the main type of unemployment in the UK: Structural especially amongst the youths (periods of positive growth does not cause a reduction in youth unemployment from 2009 to 2011, in fact evidence of increasing youth unemployment despite growth of the economy in Table 2), and cyclical unemployment (sharp increase in unemployment in 2009 during the economic recession). Recognise that reducing total unemployment involves not only measures targeting youth unemployment, but also for workers above the age of 24.

Assertion that "reinventing" vocational education as **key** to reduce unemployment especially among the youths.

- Reinventing vocational education is necessary to equip both youths and adults with the relevant skills and knowledge in accordance to the needs of the industry. As suggested in Extract 7, this means to encourage collaboration and partnerships between educators and employers in the design of training courses (extract 8) which facilitates better information sharing regarding the type of workers the employers require, more targeted training and enable the movement between vocational schools to the workplace more seamless. This could have the additional benefit of reducing frictional employment.
- As in South Korea (Extract 7), improvements made in vocational training can enable the economy to better meet specific industry needs in areas that require specialised knowledge and skills such as machine operators and plumbers

Counter Argument that vocational education may not be sufficient to address all the root causes of unemployment in the UK, especially cyclical unemployment.

Stimulating growth could be more important to reducing unemployment in the UK (Extract 8 suggests that reigniting growth is the key).

- This could be done by undertaking expansionary demand management policies to stimulate domestic consumption which has been dampening UK growth, and also to incentivise firms to invest. Fiscal policies may not be viable due to the austerity drives to cut down public debt, and given that the budget balance as a percentage of GDP has been in a deficit from 2005 to 2011 (Figure 4).
- Trade policies with focus on non EU destinations to take advantage of growth in emerging economies (Figure 5) which has been a significant contributor to UK's recovery. This could help UK develop new areas of comparative advantage, leading to creation of jobs and fall in unemployment.

Suggestion of other measure(s) to argue that reinventing vocational training is only one part of the solution to reduce unemployment.

- Retaining of talented young individuals by identifying them earlier to prevent the emigration and brain drain.
- Reforming labour markets and reducing supply-side rigidities (extract 8)
- Government intervention in the allocation of university places to better manage investment in human capital for the long-term needs of the economy. This addresses the perception of academic qualifications being more important than having the right skills set to undertake jobs in the future.

Conclusion
In light of possible measures assessed, reinventing vocational training is key in targeting the skills mismatch in a sustainable manner which also has benefit in building more synergy between employers and educators to better anticipate and meet the labour needs of the economy.

Level	Descriptors	Marks
L3	· For a comprehensive and justified explanation on the use of revamping vocational education and other policies in reducing unemployment in the UK. Referencing to the data and contextualising is done by incorporating data to substantiate analysis.	7-8
L2	· One-sided argument regarding the use of vocational training in addressing the mismatch of skills. · Discuss both vocational training and measures to counter cyclical unemployment but argument is limited in elaboration or with inaccuracies, or inconsistent in the discussion.	4-6
L1	Answers with many inaccuracies, listing of measures with little explanation.	1-3
E2	Well-reasoned judgement on the importance of re-inventing vocational training, based criterion	2
E1	Attempt to justify if reinventing vocational training is key or not, but is not well supported.	1

Total Marks [30]

2013 JC2 PRELIMINARY EXAMINATIONS

Higher 2
Paper 2

Answer **three** questions in total.

Section A

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

1 Singapore government makes it compulsory and free for every Singapore child to be vaccinated against diseases like poliomyelitis, diphtheria, tetanus and pertussis before the age of 12.

(a) Explain the economic justifications for government intervention in the case of vaccination in Singapore. [10]

(b) Discuss whether compulsory vaccination is the best form of government intervention in the market for vaccination in Singapore. [15]

2 In recent years, consumers' lifestyle has seen a drastic change due to developments in modern technology such as faster internet connection, mobile software application and computing devices like smartphones, tablets and computers.

(a) Explain the impact of current developments in modern technology on the markets for broadband connection and computing devices. [10]

(b) Using the concepts of elasticity of demand, discuss the extent to which retail stores like Harvey Norman and Sheng Siong should move away from traditional stores towards online stores to increase their revenue. [15]

3 Globalisation increases the level of competition among firms in a country, thereby making markets more competitive resulting in increased consumer welfare.

Assess the extent to which globalisation will lead to more competitive markets and increased consumer welfare. [25]

Section B

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

4 Explain how income inequality could result from the pursuit of economic growth in Singapore and discuss whether the Singapore government should make adjustments to current policies taken to achieve economic growth? [25]

5 **(a)** Explain the factors that could cause a change in the size of the national income multiplier of a country. [10]

(b) To what extent do you agree with the view that the effectiveness of a fiscal policy is most dependent on the size of multiplier of the country? [15]

6 **(a)** Explain how a surge in capital inflow is likely to affect the current account of a country. [10]

(b) Discuss the problems a government is likely to face in achieving a healthy balance of payments when the country experiences a surge in capital inflow. [15]

1 Singapore government makes it compulsory and free for every Singapore child to be vaccinated against diseases like poliomyelitis, diphtheria, tetanus and pertussis before the age of 12.

a Explain the economic justifications for government intervention in the case of vaccination in Singapore. [10]

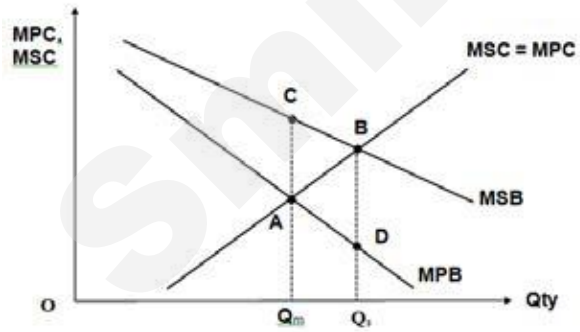
b Discuss whether compulsory vaccination is the best form of government intervention in the market for vaccination in Singapore. [15]

<u>Suggested answer for part (a)</u>

Explain positive externatlies
The consumption of vaccination is considered an activity that generates positive externalities. Once a person is vaccinated, he is immune against the disease.

Explain divergence between private benefits and social benefits and underallocation of resources
In deciding whether to be vaccinated, an individual will only take into account his private marginal cost and private marginal benefit. However, this individual does not consider the positive externalities that would be generated by the vaccination (i.e. the marginal external benefits, MEB) to the third parties. These are not taken into consideration by the individual. Hence, there is a divergence between the marginal social benefit, MSB and marginal private cost, MPB

Based on the price mechanism, the market equilibrium level of vaccination is where marginal private cost (MPC) equates to the marginal private benefit (MPB)..Due to the presence of positive externalities as explained above, the marginal social benefit (MSB) is greater than MPB at the market equilibrium level of vaccination (i.e. 0Om). The socially efficient level of vaccination should be at 0Os where MSB equates to MSC i.e. the external benefits are taken into account. The price mechanism thus under-allocates resources to vaccination.



This under consumption of vaccination results in welfare to society not being maximised,

Explain imperfect information.
Information failure occurs when people have inaccurate, incomplete, uncertain or misunderstood data and so make potentially inaccurate decision. Imperfect information may arise when consumers lack the understanding of the possible positive effects of vaccination on themselves and others.. Market demand is less than the socially desirable level.

Conclusion
Society as a whole could be made better off if the level of vaccination was to be increased to the socially efficient level, Q_S. Hence, since vaccination tends to be underconsumed

Suggested answer for part (b)

Explain how compulsory vaccination works to correct the causes of market failure.

Compulsory vaccination ensures that every child in Singapore is immunised from a list of vaccine-preventable diseases. The government estimate the socially optimal amount and provide free vaccination

Strengths of compulsory vaccination fully subsidised by government

- Easy and fast to implement.
- Good measure to implement when the external benefits and the imperfect information are too high.

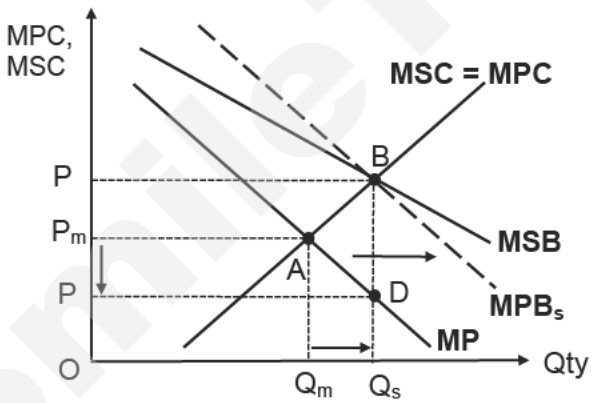
Weaknesses of compulsory vaccination fully subsidised by government

- High cost of the immunisation programme.
- Wastage of resources. Overallocation of resources.

1. Subsidies to encourage consumption

A partial subsidy to lower price could be given to consumers to encourage consumption of vaccination.

A subsidy that is received directly by consumers will act on the demand curve (MPB). Demand increases such that the market-optimal output now coincides with the social-optimal output..



Comparing subsidies with compulsory vaccination fully paid by government

✓ Lower cost compared to compulsory vaccination. Lesser strain on government's budget.
☒ However, subsidies can be overestimated or underestimated as well, resulting in deadweight loss.

Evaluation

- Compulsory vaccination fully paid by government despite its limitations is still more suited for vaccine preventable diseases that are more fatal and highly contagious.

2. Moral suasion (Campaigns, advertisements to inform people the importance of being vaccinated.)

Government could reduce imperfect information through campaigns and advertisement

Evaluation:

Takes long time to see effective

3. <u>Healthcare financing to encourage consumption.</u>

Government can allow Singaporeans to tap on their medisave or child development account to pay for vaccination..

Evaluation

- Some people may have insufficient medisave as they might have used it to pay for other medical expenses.

Conclusion

In dealing with the market failure of underconsumption of vaccination, compulsory vaccination is the best form of government intervention for vaccination against diseases that are more fatal and highly contagious eg tubercuolosis. (i.e. large external benefits).. Government can consider other form of government intervention for cases that are less fatal and contagious.

2 In recent years, consumers' lifestyle has seen a drastic change due to developments in modern technology such as high speed broadband internet access, mobile software applications and computing devices like smartphones, tablets and computers.

(a) Explain the impact of current developments in modern technology on the markets for broadband connection and computing devices. [10]

(b) Using the concepts of demand, supply and elasticity of demand, discuss the extent to which stores like Harvey Norman and Sheng Siong should move away from traditional stores towards online stores to increase their revenue. [15]

Suggested Approach

Impact of developments in high speed broadband internet access
The demand for high speed broadband depends to a large extent on what is available on the internet. The internet brings together providers of content management system, content and users.

On Demand
- faster upload and download speeds
- more social media websites created for sharing of content and to stay connected
- web publishing is made faster with richer content like high resolution photos, music and videos
- easier and faster dissemination and access to information
    - businesses for product/service information, FAQs, online applications, online banking
    - academic/educational institutions for research and collaboration
- more free or cheap and powerful communication software e.g. emails, What's app, V

On Supply
- supply of high speed broadband incurs very high overhead costs and has a very large minimum efficient of scale of production
- firms are eager and have the ability to increase their supply of broadband connection as they will be able to reap more economies of scale in expectation of higher demand
- supply of high speed broadband connection is also highly price elastic

Effect on market for broadband connection.
Price could have decreased but to a very small extent due to the highly price elastic supply that can almost fully accommodate the significant increase in demand. Broadband subscription has definitely increased to a large extent due to both a large increase in demand and the ability of broadband suppliers to increase their capacity to clear any shortages that arose preventing price from increasing and limiting the increase in broadband subscriptions.

Internet access requires a broadband connection and a computing device.
Broadband connection and computing devices are complementary in demand. Price of broadband connection falls will lead to an increase in demand for computing devices as more are able to use them to access the internet (significant impact on increase in demand for computing devices).To be able to enjoy the benefits of the Internet, the demand for computing devices will likewise increase to a large extent, driving up price of computing devices.

Impact of developments in computing devices especially in mobile computing devices

Developments

- more powerful mobile operating systems and microprocessors allow smartphones to perform more like a computer (higher computing power)
- smartphones and tablets come with good quality built-in cameras

Impact on demand

- mobile computing devices are seen to be more portable and are able to perform some of the key functions that a full computer (desktop and notebook computers) can, hence these mobile computing devices are seen as a preferred substitute to a full computer. Demand of full computers hence though may increase as discussed above,

Change in lifestyle brought about by developments in mobile software applications

- Wide range of mobile software applications available: for productivity, references, sports, travel, weather, medical, lifestyle, food etc
- Social media sites have changed how people communicate with each other (multimedia) and the speed of broadband connection also allows for almost instantaneous response

Impact on Supply of mobile computing devices

- initially, Apple dominate this market but the high level of supernormal profits earned has attracted more to enter the market. Also the development of an equally powerful mobile operating system by google: Android and made freely available made it possible for more firms to enter the market
- increase in supply of mobile computing devices

Effect on market for computing devices

- the demand for computing devices increased to a large extent likewise the supply for them
- the increase in demand for mobile computing devices saw a much larger increase than that for non-mobile ones.
- The supply of both types of computing devices also saw corresponding large increases as they are manufactured product and there are at present no factor constraints on increase in supply
- quantity of computing devices bought will see more for mobile devices than that for non mobile ones.
- Need for upgrade of computing devices to benefit from faster broadband connection

(b) Using the concepts of elasticity of demand, discuss the extent to which stores like Harvey Norman and Sheng Siong should move away from traditional stores towards online stores to increase their revenue. [15]

Harvey Norman and Sheng Siong are both in the retail industry facing keen competition of rival firms like Best Denki and Cold Storage respectively. In short, there are close substitutes for the retail services provided by them

Using price elasticity of demand

- demand face by such retail stores are highly price elastic
- Harvey Norman and Sheng Siong should decrease their price so as to increase their revenue
- Explain theoretical relationship between price elastic demand, fall in price and increase in TR

Compare cost of maintaining traditional store and online store

- Cost for operating traditional store is higher than an on-line store

Traditional	*On-line*
Higher	lower
Higher rental	Lower website hosting cost (server space)
Large physical retail space	
Premium rental due to good location	No cost incurred (free through search engine or minimal cost for priority searched)
Higher operating cost (salesperson, cashiers …)	Low labour cost (outsourced web services)

- These cost savings from an online store can be passed on to consumers in the form of lower prices thereby increasing sales volume by more than the proportional decrease in price to allow Harvey Norman and Sheng Siong to increase their revenue.

Online store with unique features can cause demand to be more price inelastic too
- Open 24/7 - convenience
- Provide detailed and accurate product information without salesperson
- Direct communication (for clarification or address concerns) with buyer through emails

With a more price inelastic demand, Harvey Norman and Sheng Siong can increase their price in the future with fear of a loss of revenue. In fact, revenue may increase as the gain in revenue from the price increase will be larger than the loss in revenue due to a fall in volume of sales. This is so because the price increase has caused a less than proportionate fall in sales volume.

Using of cross price elasticity of demand
Successful on-line store will also cause the cross price elasticity of demand between them (Harvey Norman and Sheng Siong) and their rival firms will also be ***less positive price elastic***.
- any decrease in prices by their rival firms will have less negative impact on their sales volume and revenue
- online stores can thus create stronger brand loyalty

Negative cross price elasticity
- online store can provide hyperlinks to websites of goods and services that have negative cross elasticity of demand with the goods sold by these retailers
- Harvey Norman provide hyperlinks to Telcos, delivery or disposal services, photography courses
- Sheng Siong tie up with culinary courses, online cookery magazines,

Using Income Elasticity of Demand
- during periods of increasing incomes like year-end bonus payouts or times of strong economic growth these retailers can promote a wide range of luxury products on their online store and in periods of falling incomes, retailers can easily change strategy to focus on promoting inferior goods
- compared to traditional stores, goods need to be repositioned and items on display be changed to suit the changing times – higher costs incurred

Some counter arguments and evaluation for consideration to address 'to what extent'
- success of an online store will depend on
  - design and ease of navigation of the website
  - payment methods that is easy and secure (accepts a variety of payment methods)

- suitable for products that can be well specified like electronic goods but may not be suitable for fresh food or meat
- consumer's comfort level and trust in online transactions

Students should consider if retailers should move completely from traditional stores to online stores or partially.

If partially, why.

Partially may take the form of a few traditional stores in certain location and a well designed online store or only certain products can only be purchased online and others at the traditional store.

3 Globalization increases the level of competition among firms in a country, thereby making markets more competitive resulting in increased consumer welfare.

Assess the extent to which globalization will lead to more competitive markets and increased consumer welfare. [25]

Explain the meaning of globalization and factors driving globalisation

- the expansion in the volume and variety of cross border transactions in goods and services, and in international capital flows.

Explain the effects of globalization and how that can increase the level of competition among markets

- transfer of skills, knowledge and technology
- Influx of foreign firms making the markets more competitive.
- consumer surplus in terms of prices and consumer satisfaction in terms of increased in the variety of products

<u>How globalization can lead to more competitive markets, hence improve consumers' welfare</u>

- Lower barriers to trade, lower transport costs to trade between countries à easier to enter into markets à More firms à higher level of competition à greater availability of (closer) substitutes

  - Each firm would now face a more price elastic demand curve (PED > 1) as the increase level of competition will increase the no. of substitutes to the product.
  - (Px closer to MC, closer to allocative efficiency) à consumers can enjoy cheaper products

  - As there is more competition, à consumers can enjoy better quality products

.

<u>How more competitive markets may not improve consumer welfare</u>

- However, even though there is greater level of competition among firms, brought about by globalization does indeed make firms more dynamic efficient. This does not always translate to higher consumer welfare, especially if it is the monopolistic competitive firms.
- monopolistic competitive firms compete in terms of product differentiation, they could only do so in terms of superficial differences created through advertising/branding, with no real differences in the quality of products à but this increases the firms' COP à such firms may pass on the increase in COP to consumers in terms of higher prices à reduced consumer's welfare

<u>How globalization may not always lead to more competitive markets</u>

- The higher and more intense level of competition may drive the more inefficient firms to shut down or bought over by larger and more powerful firms, forming a more oligopolistic market structure.
- May lead to more acquisitions and mergers.
- Such oligopolistic large firms may exploit consumers and charge a price that is

significantly higher than their marginal cost à consumers paying higher price à reduced consumer's welfare at the expense of greater profit margins for the firms.

Whether globalization can indeed lead to more competitive markets is dependent on the presence of government's protectionistic measures

- Some countries may adopt protectionist measures to protect domestic infant industries against the fierce and more competent foreign competitors.
- As such, domestic consumers may suffer from a smaller variety of products and could possibly be only consuming poorer quality of domestic goods and services.

Whether globalization can indeed lead to more competitive markets is also dependent on the types of existing BTEs

- Natural BTEs à Globalization is less likely to make markets more competitive,. Higher capital costs as a form of natural BTEs à harder for new firms to enter even with globalization
- Legal BTEs à regardless of globalization, because the types of existing BTEs are as such, it cannot increase the level of competition unless the government wishes to do so.

Conclusion:

- While it is true that globalization leads to more competitive markets, in reality how much globalization can make markets more competitive really depends also on the types of BTE and government's objectives.

4 Explain how income inequality could result from the pursuit of economic growth in Singapore and discuss whether the Singapore government should make adjustments to current policies taken to achieve economic growth? [25]

Suggested Approach

This 25 mark question is actually made up of two questions.

- Explain how income inequality could result from the pursuit of economic growth in Singapore.
- Discuss whether the Singapore government should make adjustments to current policies taken to achieve economic growth?

An overview of how Singapore pursues economic growth

- nature of Singapore economy: small domestic market and limited resources, lack of natural resources
- necessary for Singapore to be open for sustained economic growth

Income inequality arising from the pursuit of economic growth

- dependence on export and FDI
  - consistently creating new areas of competitive advantage
  - moving up the value chain in manufacturing
- increasing capacity to meet rising AD
  - dependent on increase in foreign labour especially in the areas of low or no-skill labour market
  - increase in use of capital to substitute labour and adopting more advanced technology
  - taxes are not highly progressive and the Singapore government is very conservative in their welfare aid

Economic growth has been successful in increasing overall standard of living for all but the extent of increase has been greater for the higher income group than for the lower income group.

Policies that need adjustments:

- ***government's expenditure policy in trade and industry***
  - encourage more SMEs so that economic growth is broad-based across sectors more successful domestic SMEs will mean more local entrepreneurs giving them the opportunity to increase their income earnings without having to compete with foreign workers
  - Policies adjustments to nurture SMEs
    - Support for Individual Firms
    - SME Talent Programme
    - Productivity and Innovation Credit (PIC) Bonus
  - Develop SMEs to provide quality supporting services to complement MNCs to share in the profitability of these MNCs
- ***Supply side policies***
  - tightening of foreign labour policy (main cause of income inequality) to increase employment of locals and increase domestic wages especially for low skilled or no skill labour markets
  - provide help to SMEs to move away from being foreign labour dependent thereby increasing wages of locals as they increase their productivity via
  - Enhance Workfare Training Support (WTS) Scheme

- increase equality of employment opportunity: removal of age discrimination against older workers

- ***Taxation policy***
  - possible to raise marginal tax rates for the highest income group as they are now extremely low in comparison to global average

Policies that do not need adjustments

- gradual appreciation of S$ exchange rate
  - continue to use exchange rate to keep imported raw materials affordable and continue to contain domestic cost of production to keep inflation rates low and export prices competitive

- Signing of free trade agreements
  - Diversify import and export markets

- Government investment (capital and human) expenditure policy
  - to create a competitive business environment to attract FDIs
  - on strategic infrastructure
  - on education and training

(just a sample of some of the policies that do not need adjustments, there may be others)

5 a Explain the factors that could cause a change in the size of the national income multiplier of a country. [10]

Introduction:

- Define the national income multiplier:
- Calculation of the national multiplier, k = 1/mpw, where mpw is the summation of mpm, mps and mpt. Relationship betw MPW and the multiplier size à larger MPW, smaller k, vice versa
- Changes in either of the mpm, mps or/and mpt can result in the change in the size of the national income multiplier

Explaining the factors affecting MPM, MPS and MPT

- Briefly explain the different marginal propensity to withdraw: MPM, MPT and MPS
- MPM: Marginal propensity to imports à the proportion of each additional dollar of income spent on imports

Factors affecting the value of MPM

- MPM à the proportion of each additional dollar of income paid as imports expenditure
- Industrialization of the economy à increase in demand for more goods and services including imports and also seeking better variety of products, à increase in their MPM à k may drop.
- Openness of an economy: as more FTA are signed, this lowers or removes the trade barriers, allowing for cheaper imports (with lower import taxes) à propensity to import will increase with each change in national income à MPM increase, k drops

Factors affecting the value of MPT

- MPT: Marginal propensity to tax à the proportion of each additional dollar of income paid as tax
- Changes in stance of govt's fiscal policy: to attract more foreign investors à reduce the tax rates à MPT reduced, k increase.
- Changes in the government budget à higher govt debt à govt needs to increase the amount of tax revenue by increasing the tax rates to finance the govt debt à MPT increase, k reduce.

Factors affecting the value of MPS

- MPS: Marginal propensity to save à the proportion of each additional dollar of income consumed
- Higher CPF Contributions in Singapore à the greater the level of MPS and hence, the smaller the k.
- Expectations of future economic growth: higher expectations of future economic growth would lead to more proportion of income consumed, lowering the MPS à increasing k
- Shift in the cultural attitudes of the households perhaps due to westernized culture influence à towards more consumeristic society à lower MPS, smaller k

Conclusion:

In reality, the change in size of multiplier affected by a combination of factors that change the value of MPM, MPS, and MPT.

b To what extent do you agree with the view that the effectiveness of a fiscal policy is most dependent on the size of multiplier of the country? [15]

Introduction

- Expansionary FP used in times of recession, when the NY is falling. Expansionary FP is when G is increased and (lump sum) taxes are reduced.
- Multiplier is useful and relevant for the government to estimate the amount of expenditure or tax adjustments needed to change the national income by a certain amount.
- If the size of the country's multiplier, K, is smaller, the amount of G injection needed is also larger à affecting the effectiveness of the government fiscal policy.

Explain the multiplier process and how the effectiveness of FP is dependant on the size of multiplier value, k

- Increase G à direct component of AE à AE increase, firms will have an incentive to increase output as planned spending increase now à helps to lower unN
- When firms increase output, the economy is generating more income (through the sales of output, through the increase employment of workers). Higher induced consumption raise income again. Therefore, the overall net impact on the national income is the multiplied increase of the initial increase in G.
- How much of the additional income the workers earned is spent (or saved) or spent on imports will depend on how large the MPS and MPM are for the country. For countries with small size of multiplier, the initial injection of G must be large enough to have the intended impact on the national income. This means the effectiveness of the fiscal policy implemented in a country with a small multiplier size would be lower.

Explain how other factors, besides multiplier value, may affect the effectiveness of the FP

1. Crowding out effect

- If the government is to borrow from the bank to finance their spending, this may increase the demand for loanable funds from the banks.
- This increases the interest rates, which is the cost of borrowing to the firms. The higher the interest rates, the less willing the firms are to borrow from banks, which may lead to a drop in the level of private investment level (crowding out effect)
- So while G may have increase, but in the presence of the crowding out effect, the drop in I may negate the overall impact on the national income, making FP less effective to achieve the macroeconomic aims.

2. Financial constraints:

- large financing of the subsidies would have to come from either borrowing from other countries or the drawing down of previous years' surpluses. Henceforth, for countries with accumulated govt debt, the government may face difficulties in implementing FP. The government may not be able to inject as much spending to close the income gap, since they do not have

the financial ability to do so. As such, FP will be limited in its effectiveness.

3. Time lag, the government must also have the capability to implement the FP in a timely manner

Conclusion:
It is largely true that the effectiveness of a fiscal policy is most dependent on the size of multiplier of the country. However there are also other factors like the government's financing ability, which are as important to see through the effective implementation of the FP as well as to ensure the sustainability of the FP.

6 **(a)** Explain how a surge in capital inflow is likely to affect the current account of a country. [10]

(b) Discuss the problems a government is likely to face in achieving a healthy balance of payments when the country experiences a surge in capital inflow. [15]

Suggested answer for part (a)

Introduction:

Define surge in capital inflow and explain briefly the components of current account

How surge in capital inflow will affect current account :Short term impact

- improvement in the capital account à improvement in BOP surplus. à appreciation of the currency in a free floating exchange rate market. à l increase the price of the exports in foreign currency and decrease the price of imports in domestic currency. Assuming that M-L condition is fulfilled where $PED_x + PED_m > 1$, net exports revenue will decrease resulting in the worsening of the trade balance and thus **worsens** the current account balance.

- lower the interest rates of the country à lowers the cost of borrowing à increase the consumption and investment. à may lead to excessive increase in aggregate demand beyond the full employment level of output and thus lead to inflationary pressures. A country's inflation rate is higher relative to other countries will erode a country's exports competitiveness and increase the demand of imports since the inflated price of the domestic goods is higher. This will further **worsen** the current account balance.

- A surge in foreign direct investment may improve the current account. à increase the export volume to other countries à exports revenue will increase. The increase in exports revenue will **improve** the current account balance.

How surge in capital inflow will affect current account :Long term impact

- A surge in FDI will improve capital account in the short term. However, in the future, the profits and dividends earned by the investment will lead to an outflow of funds from the income balance in the current account. This will **worsen** the current account balance.

- Process innovation from FDI will improve the exports competitiveness à quantity demanded of exports will increase more than proportionately and increase the exports revenue.. This will **improve** the current account balance.

3. Conclusion:

In the short term, a sudden and significantly large inflow of investment is likely to worsen a country's current account. In the long term, a surge in foreign direct investment will improve the current account.

Suggested answer for part (b)

Introduction:

Explain the meaning of healthy BOP

- A BOP account is healthy if
  - It has a healthy BOP surplus that comes from mainly current account rather than capital account balance.
  - However, if the BOP surplus comes mainly from the capital account rather than the current account. The capital account surplus is likely to be less sustainable and regular. When there is a surge in capital inflow such as hot money, it will improve the BOP in the short term but in the long term when a reversal of flows happens, government faced a difficulty in maintaining a healthy BOP surplus especially if her current account is in deficit.

HOW THE SURGE IN CAPITAL INFLOW DESTABILISE THE BOP AND CREATE A PROBLEM IN ACHIEVING A HEALTHY BOP.

- Reversal of capital flows destabilised the BOP
  the surge in ST capital inflow à a reversal of flows when the risk sentiments shift.
  à worsens the capital account à worsening BOP deficit.

- Surge in capital inflows strengthen the currency and hurts exports competitiveness.
  surge in capital inflow à BOP surplus à large appreciation of the currency in a managed float exchange rate market à l reduce the export competitiveness. à net exports revenue will decrease à worsening of the current account.

- Surge in capital inflows cause inflationary pressures and worsens BOP
  Surge of capital inflows à lower the interest rates à increase borrowing from households and firms à excessive increase in AD beyond the full employment level of output à inflation. This will worsen the current account balance. This poses a difficulty for government in maintaining a healthy BOP as the reduced exports competiveness will reduce trade surplus which is very important in maintaining a healthy BOP.

HOW THE SURGE IN CAPITAL INFLOW MAY LIMIT THE EFFECTIVENESS OF CERTAIN ECONOMIC POLICIES IN ACHIEVING A HEALTHY BOP.

Surge in capital inflows make interest rate policy less effective. The use of contractionary monetary policy by raising the interest rates is also limited as a rise in interest rates will lead to a wider interest rate difference between emerging market and developed countries resulting in a surge in capital inflows to take advantage of the higher interest rates. This limits the use of interest rate policy to lower domestic inflation in the country which is necessary to improve exports competitiveness that will improve the current account.

HOW THE SURGE OF CAPITAL INFLOWS MAY OVERALL BE BENEFICIAL AND HELPS ACHIEVE A FAVOURABLE BOP POSITION.

- Large capital inflows (foreign direct investment) helped to achieve both actual and potential growth in the economy. This will lower inflationary pressures in the long run and improve exports competitiveness. à increase the exports revenue in the short run and thus improves the country's current account balance. This helps the government in achieving a healthy BOP position.

- Large capital inflows have helped to reduce the cost of capital. Capital inflows facilitate bank lending and spur credit growth. This helped to increase investment à increase exports revenue. This will improve the country's current account and helps the government in achieving a healthy BOP position.

Conclusion:

The extent to which the surge in capital inflows will create a problem in managing a healthy BOP depends mainly on how government respond to such problems.

CATHOLIC JUNIOR COLLEGE
JC2 PRELIMINARY EXAMINATIONS
In preparation for
General Certificate of Education Advanced Level
Higher 1

ECONOMICS	**8819/01**
Paper 1	**28 Aug 2013**
	0800 - 1100
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 ALL questions 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.

Section A

Answer **ALL** questions in this section

Question 1

Cars and Floods

Extract 1: Greater Integration Good for Asean, S'pore: PM Lee

Greater integration is the best way to meet growing competition and create new opportunities for Asean. As he pressed for greater Asean economic integration yesterday at the Asean leaders' meeting, Prime Minister Lee Hsien Loong emphasized how Singapore companies also stand to gain from it. "Closer Asean integration will boost Singapore's position as the regional business hub and create new opportunities in HQ services and supply chain management," he said. He also said opening up Asean's services sector will offer a bigger market to Singaporean service companies such as those selling accountancy and medical services. According to him, getting the Masterplan on Asean Connectivity off the ground will mean potential projects for Singapore companies in the logistics, infrastructure development, information and technology businesses. Asean must work together to become stronger because global competition, especially from China and India, is tough. Mr Lee said that speeding up Asean economic integration is the best way to meet growing competition and create new opportunities for the grouping.

Source: *The Business Times*, 4 April 2012

Extract 2: Thailand Floods Disrupt Supply Chains & Raise Inflationary Risks

Moody's[1] slashed Thailand's GDP growth to 2.8% for the year in light of the heavy floods affecting its seven industrial estates. Automobile manufacturers are at the forefront as they get hit by factory closures, supply chain shortages, labour absences, transport roadblocks and other flood-related factors. Toyota which trades on the Singapore Exchange, reported that its plants in Thailand were shuttered mainly due to supply delays. The Thai floods have resulted in an output loss of 37,500 vehicles in the country itself since the shut down of its factories. To further compound matters, the production halt at its Thai facilities have had knock on effects on its other production facilities affecting delivery of cars to Singapore. Most recently, Toyota had released statements saying that it has reduced production hours in view of the supply chain disruption in Japan, United States, Canada, South Africa, Indonesia, the Philippines and Vietnam.

Back home in Singapore, several companies have announced the flood's impact on their operations in Thailand. Most of the affected are manufacturers of electronics, metals, rubber and plastic products. Business disruption amongst the major industry players sent shockwaves to several companies within the global supply chains. Such is the case for Western Digital (WD), the world's largest hard disk drive (HDD) manufacturers. In the food and beverage industry, Thai Beverage reported flood impacts on their subsidiaries where most of its finished goods had been transferred to other warehouses in unaffected areas. Similarly, Fraser and Neave announced the cessation of its dairies product manufacturing facilities in Rojana under its wholly-owned subsidiary F&N Dairies (Thailand).

Source: *Perspective*, 4 November 2011

Extract 3: Thailand to Restructure Excise Tax System on Cars

Restructuring of the excise tax on automobiles is in the pipeline after the tax hike on cigarettes and liquors, in line with global trends aiming to limit emissions of carbon dioxide, says the Thai Finance Ministry.

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[1] Moody's is a credit rating agency.

Benja, director-general of the Excise Department, said a new car tax aims to limit the emission of carbon dioxide, instead of promoting power efficiency. Under the proposed new tax structure, the lowest rates would be applied to passenger cars that discharge no more than 100 grammes of carbon dioxide per kilometre. The next-lowest rate would be applied to cars not exceeding 150g/km, and the next rate to those emitting no more than 200g/km. A punitive rate would be applied to those releasing more than 200g/km.

Source: *Asia News Network,* 23 August 2012

Extract 4: BMW Costing $260,000 Means Cars Only for Rich in Singapore as Taxes Climb

Francis Goh sits in a bronze BMW 335i convertible in a Singapore showroom, waggling the wheel and feeling the leather. He isn't fazed by the S$340,000 ($260,000) price tag, five times what the same car costs in the U.S. Record economic growth in the city state is enabling buyers like Goh, to splash out on Bayerische Motoren Werke AG and Daimler AG autos even as a 24-fold jump in the cost of a car permit inflates costs.

Source: *Bloomberg*, 17 February 2011

Extract 5: Wary Neighbours Turn Into Partners in a Quickly Developing Southeast Asia

As Myanmar opens up to the world after decades of isolation, Thai construction crews are clearing paths through the malarial jungles in preparation for creating a gateway towards broader regional integration. The opening of Myanmar; the construction of bridges, railways and roads on the Indochinese peninsula; and the rise of inexpensive air travel are bringing the region's nations closer to the goal of standing up to the two giants of the neighbourhood, India and China. In 2014, Laos and its neighbour Thailand, are set to inaugurate the fourth bridge built across the Mekong River. Western Cambodia gets its electricity from Thailand, because of the natural gas that is piped in from Myanmar. And Myanmar says it will start rebuilding its rail line to Thailand.

The impetus for the Asean nations' integration in many ways comes from the outside. Both Japan and China have been active in financing infrastructure projects in the region, partly because a better-connected Southeast Asia will make it easier to sell their products — and, in Japan's case, to link a vast network of suppliers to Japanese-owned factories. Thailand is gaining easy access between Bangkok and the port of Dawei, Myanmar, on the Andaman Sea. Ultimately, the new road will provide a shorter trade route to Europe, the Middle East and Africa for products made on the Indochinese peninsula.

Source: Adapted from *New York Times,* 5 July 2012

Table 1: Imports by Region/Country into Singapore (in million SGD)

Region	Country	2006	2007	2008	2009	2010	2011	2012
Total		378,924.10	395,979.70	450,892.60	356,299.20	423,221.80	459,655.10	474,554.2
Asia		267,850.20	277,003.90	311,896.80	236,904.10	290,501.70	317,518.20	328,159.10
	China	43,194.30	48,013.40	47,594.60	37,585.30	45,844.30	47,747.70	48,950.20
	Malaysia	49,480.8	51,808.80	53,814.40	41,336.30	49,489.60	49,166.90	50,501.40
	Thailand	13,856.30	12,797.10	15,922.70	11,906.90	14,000.50	14,270.20	12,674.80

Table 2: Exports by Region/Country from Singapore (in million SGD)

Region	Country	2006	2007	2008	2009	2010	2011	2012
Total		431,599.20	450,627.70	476,762.20	391,118.20	478,840.70	514,741.20	510,329.30
Asia		297,051.20	314,668.40	334,204.40	278,626.90	343,924.90	367,364.50	365,577.20
	China	42,061.00	43,549.50	43,817.90	38,125.10	49,467.90	53,650.70	54,872.70
	Malaysia	56,372.10	58,099.60	57,638.50	44,808.50	57,114.20	62,834.70	62,869.20
	Thailand	17,944.70	18,652.90	18,612.40	14,613.00	17,283.80	17,645.10	19,499.80

Source: www.singstats.gov.sg, accessed 30 July 2013

Questions

a) With reference to Tables 1 and 2, describe the trend in Singapore's balance of trade between 2008 and 2011. [2]

b) With reference to Extracts 2 and 4, analyse the likely impact on the market for cars in Singapore due to:

i) "heavy floods affecting its seven industrial estates" (in Thailand); [3]

ii) "record economic growth". [3]

c i) Using supply and demand diagram, explain the effect of the restructured excise tax system on the market for cars. [3]

ii) Explain what determines the impact of restructured excise tax system on government revenue. [4]

d) i) Identify the type of market failure associated with carbon dioxide emissions. [1]

ii) Assess if the usage of excise tax is a good solution in curbing carbon dioxide emissions in Thailand. [6]

e) With closer Asean integration, analyse if Singapore stands to gain more than a developing country like Thailand. [8]

[Total: 30 marks]

Question 2

Inflation complicating policy options

Extract 6: Singapore Inflation Unexpectedly Accelerates, Complicating Policy Decision

Singapore's inflation unexpectedly accelerated to the fastest pace since 2008 as housing and food costs climbed, complicating the central bank's decision ahead of a policy review next month as risks to growth rise.

A struggling U.S. economy and Europe's debt crisis dimmed the outlook for exports and prompted officials from China to the Philippines to avoid further rate increases. The island, which uses the exchange rate to manage inflation, will release its twice-yearly monetary policy decision in October.

"Higher than expected domestic inflationary pressure has kept inflation elevated in the near term" said Irvin Seah, an economist at DBS Group Holdings Ltd. in Singapore. The Singapore government has lowered its forecast for the economy's expansion in 2011 even after the central bank raised its inflation estimate. The island's currency has appreciated to unprecedented levels since the central bank said in April it would allow further gains to tame price pressures, the third monetary tightening in a year. While Singapore's central bank will most likely maintain its current policy stance of a gradual appreciation in the Singapore dollar's nominal effective exchange rate, "downside risks to growth and easing inflation could tilt the policy decision towards a more neutral policy stance," Seah said.

Source: *Bloomberg*, 23 September 2011

Extract 7: Risk of Inflation Puts Europe in a Tough Spot

Inflation in the euro zone is rising even before the European Central Bank has had a chance to end the European debt crisis. Consumer prices rose at an annual rate of 2.4 percent in January, according to European Union statistics released on Monday, significantly above the central bank's target of about 2 percent.

In theory, the central bank should be starting to think about raising its benchmark interest rate soon to cool down the euro zone economy. But in practice, the European Central Bank cannot raise the benchmark rate from a record low of 1 percent without making life even more difficult than it already is for the so-called peripheral countries, like Greece, Ireland and Spain. A rate increase would push up borrowing costs for the governments of those beleaguered countries even more.

Most analysts doubt that the European Central Bank would dare to raise rates before September, and perhaps not until next year. "It would be a mistake for the E.C.B. to raise rates anytime soon," Ms. Diron added. "The economy is still very fragile and they recognize that themselves." Mr. Trichet has blamed the spike in inflation on higher energy prices. He has said that he expected the pressure to let up later this year. European factories are still not operating at capacity, and unemployment in most of the Continent remains above levels seen before the financial crisis. In addition, borrowing by companies is likely to weaken.

All those factors mean that the European Central Bank can leave rates where they are for the time being. "There is still a lot of slack in the economy," said Eric Chaney, chief economist at AXA, a French insurance and investment management company. The central bank will come under much more pressure, though, if higher prices for food or fuel feed into prices of other goods, prompting workers to demand higher wages.

Source: *New York Times*, 1 February 2011

Extract 8: Singapore's Policy Tightening May Prompt Asia to Step Up Inflation Fight

Singapore's third monetary policy tightening in a year may prompt Asian central banks to allow further interest-rate and currency gains to prevent surging prices from hurting their economies.

Asia's policy makers are juggling the need to contain inflation fueled by oil prices near a 30-month high while protecting their economies' export-led expansion. The region can afford to remove fiscal and monetary stimulus at a "stronger and faster" rate as its growth outpaces the rest of the world, according to the World Bank.

South Korea, Indonesia and India are already behind in controlling inflation, along with possibly Thailand and China, said Win Thin, head of emerging-market strategy at Brown Brothers Harriman & Co. "Most in Asia are operating at or near full capacity, and with commodity prices still buoyant, there should be no hesitation to tighten," Thin said. "All of these central banks should take a lesson from the MAS and tighten without fear of slower growth and a stronger currency."

While the Singapore monetary authority adjusted the currency band upwards, it was cautious not to over adjust it. The Singapore government has said too much appreciation would hurt the export competitiveness of the nation. The island has remained vulnerable to fluctuations in overseas demand for manufactured goods even after the government boosted financial services and tourism.

"This 'half re-centering' was likely a result of a compromise between policy makers who acknowledged the need for further tightening but yet had concerns on the strength of the Singapore dollar and the impact on competitiveness," Goldman Sachs Group Inc. economists Mark Tan and Jerry Peng said in a note yesterday.

Source: *Bloomberg,* 15 April 2011

Extract 9: Increase in Local Inflation a Cause for Concern

Inflationary pressure in Hong Kong is building steadily. The city's inflation rate currently stands at 3.7 percent. But the combination of progressive appreciation in the yuan, the quantitative easing policy in the US, and increases in world food and fuel prices will continue to put upward pressure on inflation.

Inflation erodes purchasing power, and thus acts like a tax on individuals. Savers are also being punished given negative real interest rates, while borrowers are benefiting from lower borrowing costs. Investors and asset holders who invest in inflation-protected products will be better off compared to depositors and individuals whose assets are mainly money balances.

In addition, the adverse impact of inflation also tends to vary across income groups. Given the glut of low-skilled workers in Hong Kong, wages are often slow to adjust to rising inflation. Additionally, welfare recipients and low income individuals tend to spend a higher proportion of their income on food. Thus, in the current environment of soaring food prices, a welfare recipient - whose rent is paid by the government whilst receiving HK$3,000 monthly under Comprehensive Social Security Assistance Scheme - will be experiencing inflation closer to 10 percent.

Source: *China Daily*, 5 April 2011

Table 3: Singapore's Inflation Rate

Year	Annual Inflation rate
2004	1.7
2005	0.5
2006	1.0
2007	2.1
2008	6.6
2009	0.6
2010	2.8
2011	5.2

Source: www.singstat.gov.sg, accessed on 31 July 2013

Table 4: Singapore's GDP at 2005 Market Prices

Year	GDP (S$m)	% Growth
2004	194,433.2	9.2
2005	208,763.7	7.4
2006	226,765.2	8.6
2007	247,218.4	9.0
2008	251,538.9	1.7
2009	249,559.8	-0.8
2010	286,446.7	14.8
2011	301,228.4	5.2

Source: www.singstat.gov.sg, accessed on 31 July 2013

Questions

(a) **(i)** With reference to Table 3, describe the trend in Singapore's general price level between 2005 and 2011. [2]

(ii) Consider whether the information in Tables 3 & 4 suggests there is a stable relationship between inflation and economic growth. [3]

(b) Using AD/AS analysis, explain how the following factors in Extract 7 might affect the European economy:

(i) "higher energy prices";

(ii) "borrowing by companies is likely to weaken". [6]

(c) **(i)** Define inflation. [1]

(ii) Explain why inflation might be a cause of concern for governments. [4]

(d) Discuss the use of interest rates in curbing inflation in the European Union. [6]

(e) "This 'half re-centering' was likely a result of a compromise between policy makers who acknowledged the need for further tightening but yet had concerns on the strength of the Singapore dollar and the impact on competitiveness." In light of the data, comment on the need for this compromise. [8]

[Total: 30 Marks]

Section B

Answer **one** question from this section

3 (a) Explain the market failure associated with:

(i) National Defence
(ii) Education [10]

(b) Discuss with the use of examples, the view that subsidies are the best way for an economy such as Singapore to solve the market failure in positive externalities. [15]

4 (a) Explain the potential causes of a balance of payment deficit in the current account [10]

(b) The fall in exports due to global recession has caused unemployment to increase in Singapore. Discuss the use of supply side policies in solving the above problem. [15]

[End of Paper]

Answers

a)		**With reference to Table 1 and 2, describe the trend of Singapore's balance of trade between 2008 to 2011**	**[2]**
		Singapore's BOT trend is increasing (1) surplus (1)	
b)		**With reference to Extracts 3 and 5, analyse the likely impact on the market for cars in Singapore due to**	
	i)	**Record economic growth**	**[3]**
		Economic growth will increase income of Singaporeans. Increased income is a determinant of demand. (1) Hence demand for cars increase thus both price and quantity will increase (1) The extent of increase in demand will be large as Singaporeans place a huge emphasis on purchase of a car (1) OR highest proportion of millionaire households suggesting that the increase in income is huge and thus the increase in dd and price and quantity (1)	
	ii)	**heavy floods affecting its seven industrial estates in Thailand**	**[3]**
		Floods will cause factories to shut down. Thus limiting the number of producers being able to manufacture cars. (1) Hence the supply of cars will fall leading to a rise price but a fall in quantity (1) The supply of cars may not drop drastically as there are multiple suppliers/brands of cars available in Singapore thus small fall in ss hence small increase in price and small fall in quantity. (1)	
c	**i)**	**Using supply and demand diagram, explain the effect on the market for cars of the restructured excise tax system**	**[3]**
		The excise tax will increase the cost of production (1) Resulting in a leftward shift in the supply curve for cars (1) Diagram (1)	
	ii)	**Explain what determines the impact of restructured excise tax system on government revenue**	**[4]**
		PED of cars in Thailand. PED is assumed to be elastic as there are substitutes to cars ie motorcycles. A shift in tax regime (increase in tax) will cause more than proportionate fall in quantity demanded than the increase in price. Since the tax quantum is fixed, given the "larger" fall in quantity demanded. The tax receipt will not be as large as anticipated. A % as total government receipt from various income sources. number of cars purchased (1) + explain (1) types of cars purchased (1) + explain (1) Any other plausible answer with explanation	
d)	**i)**	**Identify the type of market failure that carbon dioxide emission causes**	**[1]**
		Carbon dioxide emission is a form of negative externality (1)	
	ii)	**Assess if the usage of excise tax is a good solution in curbing carbon dioxide emissions in Thailand.**	**[6]**

Outline of answer:
Proposed Answer

- How tax works to curb carbon dioxide emissions
- How it is ineffective in curbing carbon dioxide emissions
- Suggest a policy or combination and why it is better.

Introduction	Identify what an excise tax is
Paragraph 1	**How the excise tax helps to curb carbon dioxide emissions in Thailand.**
Paragraph 2	**Why excise tax is a good solution- the strengths of the policy**
Paragraph 3	**Why excise tax is not a good solution- the weaknesses of the policy**
Paragraph 4	Identify at least one other policy or an amendment to the policy and show how it is better than the original excise tax at curbing carbon dioxide emissions and make a justified stand as to whether excise tax is a good solution in curbing carbon dioxide emissions.

Knowledge, Application, Understanding and Analysis		
L3	For an answer that shows in-depth discussion and judgment of how well the tax works. The answer should have a clear thesis and anti-thesis, also showing how it is ineffective and suggesting a solution.	5-6
L2	For an answer that shows an underdeveloped economic analysis of how well the tax works. The answer should have a clear thesis and anti-thesis, also showing how it is ineffective and suggesting a solution but in a limited manner.	3-4
L1	Descriptive responses that, in consequence, listed the policies with minimal elaboration and conceptual errors. The answer is one sided.	1-2

e) **With closer integration in Asia , analyse if Singapore stands to gain more than a developing country like Thailand.** **[8]**

Outline of answer:

- What closer integration in Asia means
- How it would benefit developed nations like SIngapore
- How it would benefit developing nations like Thailand
- Which would stand to gain more and why.

Introduction	Identify what an excise tax is
Paragraph 1	How this closer integration is beneficial for Singapore
Paragraph 2	Show how other developed nations stand to gain
Paragraph 3	Show how develping nations stand to gain
Paragraph 4	To make a stand as to whether developed or developing countries stand to gain and Justify the reasoning.

Knowledge, Application, Understanding and Analysis		
L3	For an answer that shows in-depth discussion and judgment of how closer integration in Asia affects Singapore compared to developing countries. The answer should have a clear thesis and anti-thesis and address key benefits and consequences identified in the extracts.	5-6
L2	For an answer that shows how closer integration in Asia affects Singapore compared to developing countries. The answer should have a clear thesis and anti-thesis and address key benefits and consequences identified in the extracts but in a limited manner.	3-4
L1	Descriptive responses that, in consequence, listed the effects of closer integration in Asia with minimal elaboration and conceptual errors. The answer is one sided.	1-2
E2	Insightful evaluative comments, backed by depth of economic analysis	2
E1	Limited evaluation without justification and economic analysis	1

ai)	**With reference to figure 1, explain the trend of Singapore's general price level from 2005-2012.**	**[2]**
	Overall, general price level has increased. [1m] There is a sharp increase in 2008. [1m]	
aii)	**Consider whether the information in table 1 & 2 suggests there is a stable relationship between inflation and economic growth.**	**[3]**
	Generally, when economic growth is positive, inflation rate is positive. This is because when demand of goods and services increases, there will be an upward pressure in price. [1m] However, in year 2009, there's negative economic growth with a low inflation rate. The weak economic performance of the economy could have help pushed inflation rate from a high of 2008 to its level in 2008. [1m] Overall, there is a positive relationship between inflation and economic growth.[1m]	
b)	**Using AD/AD analysis, explain how the following factors in extract 2 might affect the European economy.** **i) "Higher energy prices"** **ii) "Borrowing by companies are likely to weaken."**	**[6]**
	i) Higher energy prices would likely contribute to a rise in the cost of factor inputs within the European economy which will lead to a rise in the AS. The rise in AS would result in a fall in the economy's GDP as well as a rise in the general price level. [2m] Diagram [1] ii) The weakened level of borrowing by firms will likely diminish the ability of firms to finance investments. This decreased level of investment will likely lead to a fall in the AD, since investment is a component of AD. The fall in AD would result in a fall in the economy's GDP as well as a rise in unemployment. [2m] Diagram [1]	
ci)	**Define inflation.**	**[1]**
	Inflation is a sustained increase in the general price level (or overall prices) in the economy. [1]	
cii)	**Explain why inflation might be a cause of concern for governments.**	**[4]**
	Effects of inflation: examples taken from extract 4 Reason 1: As mentioned in extract 4, "inflation erodes purchasing power". Inflation results in a rise in the general price level and makes it relatively more expensive for consumers to purchase goods and services. If consumer's income does not keep up with the inflation rate, they could see a reduction of their real income. This is similar to a tax on consumers as both a tax and inflation could reduce their real disposable income. [2m] Reason 2: As mentioned in extract 4, "savers are also being punished given negative real interest rates". For savers, if the interest rate by the bank is not at least on par with the inflation rate, this would mean that savers will see a reduction in the real value of their savings. While nominal interest rates continue to be positive, when it is outstripped by the inflation rate, the real interest rate will actually be negative, eroding the real value of the savings. [2m] Or any reason which is supported by context. [2m]	

d) Discuss the use of interest rates in curbing inflation in the European Union. [6]

Outline of answer:	
Introduction	Identify the type of policy used Overview
Paragraph 1	Interest rate policy would reduce inflation à show how
Paragraph 2	Interest rate policy may not be suitable à explain why (limitation of Ir policy)
Conclusion	Stand

Knowledge, Understanding, Application and Analysis		
L2	Good and well developed elaboration on the effectiveness of using interest rate to curb inflation in the EU context. Overall stand on effectiveness needed.	4-6 Marks
L1	Weak or inaccurate elaboration on the use of interest rates to curb inflation in the EU.	1-3 Marks

e) '"This 'half re-centering' was a likely a result of a compromise between policy makers who acknowledged the need for further tightening but yet had concerns on the strength of the Singapore dollar and the impact on competitiveness,"' In light of the data, comment on the need for this compromise.

Outline of answer:	
Introduction	Define inflation, explain SG context
Paragraph 1	Exchange rate can be used to tackle imported inflation à show how (appreciation)
Paragraph 2	Appreciating exchange rate could reduce export competitivity à increase in Px, leads to fall in X as countries import from other countries. Worsen BOP.
Paragraph 3	Source of inflation in SG due to domestic rather than foreign factors. à e.g. domestic demand pull, domestic cost push due to rising wage cost, lack of resources.
Paragraph 4	Appreciating exchange rate affects SG economic growth à Singapore trade dependent, leads to fall in AD. Also, due to higher costs of exports, might reduce FDI attractiveness
Conclusion	Stand: Exchange rate policy might not be most effective, but is needed to compromise to fight imported inflation, although it might affect economy
Possible other points	The appreciation leads to lower costs, making singapore more attractive as investment opportunity

Knowledge, Understanding, Application and Analysis		
L2	Well developed analysis on the rationale behind the policy adopted as well as its implications on the Singapore economy.	4-6 Marks
L1	Underdeveloped explanation of the policy adopted.	1-3 Marks

Evaluation		
E2	Well justified stand.	2 marks
E1	Weak stand with little justification.	1 mark

3 (a) Explain the market failure associated with:
(i) National Defence
(ii) Education [10]

(b) Discuss with the use of examples, the view that subsidies are the best way for an economy such as Singapore to solve the market failure in positive externalities. [15]

3(a)

Approach	(i) · Students should begin by defining what National defence is, then explain its characteristics of non-rivalry and non-excludability and how this leads to market failure. · A good answer would have a comprehensive discussion encompassing all characteristics of a public good. · The common pitfalls would be to only explain some factors leading to the market failure. (ii) · Students should begin by identifying the market failure in education and using a diagram show comprehensively how it comes about explaining all aspects. · A good answer would have a proper logical flow, step by step as to how the market failure results, instead of the common error of haphazardly listing the various points without connecting them.

Outline of answer:
Proposed Answer (i):
- Identify what type of good National Defence is: Public Good
- Analyse National Defence using the characteristics of non-rivalry and non-excludability to show it is a public good
- As a result of these characteristics, it leads to no effective demand and inability to charge a price and explain
- Show how this leads to complete market failure

Proposed Answer (ii):
- Identify what type of good Education is: Merit Good
- Show the market failure in Merit goods caused by positive externalities.
- Show how the market failure in merit goods is worsened by the imperfect information in merit goods.
- Show how this leads to partial market failure with the use of a diagram

Introduction	(i) Identify what type of good National defence is and why (ii) Identify what type of good Education is and why
Paragraph 1	(i) Analyse National Defence using the characteristics of non-rivalry and non-excludability to show it is a public good (ii) Show the market failure in Merit goods caused by positive externalities.
Paragraph 2	(i) As a result of these characteristics, it leads to no effective demand and inability to charge a price and explain (ii) Show how the market failure in merit goods is worsened by the

	imperfect information in merit goods.
Paragraph 3	(i) Show how this leads to complete market failure (ii) Show how this leads to partial market failure with the use of a diagram

Knowledge, Application, Understanding and Analysis		
L3	For an answer that shows in-depth discussion in context of how the two contexts lead to market failure and links the points together clearly to paint a clear picture of how market failure results with the use of a diagram.	7-10
L2	For an answer that shows quite clearly how the two contexts lead to market failure, correctly identifying the types of market failure and with the use of a diagram. The answer is not very clear in its linkage of points.	5-6
L1	Descriptive responses that, in consequence, merely listed the points without linking them together to show how the market failure comes about. The answer has conceptual errors. No use of context in discussion. No diagram is used.	1-4

b) Discuss with the use of examples, the view that subsidies are the best way for an economy such as Singapore to solve the market failure in positive externalities. [15]

Approach	· Students should begin by explaining what subsidies are and show how they solve the market failure in positive externalities with the aid of a diagram. They should then elaborate on how subsidies are not ideal, evaluating their usefulness in the Singapore context using examples. They should then identify and explain other policies and show how they are 'better' than subsidies. They should finally make a stand as to which would be better and justify the stand. · A good answer would have a comprehensive discussion that is clearly able to address the question direction of whether subsidies are the 'best' way to address positive externalities in Singapore. These answers would have a clear reason for saying why it is best or not that would relate to the context of Singapore. · The common pitfalls would be to give a generic explanation and evaluation of subsidies without considering the context, and also not making a final stand or making a final stand but not justifying it.

Outline of answer: Proposed Answer : · Explain what subsidies are and show how they solve the market failure caused by positive externalities. Examples should be given · Evaluate the use of subsidies focusing on the context of Singapore · Identify other superior policies and elaborate on why they are superior. · Make a conclusion as to whether subsidies are 'best' in the Singapore context and justify the stand.	
Introduction	Explain what subsidies are and show how they solve the market failure caused by positive externalities. Use a diagram.

Paragraph 1	Evaluate the use of subsidies focusing on the context of Singapore. Use a diagram
Paragraph 2	Identify other superior policies and elaborate on why they are superior.
Paragraph 3	Make a conclusion as to whether subsidies are 'best' in the Singapore context and justify the stand.

Knowledge, Application, Understanding and Analysis		
L3	For an answer that shows in-depth discussion and judgment of how how subsidies solve the market failure in positive externalities with the use of examples that are in context, followed by evaluation of the policy and detailed discussion of alternative policies and mention of the question direction considering if subsidies indeed are the 'best'.	9-11
L2	For an answer that shows clearly how subsidies solve the market failure in positive externalities with the use of examples that are in context, followed by evaluation of the policy and brief mention of alternative policies and mention of the question direction considering if subsidies indeed are the 'best'.	6-8
L1	Descriptive responses that, in consequence, briefly explained how subsidies work to solve the market failure with minimal elaboration and conceptual errors. The answer is one sided. There is no use of the context of Singapore.	1-5
E2	Insightful evaluative comments, backed by depth of economic analysis	3-4
E1	Limited evaluation without justification and economic analysis	1-2

4 (a) Explain the potential causes of a balance of payment deficit in the current account [10]

(b) The fall in exports due to global recession has caused unemployment to increase in Singapore. Discuss the use of supply side policies in solving the above problem. [15]

Part a

Approach	The question is specific about current account deficit and students have to display an understanding of the components of current account deficit. While all reasons are possible, we should give an answer that looks at how a current account deficit might be due to reasons that are good for economy as well as due to reasons that shows that the economy has problems.

Outline of essay:	
Introduction	Definition and overview
Paragraph 1	A short-term planned deficit in the current account could be the result of an emerging economy rapidly industrializing.
Paragraph 2	Another reason for a current account deficit could be because of the loss of competitiveness of exports of a country due to increasing cost of production.
Paragraph 3	Another reason would be due to cyclical reasons such as economic growth, leading to rising incomes. Hence, consumers choose to have better imported goods rather than poorer quality domestic goods
Conclusion	Summary

Knowledge, Understanding, Application and Analysis		
L3	Clear and well developed explanation of potential causes of current account deficit. Took into account planned and unplanned deficit. At least 2 well explained points supported with clear examples.	7-10 Marks
L2	Explanation of potential causes of current account deficit but gaps in explanation. Little use of examples.	5- 6 Marks
L1	Mere listing of points. Shows little understanding of potential causes of current account deficit.	1- 4 Marks

b) The fall in exports due to global recession has caused unemployment to increase in Singapore. Discuss the use of supply side policies in solving the above problem.

Part b

Approach	This is a straight-forward question to discuss the use of supply side policies in dealing with unemployment. Students could either offer up various supply side policies and evaluate their effectiveness with dealing the with said problem or a combination of supply side policies and demand side policies to deal with the type of unemployment stated.

Outline of essay:	
Introduction	Overview of nature of Singapore Overview of essay
Paragraph 1	How would unemployment arise à Fall in AD due to fall in net exports
Paragraph 2	How flexible wage policy would help à reduces cost of production
Paragraph 3	How training will help à increases productivity, AS shift down. Attracts FDI, helps increase AD.
Paragraph 4	Building of infrastructure à increases productivity in LR. Helps increase AD in short run.
Conclusion	Stand

Knowledge, Understanding, Application and Analysis		
L3	For a well discussed answer with good analysis. Able to explain how Singapore government would use supply side policy to deal with the unemployment issues and its limitations. Or Well discussed answer with good analysis. Able to explain the use of supply side policy in the context of Singapore and the suggestion of alternative policies to deal with the form of unemployment. (Note: explanation of how unemployment arises due to fall in global income while welcome, is not necessary)	9-11 Marks
L2	For a correct but undeveloped explanation of the use of supply side policies and/or demand side policy.. Some application to the Singapore context.	6-8 Marks
L1	For a descriptive/sketchy answer that states the various supply side policies. One-sided answer that explains how supply side policies can be used.	1-5 Marks

Evaluation		
E2	Evaluation/judgment based on economic analysis	3-4
E1	Largely unexplained evaluation with limited economic analysis	1-2

CATHOLIC JUNIOR COLLEGE
JC2 PRELIMINARY EXAMINATIONS
In preparation for
General Certificate of Education Advanced Level
Higher 2

ECONOMICS	**9732/01**
Paper 1	**28 Aug 2013**
	0800 - 1015
Additional Materials : Writing Paper	**2 hours 15 min**

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 ALL questions 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.

Answer **ALL** questions in this section

Question 1

Rare Earths

Extract 1: China's dominance of rare earths

According to market research reports, there is a growing global dependence upon a multitude of diverse technologies — including computers, smart phones, TVs, lighting systems, hybrid automobiles, life-saving medical technologies, offshore wind turbines and laser-guided missile defense systems – due to the central role telecommunication and high-tech electronic products play in our lives today.

China produces more than 95 per cent of the metals that are important for the manufacture of a variety of consumer electronics, such as mobile phones, as well as automotive, advanced medical and defence products. Since 2009, the country has been reducing sales of these metals overseas.

Last month, Japan, the US and the European Union lodged a complaint with the World Trade Organisation over China's restrictions on the export of a variety of raw materials including rare earths.

For its part, Beijing has cited concerns such as the exposure of miners to cancer-causing chemicals as some of the key reasons for tidying up its rare-earth sector and capping exports. While environmental protection is a valid reason, research analysts questioned if Beijing's reduction of export quota is truly motivated by green concerns. Analyst reports indicate that the production quota has been on a rise while the export quota has been in the downward trend.

Adapted from: *The Straits Times*, 14 April 2012,

Extract 2: New trade dispute with China over rare-earth curbs

The United States, European Union, (EU) and Japan are accusing Beijing of maintaining export restrictions on them that distort prices and hurt job creation.

China vowed to defend itself against the complaint, which was filed with the World Trade Organisation (WTO) in Geneva yesterday. It is arguing that the restrictions were not protectionist but are meant to help prevent environmental damage from excessive mining of the rare metals.

The official Xinhua news agency also warned in a commentary that the case could trigger a "backlash", though it gave no indication as to what retaliatory moves Beijing might take.

Senior US officials noted that they chose to act to prevent Beijing from introducing more export restrictions. "We can't leave this to chance (as) it could have a crippling effect on our manufacturing and industrial sectors," said one of the officials. "The fact that we are joined by the EU and Japan speaks to the seriousness of (the issue)."

President Barack Obama said the economic stakes involved were too important for his administration to do nothing, and urged Beijing to allow market forces to determine the rare-earth trade. "We prefer dialogue, especially with key trading partners like China... but when it is necessary, I will take action if our workers and our businesses are being subjected to unfair trade practices," Mr Obama added.

In a statement, US Trade Representative Ron Kirk said China's rare-earth policies hurt American workers and manufacturers by creating "massive distortions and harmful disruptions in supply chains for these materials throughout the global marketplace".

"The improper export restraints also contribute to creating substantial pressure on US and other non-Chinese downstream producers to move their operations, jobs and technologies to China," he added.

The trade restrictions are not new as the mainland has set export quotas on the valuable minerals since 2000, and introduced export duties from 2007. But the restrictions and duties were dramatically raised in the last two years, prompting serious concerns among global manufacturers. In 2010, it also halted exports of rare earths to Japan amid a heated diplomatic dispute.

China has defended its policy on environmental grounds, saying that the production cap and export quotas were necessary to prevent excessive mining. This is despite China urging its enterprises to invest in pollution control and technology upgrading to enhance the environmental protection level of the industry.

"China's rare-earth export restriction is not against any specific country, nor is it a kind of trade protectionism. Instead, the policy was drawn up out of concern for the environment and the sustainable use and development of resources," said Mr Miao Wei, the Chinese Minister for Industry and Information Technology.

China's leaders have taken a hard line on trade of late, imposing fresh tariffs on imported poultry and sport-utility vehicles. A Chinese official declared defiantly that “we are fully prepared” to fight any challenge on rare earths.

Adapted from *Straits Times*, 14 March 2012 and *China Daily*, 21 June 2013

Extract 3: Set to enter the rare earths industry

Australia
Lynas, an Australian rare earths mining company plans to import ore from Mount Weld in Western Australia, which is said to be the source of the richest rare-earth deposits in the world, for processing in Malaysia. Lynas chose Malaysia to process the materials because labour and other costs are cheaper than they are in Australia. It said its plant would be safe, and is far more advanced than the first rare-earth plant operated by Mitsubishi Chemical in the mid-1980s. The Lynas Malaysian plant will break China's monopoly when it is able to process an initial 11,000 tonnes of rare earths a year – about a third of current world demand – once output begins in June.

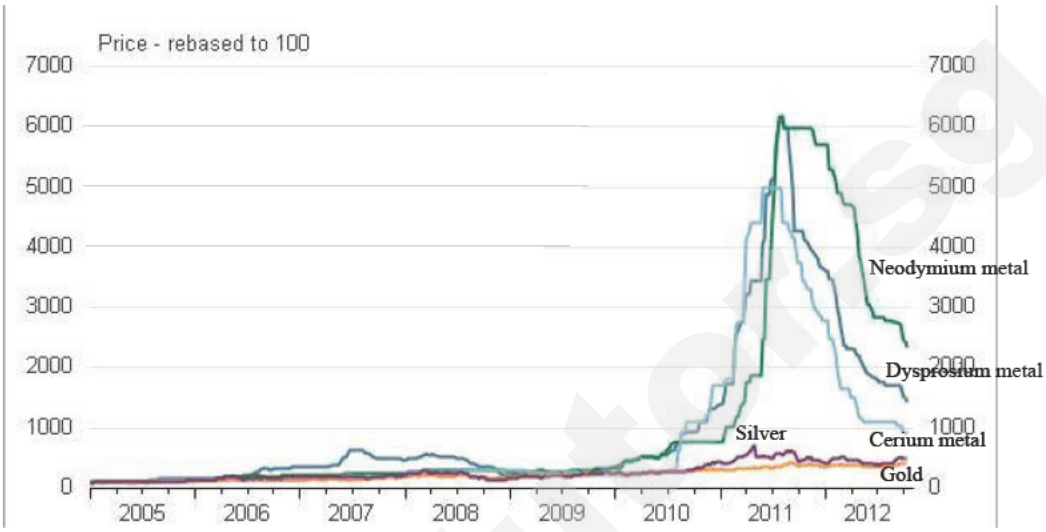
Japan
Japan, which found supplies restricted and even cut off for two months in 2010 over a territorial dispute with China in the East China Sea, is among the countries looking for alternative supplies. It has signed agreements with India, Vietnam and Kazakhstan to develop rare earth minerals. Against this backdrop, China yesterday announced it was raising its export quota for this year to 30,996 tonnes, up 2.7 per cent from last year.

India
India is trying to revive its dormant rare earths industry, seeing an opportunity as top producer China restricts exports of the minerals. Indian Rare Earths (Irel), a state-owned company, is set to start producing rare earth minerals in December and has applied for a mining licence in the state. Irel was producing rare earth minerals until 2004, when it closed because it could not compete with Chinese rivals. China squeezed out big and small players, from India to the US, in the last decade with lower pricing and higher volumes. India's annual production has hovered at 2,700 tonnes. Analysts predicted it could take five to eight years for India to set up shop and dip into its rare earth reserves, estimated at 3.1 million tonnes.

"India has enough resources and can even meet the Japanese demand... but it will take time to revamp the whole mining sector," said Professor Srikanth Kondapalli of the Jawaharlal Nehru University. But just as China is intent on preserving its natural resources, India too is geared towards its own market, before considering exports.

Adapted from *The Straits Times*, 27 February 2012 and 23 August 2012

Figure 1: Rare earth* prices versus gold and silver



*Neodymium, Dysprosium, Cerium metals are examples of rare earth

Source: *Reuters*, 15 October 2012

Questions

(a) (i) Describe the trend in rare earth prices between 2005 and 2012. [2]

(ii) Account for the above overall trend. [4]

(b) What can you conclude from the data about the price elasticity of supply of rare earths in India? [2]

(c) Explain the impact of the entry of Australia, Japan and India on the profit of China's rare earth producing firms. [4]

(d) To what extent will the use of 'pollution control and technology upgrading' help to achieve a more efficient allocation of resources in the rare earth market? [8]

(e) Discuss the desirability of World Trade Organisation's intervention over China's export restrictions of rare earths to consumer welfare. [10]

[Total Marks: 30]

Question 2

The Tale of 2 Economies

Table 1 : Key Economic Indicators

	2008	2009	2010	2011	2012
Nominal GNI (USD $millions)					
Singapore	170,769	183,732	216,147	243,010	271,585
Finland	273,138	243,201	238,757	264,394	249,861
Current Account (USD $millions)					
Singapore	28,838	33,482	62,026	65,323	51,437
Finland	8,941	6,681	5,901	-1,781	-3,679
Unemployment (% of labour force)					
Singapore	3.2	4.3	3.1	2.9	2.8
Finland	6.3	8.2	8.4	7.7	7.8
Inflation (%)					
Singapore	6.5	0.6	2.8	5.3	4.5
Finland	4.1	0	1.2	3.4	2.8

Source: *The World Bank Data*, *Singstat*, *Statistics Finland*

Extract 4: Recession besets Finland

"Growth has been extinguished in Europe," said Roger Wessman, Helsinki-based chief economist at Nordea Bank AB. Finland's job losses and export slump are driving the nation into a recession as growth in its European trade partners evaporates. Finnish exports fell an annual 8 percent in September, with sales to the European Union plunging 14 percent, the customs office said yesterday. New orders for the technology industry have contracted for five consecutive quarters. Companies interested in buying Finland's investment goods have struggled to obtain funding, said Jorma Turunen, chief executive officer of the Federation of Finnish Technology Industries, whose members produce 60 percent of the country's exports and employ a quarter of its workforce.

However, in 2010, Finland topped Newsweek's list of the world's best countries and was named the second happiest country by the Gallup World Poll and the Organization for Economic Co-Operation and Development. Newsweek's study calculated scores based on categories of health, education, quality of life, economic dynamism and political environment.

From an objective standpoint, Finns experience a high quality of life, low levels of corruption, high literacy rates, a small income gap, wide access to health care, high life expectancy rates and a healthy work-life balance. But there are other, more personal factors that help paint a fuller picture of the levels of happiness or unhappiness in a particular country. The New Economics Foundation's National Accounts of Well-being project profiles European countries based on how citizens feel about their own happiness. Finland's Well-being profile, for instance, scores especially high in the "Absence of Negative Feelings" category, but just a bit above average in the "Positive Feelings" category.

Source: *BBC,* 22 June 2011and *Bloomberg,* 8 Nov 2011

Extract 5: China faces pressure from US on foreign exchange policy

The growth of China's exports in November has dropped to its lowest level since December 2009 as demand for made-in-China goods shrank due to the escalating European debt crisis. Experts said the outlook of the nation's exports would be gloomier in the coming year. Excluding distortions in January and February each year, the rise was the most minimal since China's export resumed growth in 2009. Slowing global growth and the debt crisis in Europe dampened overseas demand and slowed exports. After US President Barrack Obama further pressured China to strengthen the Chinese Yuan, China looked to improve trade relations with Association of Southeast Asian Nations (ASEAN).

During the past 11 months, China's trade volume with the European Union rose by 19.2 percent to $517.11 billion, while its trade with the US totalled $405.43 billion up 16.9 percent. Both increases were weaker than China's foreign trade growth of 23.6 percent in the same period. China is focusing on strengthening trade with emerging markets. China's trade with members of the ASEAN came up to $328.96 billion in the first 11 months, increasing 25.1 percent year-on-year while its trade with South Africa soared by 82.5 percent to $41.45 billion compared to a year ago.

Source: Adapted from *China Daily,* 11 December 2011

Extract 6: Republic drew $12.9b in fixed asset investments

Investments poured in at near record levels last year despite a fragile global economy, setting the country up for an additional 20,000 or so new skilled jobs in coming years. Foreign spending on fixed assets such as factories and machinery hit $13.7 billion. American companies accounted for 36.8 per cent of the investment commitments, with 15.5 per cent from Europe. Global firms also shelled out $7.3 billion in total business spending, including spending on wages and rentals.

When all the investment projects committed to last year are completed, there will be 20,300 new skilled jobs created. In terms of "value-added" to the economy – the contribution to actual economic growth – the new investments will contribute $15.5 billion a year. Economic Development Board (EDB) expects investment figures to come in at similar levels this year, up to $15 billion in fixed asset investments. Investments in specialty chemicals are expected to make up a large part of spending this year, with ExxonMobil, an operator of the new petrochemical plant, expected to begin working this year. The electronics sector, which comprised more than half of total fixed asset investments last year, is expected to draw in new spending this year.

Despite a slowing global economy, Chairman Leo Yip said the EDB remains "cautiously optimistic" about 2012, as investment interest in Asia remains healthy. Decisions on capital-intensive investments are based on long-term considerations and are less sensitive to short-term economic volatility, said the EDB. The agency has also strengthened Singapore's allure as a business hub by developing new capabilities attractive to global companies in search of Asian growth.

Mr Yip noted that Europe's economic troubles last year did not seem to dent interest from firms looking to this region. "Europe is in a situation of uncertainty, but many European companies look for growth in other regions, and Asia presents great promise to them."

As more Asian enterprises set up bases in Singapore, fixed asset investment from the Asia-Pacific region and other countries more than doubled from 2010 to $3.7 billion last year. "Increasingly, Asian companies are also making their mark. Many of them are growing to a scale and size that will contribute to meaningful investments as they go in search of global markets," added Mr Yip.

Singapore Business Federation officer Victor Tay said that the foreign manpower tightening could put a dampener on potential investments here. "We do know that big multinational firms are rethinking whether to relocate here due to the tight manpower restrictions," he said. "So I'm not sure how well we will do, as manpower requirements are key to any investment into a country."

Source: *Straits Times* 18 Jan 2012, and *Straits Times* 14 Nov 2011

Extract 7: Singapore puts budget's focus on narrowing wealth gap

A retired hotel worker, Mr Sivakumar is among Singapore's poorest 20% of citizens and has had to come back to work to make ends meet. And while his new job is a vital cash earner, it is also a good example of how Singapore's government is trying to narrow an income gap the United Nations says is the second-biggest among Asia's developed nations.

Singapore's economy almost doubled in size in the 10 years to the end of 2008, Department of Statistics figures show. Thanks to this growth, the average monthly income increased by 40% over the same period. However, the average monthly income for the bottom 20% of Singaporean households fell by 2.7% over the same decade. High food prices, meanwhile, have been making it tougher for Singapore's low-income families. Singapore's inflation rate hit a two-year high of 4.6% in December, and the central bank has warned that prices may rise at a faster pace in coming months.

The government has been looking at ways of narrowing the country's income gap and in 2007 introduced the Workfare Income Supplement scheme. And while it is helping fund these people's lives, it is also costing the government millions of dollars.

Source: *BBC,* 18 February 2011

Questions

(a) (i) Using Table 1, compare Finland's and Singapore's inflation rates between 2008 and 2011. [2]

(ii) What can be inferred about the relative prices in Finland and Singapore between 2008 and 2011? [1]

(b) (i) According to Extract 4, "Growth has been extinguished in Europe". Explain how the poor economic performance of Europe leads to unemployment in Finland. [3]

(ii) Assess the relevance of the data in comparing the standard of living in Singapore and Finland. [8]

(c) According to Extract 5, the US "pressured China to strengthen the Chinese Yuan". Explain the impact of China's reaction on Singapore and Finland. [6]

(d) Assess the impact of Singapore's emphasis on Foreign Direct Investment inflow on her economy [10]

[Total Marks: 30]

ANSWERS

CSQ 1 Answer

a	**i)**	**Describe the trend in rare earth prices between 2005 and 2012.**	**[2]**
		General rise in price [1m] and with a sharp increase from year 2011[1m].	
	ii)	**Account for the above overall trend.**	**[4]**
		<u>Explain demand factor using case material</u>: **Increase in demand** for rare earths Demand for rare earths is **derived from the demand for consumer electronics.** From Extract 1, there is an **increase in demand for consumer electronic products** such as computers, smart phones, TVs and medical products. As rare earth metals are important factors of production for the manufacture of these consumer products, there is an increase in demand for rare earths. <u>Explain supply factor using case material</u>: **Fall in supply** of rare earths From Extract 1, there is a **restriction of China's exports** due to the export quota. <u>Combined effect</u> The combined effect of an increase in demand and a fall in supply of rare earths will lead to a rise in price of rare earths. 1m – increase in demand and fall in supply 1m - explain demand factor using case material 1m – explain supply factor using case material 1m – explain combined effect on outcome of price.	
b		**What can you conclude from the data about the price elasticity of supply of rare earths in India?**	**[2]**
		Supply of rare earths in India is price inelastic – rise in price would lead to a less than proportionate increase in quantity supplied. Due to time period where a sufficiently long time (about 5 – 8 years) is needed to start up the operations of a rare earth mining industry e.g. purchase of heavy machinery and equipment OR No readily available rare earth reserves that can be released. 1m – state supply is price inelastic 1m – explain reason using case material	

c		**Explain the impact of the entry of Australia, Japan and India on the profit of China's rare earth producing firms.**	**[4]**
		Profits = TR – TC <u>Fall in TR [2m]</u> Increase in no. of suppliers and hence more competition à Fall in AR for China's rare earth producing firms and demand also less price inelastic. <u>TC same or rise in TC [1m]</u> Assume MC is the same. Hence TC will remain constant or increase in TC as the firm produces less output. Fall in price and fall in output, fall in profits [1m]	

d		**To what extent will the use of 'pollution control and technology upgrading' help to achieve a more efficient allocation of resources in the rare earth market?**	**[8]**
		Explain the source of market failure (negative externalities) - identify negative externalities as the source of market failure - identify the MEC - explain the over production of rare earths and deadweight loss Explain how the measure works and its pros & cons - pollution and technology upgrading is R&D investment in green technology to reduce carbon emissions - cons: Funding issues Explain at least one other measure to help correct negative externalities and its pros & cons. e.g. tax, tradeable pollution permits Evaluation: weigh the effectiveness of the different measures suggested and justify	

L3 5-6	Clear discussion of the pros and cons of at least 2 measures (including pollution control and technology upgrading) and how they work to correct the source of market failure.
L2 3-4m	Explanation of at least 1 measure (pollution control and technology upgrading) and how it works to correct the source of market failure, but one-sided explanation of either pros or cons. Max 4m – for good discussion of pros and cons of only 1 measure (pollution control and technology upgrading).
L1 1-2m	Identify source of market failure (negative externalities). Listing the measures and superficial description of the measures.
E2 2m	Evaluation specific to effectiveness of measures
E1 1m	Unexplained evaluative comment or generalized evaluation

e		**Discuss the desirability of World Trade Organisation's intervention over China's export restrictions of rare earths to consumer welfare.**	**[10]**
		Thesis: Desirable if WTO intervenes - Reduce world prices of rare earth Anti-thesis: Not desirable if WTO intervenes - Improve environmental pollution - Retaliation by China through imposition of tariffs on other goods such as poultry and sport-utility vehicles Overall stand and justify	

L3 7-8m	Well balanced and clear explanation on the desirability and undesirability of WTO's intervention on consumer welfare. Good reference to case material.
L2 4-6m	Some development of points to address whether desirable or undesirable for WTO to intervene but inadequate links to consumer welfare. Some reference to case material. Max 4m – for one-sided argument
L1 1-3m	Listing of points. Minimal links to consumer welfare. No reference to case material.
E 2m	Justified stand with economic analysis
E 1m	Unexplained evaluative comment or generalized evaluation

ANSWERS

CSQ 2 Answers

ai)	**Using Table 1, compare Finland's and Singapore's inflation rates from 2008 to 2011.**	**[2]**
	Both countries' inflation rate was positive throughout. [1] Singapore's inflation rate remained higher than Finland's throughout. [1]	

aii)	**What can be inferred about the relative prices in Finland and Singapore from 2008 to 2011.**	**[1]**
	Prices in Singapore is rising faster than prices in Finland. [1]	

bi)	**According to Extract 1, "Growth has been extinguished in Europe". Explain how the poor economic performance of the EU leads to unemployment in Finland.**	**[3]**
	Evidence of falling exports to EU [1] Diagram & Explanation –AD falls [1] Outcome – NY fall unemployment increase. [1]	

bii) Assess the relevance of the data in comparing the standard of living in Singapore and Finland. [8]

Command words:	Assess the relevance
Content:	SOL, indicators
Context:	All data provided – including extract information
Approach	2 sided answer that discusses how relevant given data is in the comparing SOL of Finland and Singapore.

Outline of answer:	
Introduction	Define SOL
Paragraph 1	Thesis: Data is relevant in comparing SOL of Finland and Singapore. 1. GNI -GNI Finland higher than Singapore means material SOL is higher in Finland than in Singapore. 2. Inflation rates -Inflation in Finland is lower than Singapore. Implies higher real GNI value. Material SOL higher in Finland than Singapore 3. BOP -BOP surplus in Singapore shows net inflow of money into Singapore. Suggest healthy economic growth in Singapore, material SOL higher in Singapore than Finland with worsening BOP up till a deficit. 4. Unemployment -somewhat the same. Employment indicates income. Hence material SOL in Finland and Singapore is comparable 5. Income gap -Extract 3 states Singapore's widening income gap 2nd biggest in Asia's developing nations. Extract 1 states Finland's small income gap. Equity seems to be problem in Singapore but not Finland. Overall SOL material and non material higher in Finland.
Paragraph 2	Anti – Thesis: Data is not relevant in comparing SOL of Finland and Singapore. <u>Insufficient information</u>

	1. Population data GNI not accurate. Need Real GNI per capita. Higher GNI in Finland when divided by a greater population than Singapore will mean that each person in Finland has less goods and services available than in Singapore. Hence lower material SOL in Finland. 2. composition of GNI Consumer goods at the expense of capital could mean higher current SOL but lower future SOL. 3. different accounting practices/gathering of data Inclusions and exclusions may be different Depreciation calculated differently 4. Differences in strength of currency Although data is in USD, relative strength of currency to the USD will determine the value of goods and services recorded <u>Lack of information on non-material SOL</u> 1. Extract 3 Singapore's rising income gap No concrete evidence given/same data for Finland 2. Extract 1 Finland has high quality of life, low levels of corruption, high literacy rates, a small income gap, wide access to health care, high life expectancy rates and a healthy work-life balance. But nothing on Singapore for comparison.
Conclusion	Opinion : Relevant/Not relevant. Justification

Knowledge, Understanding, Application and Analysis		
L3	Well discussed, 2 sided answer that uses various data provided as a basis for comparison. Able to infer what data can and cannot represent in terms of SOL.	5-6
L2	2 sided answer that only uses limited parts of data provided. Use of data as a basis for comparison may not be clearly explained in terms of SOL.	3-4
L1	1 sided answer that either explains the relevance or irrelevance of data.	1-2

Evaluation		
E2	Justified stand	2
E1	Unjustified stand	1

c)	**According to extract 4, "China faces pressure from US on foreign exchange policy." Explain the impact of China's reaction on Singapore and Finland**	**[6]**
	Because of pressure from US, China will start to focus on strengthening trade with emerging markets in ASEAN. Singapore being part of ASEAN will benefit in terms of larger market base for exports into China. à BOT improves, AD shifts right. Actual EG, reduced unemployment Furthermore, FDI into Singapore from China may also increase à increase in Investment, AD shifts right. Actual EG, reduced unemployment Singapore can also gain access to cheaper imports from China à lower cost of production, AS shift right – Potential EG, lower inflation Possible other impact: China increases trade with other Asean members, who in-turn	

	increase import from Singapore as their income rises. Possible other impact: looking at figures, given singapore's near full employment, increased exports may lead to inflation. Possible impact on finland 2m for each impact (need to have at least one AD one AS effect)	

d)	**Assess the impact of Singapore's emphasis on FDI inflow on her economy**	**[10]**

Command words:	'Assess' means to ascertain, or to measure something
Content:	'FDI' – foreign direct investment, BOP (Financial account) 'Economy-ADAS
Context:	'Singapore Emphasis' – Singapore places an emphasis on FDI, leading to certain impact
Approach	To ascertain or to determine the extent to which Singapore's emphasis on FDI has had an impact on the economy.

Outline of answer:	
Introduction	Define terms: FDI, mention the impacts. Brief overview of essay
Paragraph 1	Positive effect: Creates Jobs and growth (Extract 5) Explain how à using ADAS, show FDI shifting AD curve
Paragraph 2	Positive effect: Creates new capabilities (extract 5) Explain how, explain why beneficial à increases AS/ investment attractiveness etc
Paragraph 3	Negative effect: Inflation (extract 6) Explain how à leads to rising AD à DD pull inflation
Paragraph 4	Uncertain effect: For growth: final contribution depends on k process, Depends on relative size of FDI to economy For AS à depends on whether the FDI pays off Explain why
Conclusion	Opinion : Large impact. Justification à Singapore small domestic economy. FDI major part in economy.

CATHOLIC JUNIOR COLLEGE
JC2 PRELIMINARY EXAMINATIONS
In preparation for
General Certificate of Education Advanced Level
Higher 2

ECONOMICS	**9732/02**
Paper 2	**3 Sep 2013**
	0800 - 1015
Additional Materials : Writing Paper	**2 hours 15 min**

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 staples, paper clips, highlighters, glue or correction fluid.
Begin each question on a new sheet of 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.

At the end of the examination, **hand in ALL questions 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

Answer THREE questions in total.

Section A

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

1 "The root cause of market failure is far more often lack of information than externalities, and this is where government should direct their efforts to improve the efficient working of the economy."

(a) Explain the two types of market failure described in the preamble. [10]

(b) Discuss if legislation is the best way for government intervention in the above situations of market failure. [15]

2 There were 101,000 millionaires in Singapore by the end of 2012, a jump of 10.3 per cent over 2011 and their total income is estimated to have hit US$489 billion, up 11.5 per cent on the 2011 level. Measures are announced to reduce the inflow of foreign workers, and help our businesses adapt to the permanent reality of a tight labour market.

Source: Adapted from Straits Times, 2012

Using economic analysis, discuss the likely impacts of abovementioned changes on various product markets in Singapore. [25]

3 **(a)** Explain how the size of firms affects the price and output decisions of various firms. [10]

(b) Discuss the extent to which large firms in an industry impede economic efficiency. [15]

Section B

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

4 (a) Explain the extent to which an increase in net exports will lead to a larger increase in real GDP. [10]

(b) The pursuit of higher levels of real GDP per capita leads to higher standard of living. Discuss. [15]

5 The plan is for the Bank of Japan to print more money and to splurge on public works projects to reboot Japan's recessionary economy.

(a) Explain how the above approaches will help to reboot the Japanese economy. [10]

(b) To what extent can Singapore adopt the above approaches to solve a recession. [15]

6 There is substantial evidence, from countries of different sizes and different regions, that as countries "globalise" their citizens benefit. (IMF May 2008)

Explain how globalisation has changed Singapore's pattern of trade and assess whether such changes have benefitted the Singapore economy. [25]

Qn 1 "The root cause of market failure is far more often lack of information than externalities, and this is where government should direct their efforts to improve the efficient working of the economy."

a) Explain the two types of market failure described in the preamble. (10m)

b) Discuss if legislation is the best way for government intervention in the above situations of market failure. (15m)

Part a

Approach	This is a straightforward question that requires candidates to explain two specific causes of market failure, i.e. externalities and lack of information. Good candidates need to be able to show explicitly why imperfect information and externalities can lead to the market being unable to allocate resources efficiently.

Outline of essay:	
Introduction	Define market failure, Essay overview: State with reasons why lack of information and externalities lead to market failure.
Paragraph 1	Show explicitly externalities can lead to market failure à via external costs/benefits leading to divergence between MPC/MPB and MSC/MSB, resulting in deadweight loss and over/under consumption/production in the society.
Paragraph 2	Show explicitly how lack of information can lead to market failure. à society is not aware of the external costs/benefits of certain goods resulting in over/under production/consumption.
Paragraph 3	Show explicitly how lack of information can lead to market failure. à consumers are not fully aware of the private cost/benefits of merit/demerit goods resulting in under/over consumption.
Conclusion	Summary of points.

Remarks	For imperfect information, can use the idea of true MPC versus perceived MPC

Level	Descriptors	Marks
L3	Clear and well developed economic analysis. Able to show clearly how market failure is caused by lack of information and by externalities. Good use of relevant examples. Clear structure.	7 -10
L2	Some economic analysis. Able to show how market failure is caused by lack of information and by externalities, but lacking clarity. Some use of examples. Some structure.	5-6
L1	Poor economic analysis. Shows the concept of market failure, but unable to link to lack of information and/or externalities. Poor use of example. No real structure.	1-4

Part b

a) Discuss if legislation is the best way for government intervention in the above situations of market failure. (15m)

Approach	This question tests how well candidates are able to explain and discuss the effectiveness of government intervention efforts through legislation in situations of market failure due to the lack of information and externalities, either positive or negative. Because this is a 'discuss' type question, candidates will need to use the TAS approach.

Outline of essay:	
Introduction	Link to part a Explain briefly why governments intervene in such situations Essay overview
Paragraph 1,2	Show explicitly how legislation by the Singapore government is able to correct market failure associated with lack of information. Evaluate policy.
Paragraph 3,4	Show explicitly how legislation by the Singapore government is able to correct market failure associated with externalities. Evaluate policy.
Paragraph 5	Give a possible alternative policy to deal with the market failure associated with both the above causes.
Conclusion	Summary of points, final evaluation and stand

Level	Descriptors	Marks
L3	Clear and well developed economic analysis. Able to show clearly how legislation can help solve market failure in context of lack of information and externalities Good use of relevant examples. Clear structure.	9 -11
L2	Some economic analysis. Able to show clearly how legislation can help solve relevant market failure, but lacking clarity and/or consistent reference to context. Some use of examples. Some structure.	6-8
L1	Poor economic analysis. Unclear of link of legislation to solve market failures in context, and/or unable to show how policies can solve market failure in context. Poor use of example. No real structure.	1-5

E2	Evaluation with good indepth economic justification	3-4
E1	Evaluation without proper economic justification	1-2

Qn **2. There were 101,000 millionaires in Singapore by the end of 2012, a jump of 10.3 per cent over 2011 and their total wealth is estimated to have hit US$489 billion, up 11.5 per cent on the 2011 level. Measures are announced to reduce the inflow of foreign workers, and help our businesses adapt to the permanent reality of a tight labour market.**

Source: Adapted from Straits Times, 2012

Using economic analysis, discuss the likely impacts of abovementioned changes on various product markets in Singapore

[25]

Command: Discuss the likely impacts on different products that millionaires would or would not purchase. The discussion revolves around the growth in income of high net worth individuals and government policy to curb foreign labour dependence in Singapore.

Content: Demand and Supply, PED, YED, XED, PES

Context: Various products sold in Singapore

How to attempt this question:

Firstly we need to establish:

1. How will the increase in income of millionaires affect the dd/ss of various category of products (normal vs inferior or even luxury)

2. How the reduction of foreign workers into Singapore will affect the various products (requires foreign labour input vs those who do not require foreign labour)

3. How will both changes affect a product's market

4. How the above 3 points affect the PRICE and QUANTITY of various products.

Meaningful discussion of extent of change for price and quantity for various products require the use of the various elasticity concepts.

Quick Outline:

- To identify and explain how increase in income of millionaires will affect the demand of various products

- To explain how reduction of foreign labour will affect the supply of various products

- To explain the magnitude of shift of the above 2 determinants on different products

- To identify the relationship of various products (eg substitutes vs compliments)

- To discuss how different markets will be affected differently (some positive while others negatively : how to measure impacts – consumer surplus, producer surplus, price and quantity, maybe even quality?)

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	6-9 marks

		no use of examples of ANY product will fall into this category	
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 product markets	10-11 marks
	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
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 stakeholders	15-17 marks
	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

Qn 3

(a) Explain how the size of firms affects the price and output decisions of various firms. [10]

(b) Discuss the extent to which large firms in an industry impede economic efficiency. [15]

Suggested Essay Outline:

Part (a)

- The size of firms may be due to the existence of barriers to entry 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.
  - Subsequently, this will affect the price and output of firms.
- Assume all firms aim to maximize profits, ie, MC = MR
- Consider the case of a perfectly competitive firm, one of the numerous, small firms operating in the market.
  - The firm is a price taker as each firm only produces an insignificant amount of the industry output. Hence, this firm will set its price at the prevailing market price, as determined by market forces.
  - If a PC firm tries to manipulate prices in order to achieve a higher level of profits, say by lowering prices, the lack of barriers to entry allows entrants to come in and compete away its profits, forcing prices back to the market price.
- Consider the case of a monopoly, the sole firm operating in the industry.
  - The firm is a price setter but is constrained by the downward sloping demand curve.
  - The monopolist must lower the price of its output if it wants to sell a higher level of output.
  - On the other hand, it could raise the price of the output by restricting the output level. The reason for the ability to control price in this way is due to the existence of barriers to entry preventing entrants from competing away its profits.
- Other valid points
  - Large firms are able to enjoy internal economies of scale which can act as a barrier to entry to deter entrants.
  - Large firms with large market share can better engage in pricing policies such as price discrimination to capture more profits.

Level	Descriptors	Marks
1	Random explanation of characteristics of firms that did not address question requirements much with an obvious lack of examples and/or economic theory to support points.	1 – 4
2	Able to link size of firms to barriers to entry and exit and bring in the case of 2 possible market structures, monopoly and perfect competitive industry and address the question requirements. Answer explains how barriers to entry and exit will affect the size of firms and thereafter the price and output decisions of various firms.	5 – 6
3	A well developed answer with points that addresses the question well and is supported with sound economic analysis and the use of examples.	7 – 10

Part (b)

- Define economic efficiency as the achievement of productive, allocative and dynamic efficiency
- To select the case of either a monopoly or oligopolistic firm and explain how they can achieve the abovementioned efficiency.

- monopolist is productive inefficient à operates on LRAC, hence productive inefficient from society's viewpoint or it is X-inefficient.
- monopolist is allocative inefficient à operate at P > MC, hence underproduction occurs.
- monopolist dynamically inefficient à due to absence of competition and complacency.

However,

- monopolist can be productive efficient à operates on LRAC, hence it is productive efficient from firm's viewpoint. It has the ability to enjoy internal economies of scale, allowing it to expand on its output and move towards the minimum efficient scale.
- monopolist can be allocative efficient à through government regulation, ie, MC/AC pricing
- monopolist can be dynamically efficient à due to contestable market theory, there is incentive for the monopolist to engage in R 7 D.

· Conclusion: The extent to which large firms impede economic efficiency is subject to the nature of the industry in which it operates in and the level of government intervention. An unregulated monopolist is likely to exploit consumers and less likely to be efficient compared to one that is regulated by the government.

Level	Descriptors	Marks
1	Answer superficially explains the various forms of economic efficiency without any specific reference to large firms. Did not make use of any examples to support point.	1 – 5
2	Answer is able to address question requirements and develop points with the use of economic theories/concepts. There is some use of examples but mostly randomly listed without supporting the points mentioned.	6 – 8
3	A well developed answer which is able to offer different perspectives to the issue. Made good use of examples to support points that are evidently backed with in depth economic analysis.	9 – 11
Level	**Evaluation**	**Marks**
1	Made a logical stand that is not well supported.	1 – 2
2	Made a logical stand that is well supported and applicable to real world events.	3 – 4

4a) Explain the extent to which an increase in net exports will lead to a larger increase in real GDP.
4b) The pursuit of higher levels of real GDP per capita leads to higher standard of living. Discuss.

Suggested answer

a) **Explain the extent to which an increase in net exports will lead to a larger increase in real GDP.**

Outline
Intro

- Show link between exports and AD
- Explain briefly k idea
-

Body
Paragraph 1

- Explain circular flow

Paragraph 2

- Explain k process, either numerically or intuitively.

Paragraph 3

- Tie in idea of k to the withdrawal process (explain the withdrawal process)
- Explain how in the case of Singapore, MPW very high due to high MPS (CPF) and MPM (Import dependent) but in the case of USA, MPW lower (low savings rate, low import rate)

Conclusion
Whilst real GNP will always increase more than proportionately to the initial increase in net exports due to the multiplier, the extent of the increase will depend on the value of the multiplier.

Other possible points:
Using Accelerator principle à also accepted

L3	**Explained the multiplier process using the initial injection in terms of net exports and numerical/ intuition. Explained the components of the multiplier and the effect it has on the change in National Income using specific examples.**	**7-10**
L2	**Explanation of the multiplier process is acceptable. Components of the multiplier were briefly explained and how it may affect the final change in National Income, but lacking depth and clear consistent link.**	**5-6**
L1	**Brief explanation of the multiplier process and/or stating of the components of the multiplier.**	**1-4**

b) The pursuit of higher levels of real GDP per capita leads to higher standard of living. Discuss.

Suggested answer

Outline

Intro

- Define real GDP per capita and SOL
- Explain briefly the two ideas
- State purpose and overview of essay
-

Body

Paragraph 1 Thesis

- Increasing real GDP per capita leads to higher standard of living
- Explain how (rising incomes lead to better access to material goods)
- Can tie also the idea that higher GDP per capital leads to greater government resources (higher taxation) means government can increase expenditure on social welfare.

Paragraph 2 Anti-Thesis

- Increasing real GDP per capita may not lead to higher standard of living
- Explain how (rising GDP may be due to greater expenditure on Military goods, which are not really improving SOL. If expenditure is on consumer goods now and less capital goods are produced, long run there could be a fall in availability of consumer goods à fall in LR SOL)

Paragraph 3 Anti Thesis

- Increasing real GDP per capita may not lead to higher standard of living
- Explain how (rising GDP may be expense of pollution, or worsening leisure. Non material well being harmed)

Paragraph 4 Anti Thesis

- Increasing Real GDP per capita may not lead to higher standard of living for everyone
- It is an average figure. If serious income inequality exist, may mean that some people are benefitting while others are not. E.g. Singapore.

Conclusion

While Rising GDP can help increase SOL, it depends on how it is achieved and hwo the fruits of the labour are shared out.

L3	**2 sided analysis of how higher real GDP per capita will and will not lead to higher material and non-material SOL. Concrete examples were used as illustrations to support arguments. Answer is contextualized and not generic.**	**9-11**
L2	**2 sided analysis of how higher real GDP per capita will and will not lead to higher SOL. Examples were used but not explained in detail. Answer is mostly generic without contextualization.**	**6-8**
L1	**1 sided answer that only explains how higher real GDP per capita will or will not lead to higher SOL. Points were stated instead of explained.**	**1-5**
E2	**Justified stand**	**3-4**
E1	**Unjustified stand**	**1-2**

5. The plan is for the Bank of Japan to print more money and a splurge in public works projects to reboot Japan's recessionary economy.

a) Explain how the above approaches will help to reboot the Japanese economy.[10]

b) To what extent can Singapore adopt the above approaches to solve a recession [15]

a) Explain how the above approaches will help to reboot the Japanese economy.[10]

Approach:

- **Step 1: Identify the problems in Japan economy**
- **Step 2: Identify the policies in the preamble**
- **Step 3: Explain how the policies in the question help to solve the problem/achieve specific aims**
- *** Use of diagram is expected for a well-developed answer**

Answer Outline:

Introduction:

- Identify that Japan is facing a recession
- Define Recession, possible reasons à demand deficient, or slumpflation
- Effects of recession in brief
- Plan/direction for the essay

Body:

- Identify printing of money as an expansionary monetary policy
- Explain how the policy works to boost domestic consumption and investment
- Explain how the policy works to increase AD and increase real income
- Identify splurge in public works as an expansionary fiscal policy (those who identify it as fiscal policy with supply side slant will also be credited)
- Explain how the policy works to boost the AD and increase real income
- Explain how the two policies, thus, help to reboot the Japan economy

Conclusion

- Summarize and set a tone of the possible potential of the policies to lead to sustained economic growth in the future
- Briefly explain that the policies not only lead to rise in real income but also fulfils other macroeconomic aims too (may be in terms of lowering unemployment)

Levels	Descriptors	Marks
L3	A very well developed answer that adequately addresses the requirements of the question in terms of the approach(identify the problem and then explain how the policies solve them). The answer also displays good elaboration of the with respect to both the policies in the question and is substantiated with consistent use/link of example/context of Japan. Appropriate use of diagram to enhance the quality of explanation is expected.	7-10
L2	Answer attempts to elaborate the content in terms of the two policies but is not supported well with the use of the context of Japan consistently **OR** Answer that only explains one of the policies very well and links it adequately to the context of the question while the other policy is explained superficially. Use of Diagram is expected.	5-6
L1	Identification of the macro problem in the context of Japan is weak and so the policies are not developed to address the problem and the answer contains conceptual errors. Overall, the answer does not address the question adequately **OR**	1-4

	Random explanation of macro policies and problems with superficial description of how the policies work and the answer contains conceptual errors **OR** Only one policy explained adequately while the other policy contains conceptual errors in explanation (or the other policy not explained at all)	

Note: the stretch of the answer in explaining the effect of expansionary monetary policy is not a requirement. But students, who only state depreciation of currency without identifying the monetary policy as an internal tool of AD, will not be awarded good levels of marks. "Printing more money leads to depreciation of currency" will be treated as a superficial development of content and will be awarded low levels of marks.

Part b) To what extent can Singapore adopt the above approaches to solve a recession [15]
Approach:

- **Step 1: Identify the nature of Singapore economy, how is it different from Japan**
- **Step 2: Most likely cause/es of Recession in Singapore**
- **Step 3: Use of expansionary Fiscal Policy in the context of Singapore Recession**
- **Step 4: Limitation of expansionary Fiscal Policy in the context of Singapore**
- **Step 5: Possible use of expansionary monetary policy- printing money in the context of Singapore recession (Why can't it be used? What is the difference between Japan and Singapore lead to this problem?)**
- **Step 6: Other possible policies that Singapore can use to correct recession**

Introduction:

- Explain the nature of Singapore economy
- Briefly establish the difference with the Japan economy
- Possible causes of recession in Singapore
- Plan for the essay/ direction for the essay

Body:

- **Argue** how and why the expansionary fiscal policy will work for Singapore + use examples
- **(Counter Argue)**Highlight the possible limitations of expansionary fiscal policy for Singapore
- **Argue** why the expansionary monetary policy in the form of printing money is not applicable in the context of Singapore (briefly explain open economy trilemma)
- Explain other possible monetary policy that may work instead
- Other possible policies à if the recession is due to possible fall in AS à **Argue** use and explain supply side policies to solve the problem
- These other problems also have some limitations (**Counter Argue**)

Conclusion:

- Take a stand and justify on whether the policies that are used in Japan can be used in Singapore
- Provide suggestions of other policies that Singapore may look into and promote.

Levels	Descriptors	Marks
L3	A very well explained answer that clearly addresses the requirements of the questions, analysing the use of all the policies suggested in the context of Singapore. The answer displays various perspectives and develops the various arguments coherently. The use of examples/reasons in the context of Singapore is good and relevant. The content is well elaborated to encompass the nature of Singapore economy and the various issues that she has to deal	9-11

	with. Good use of AD/AS diagram to complement the explanation is expected.	
L2	The answer attempts to use the context of Singapore but the arguments are not developed coherently to suit the context well. There is lack of adequate development of content. The answer inconsistently addresses the requirement of the question in the use of nature of Singapore and source of recession in Singapore. **OR** The answer is largely one-sided: explain why one policy would or would not work **OR** Discuss only ONE of the policies very well, with sufficient content development and use of good contextual knowledge	6-8
L1	The answer does not address the requirement of the question and has not attempt to link to the context of Singapore and the source of recession in Singapore. Different policies are discussed/explained in a rather regurgitated manner.	1-5
E2	A well rationalised stand with some attempts to look beyond theory and base the judgement on reality	3-4
E1	Attempt to make a stand without proper justification	1-2

6. There is substantial evidence, from countries of different sizes and different regions, that as countries "globalize" their citizens benefit. (IMF May 2008)

Explain how globalization has changed Singapore's pattern of trade and assess whether such changes have benefitted the Singapore economy. (25)

CCCA

Approach	This question comes in two parts. Students should be able to explain that the fundamental theory explaining international trade is the theory of comparative advantage. It is important that students start off by explaining Singapore's trade pattern as a background to the question. What else might explain what we export and import? Remember, comparative advantage theory dictates what we export and import – we export what we have a comparative advantage in and import what we do not have a comparative advantage in. While this theory explains some of Singapore's trade pattern there are also other reasons which explain Singapore's trade pattern. The second part of the question analyze how globalization has changed Singapore's trade pattern. Assess means to consider different perspectives of the analysis. There should be a thesis, anti-thesis and synthesis. Thesis: How globalisation which has changed Singapore's trade pattern has benefitted the economy and improve the citizens' standard of living. (refer to preamble) Anti-thesis: How globalisation which has changed Singapore's Pattern of trade has not benefitted the economy and people's standard of living. Synthesis: Evaluate overall whether Singapore has benefitted from globalization. Students need to link globalisation to changes in the pattern of trade. The essay first aims to explore how Singapore's pattern of trade has changed due to globalisation before looking at the impact of such changes on the Singapore economy. Must also link to preamble. Although not asked, examples are expected

Answer outline

Outline of essay:	
Introduction Paragraph 1	What is meant by globalization and pattern of trade? Briefly explain that globalisation encourages trade between countries according to the theory of comparative advantage.
Paragraph 2	Globalisation has resulted in Singapore's comparative advantage to shift away from labour intensive products to capital and technology intensive products.

Paragraph 3	Other reasons for changes in Singapore's trade patterns that are not associated with comparative advantage due to Singapore being a transhipments hub, location advantage and intra-industry trade.
Paragraph 4	Singapore's trade pattern also changed since joining FTA and WTO. Expansion of our markets and trading with more countries.
Paragraph 5	Explain how our trade pattern may change due to our trading partner's exchange rate which may affect relative price of our imports.
Paragraph 6 Thesis 1	Benefits arising from a change in Singapore's pattern of trade. Globalisation has resulted in Singapore exporting high value added and importing low value added goods and services → increase in (X-M) and improve Singapore's BOT and actual growth and SOL. Inward FDI → actual and potential growth.
Paragraph 7 Anti-thesis 1	Costs arising from change in Singapore's pattern of trade. Crowding out effect and affect Singapore's long term economic stability.
Paragraph 8 Thesis 2	Trading with more countries → decreases unemployment and move into knowledge intensive industries. Increase international mobility means more goods and services produced resulting in increase in material SOL.
Paragraph 9 Anti-thesis 2	Increase interdependence of economy and therefore more vulnerable to external shocks. Also changes in the pattern of trade may result in structural unemployment and fall in wages of lower skilled workers causing income inequality.
Paragraph 10 Thesis 3	The joining of FTA has impacted our pattern of trade which has resulted in trade creation and trade diversion. This has benefitted exporting industries generating more output, income and employment and thus increase SOL.
Paragraph 11 Anti-thesis 3	Explain how increase in (X-M) may trade off with other macroeconomic aims such as inflation, increase in demand for imports due to removal of tariffs, unemployment.
Paragraph 12 Thesis 4 Anti-thesis 4	Our changing pattern of trade which caters for the global market has led to the improvements in transportation and communication and therefore has increased mobility of labour and capital. Opportunity costs in the use of resources to develop export driven industries.
Conclusion	Evaluate whether Singapore has overall benefitted from globalisation and whether the benefits outweigh the cost and your stand on the SOL

	of the people.

Marking Scheme

Lower L1	Students define globalisation only and leave out pattern of trade. Globalisation is well defined with some account of causes of globalisation but leave out pattern of trade.	1 – 5 marks
Higher L1	Students define globalisation and pattern of trade with brief general explanation of advantages and disadvantages of globalisation with no linkage to changing trade pattern and comparative advantage.	6 – 9 marks
Lower L2	Answer that does not link globalisation to changes in the trade pattern but only analyses the economic impact of increased trade and factor mobility on Singapore with some examples. Able to bring out how Singapore's pattern of trade has changed from labour intensive to capital and technology intensive and nature of its exports and imports. Also reference is made to comparative advantage. One sided answer with no anti-thesis.	10 – 11 marks
Higher L2	There is some link between globalisation to changes in the pattern of trade. Use of comparative advantage analysis when explaining Singapore's changing trade pattern. Causes of changes in Singapore's trade pattern and how globalisation has influenced our trade pattern and what benefits do our economy enjoy. Some attempts at analysing the anti-thesis.	12 - 14 marks
Lower L3	Students are able to analyse the impact of these changes on the Singapore economy with examples and also link to the standard of living of its citizens. Two sided answer with thesis and anti-thesis.	15 – 17 marks
Higher L3	Students are able to define globalisation and changing pattern of trade explained by the Law of comparative advantage. Also bring out trade patterns caused by other factors. Thesis and anti-thesis are very clearly analysed. Students must analyse three benefits and costs. Examples must be provided. Both thesis and anti-thesis must be linked to the preamble on how they affect citizens standard of living.	18 – 21 marks
E1 E2	Evaluation by just reiterating the cost and benefits of globalisation without making a stand. Assess whether Singapore has overall benefitted from globalisation and able to make a stand as to whether the costs outweigh the benefits or the benefits outweigh the costs and why and your stand on the standard of living of our citizens.	1- 2 marks 3-4 marks

Name:		Index Number:		Class:	

DUNMAN HIGH SCHOOL
Preliminary Examination
Year 6

Economics 8819/1

Higher 1 — **25 September 2013**
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 all 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 in Section B.

Section A		Section B	
Q1	Q2	Q3	Q4

This document consists of **8** printed pages including this cover page.

[Turn over

Section A

Answer **all** questions in this section.

Question 1 Disasters across Southeast Asia

Extract 1: Thai Prime Minister to Take Command of Flood Control Efforts

The Prime Minister said that she would take direct command of flood control in Thailand as criticism of the government mounted after days of conflicting messages. The continued confusion added to analysts' fears that Thailand's performance and a lack of adequate infrastructure to handle flooding would lead to a long-term loss of foreign investment.

With more than 300 lives claimed and about 14,000 companies employing more than 600,000 workers forced to shut down, Thailand's floods have brought steep costs not only to the country's own economy but also to foreign investors and export markets, principally Japan. Being the leading exporter of computer disk drives, the floods were expected to cause a temporary worldwide shortage. Its automotive industry, the biggest in the region, is also one of the hardest hit industries.

Although most factories are expected to reopen, analysts said the harshest long-term toll of the floods would be to Thailand's reputation as a stable and reliable home for foreign investors. In a survey compiled before the floods, the World Bank ranked Thailand, despite last year's political turmoil, as the world's 17th most attractive country to do business.

To salvage its reputation, the government will have to spend heavily on a system of canals and set up an efficient flood control system, a good that cannot be confined to those who have paid for it.

Adapted from *New York Times*, 21 October 2011

Table 1: Statistics for Thailand 2008 – 2012

	2008	**2009**	**2010**	**2011**	**2012**
GDP (constant 2005 US$, billions)	199.5	194.9	210.1	210.3	223.8
Components of GDP (% of GDP)	%				
Private consumption expenditure	56.0	54.8	53.7	55.6	52.7
Government consumption expenditure	12.3	13.4	13.0	13.3	13.2
Gross fixed capital formation	27.4	24.1	24.7	26.3	28.0
Exports of goods and services	76.4	68.4	71.3	76.9	78.0
Imports of goods and services	73.9	57.8	63.9	72.4	75.3
Net inflows of foreign direct investment (% of GDP)	3.1	1.8	2.9	2.3	2.4

Source: *World Bank*, 2012

Extract 2: Food Price Inflation – Slaying the Hydra

Catastrophic flooding and crop losses in Thailand, the world's leading rice exporter, are raising concerns that another food crisis may loom. There are worrying signs that food price fluctuations are now taking place within a much higher bandwidth than before. When food prices rise, it will reduce families' expenditure on other goods and services such as

healthcare and education, especially for Asia's poor, who already spend 60 percent of their household budget on food.

Much of the sharp increase in the region's food prices is due to production shortfalls caused by extreme weather events – such as droughts and floods across Southeast Asia like Thailand, Cambodia, Laos, Philippines and Vietnam – and subsequent export bans by some food-producing countries. Growing appetites for grains, oil, seeds, sugar and livestock in emerging economies such as China and India are exerting further upward pressure on supply. And then there is high oil prices, which raise costs at almost every step of the food supply chain, from fertiliser and animal feed, to fuel for bringing food from the farm to the kitchen table.

With persistently high and volatile food prices here to stay, what are policymakers to do? There are some levers policymakers can pull, including a broad range of supply-side policies to reduce bottlenecks in commodity-based industries, reduction of trade barriers between countries – to counter local food shortages through imports from surplus producers, and increasing productivity.

Adapted from *The Straits Times*, 29 October 2011

Extract 3: Singapore Vulnerable to Global Price Rises

Singapore imports more than 90 percent of its food and is, therefore, vulnerable to global price increases. Hence it has always adopted a strategy of source diversification – that is, to import from various food sources. This helps to ensure a resilient supply of food, and, to a certain extent, minimise volatility in food import prices caused by short-term supply shortages.

Last year, Singapore imported 310,135 tonnes of rice. Some 53 percent came from Thailand, 26.2 percent from Vietnam and 13.8 percent from India. The rest came from countries such as Myanmar, the United States and China.

Since April last year, the Monetary Authority of Singapore has allowed the Singapore dollar (SGD) to appreciate against the currencies of our major trading partners, which has helped to dampen the rise in prices of our food imports. However, DBS economist cautioned that the strong SGD could have played a significant part in July's poor figures, where electronics exports dived 16.9 per cent in July from the same month last year.

Adapted from *The Straits Times*, 15 and 18 August 2011

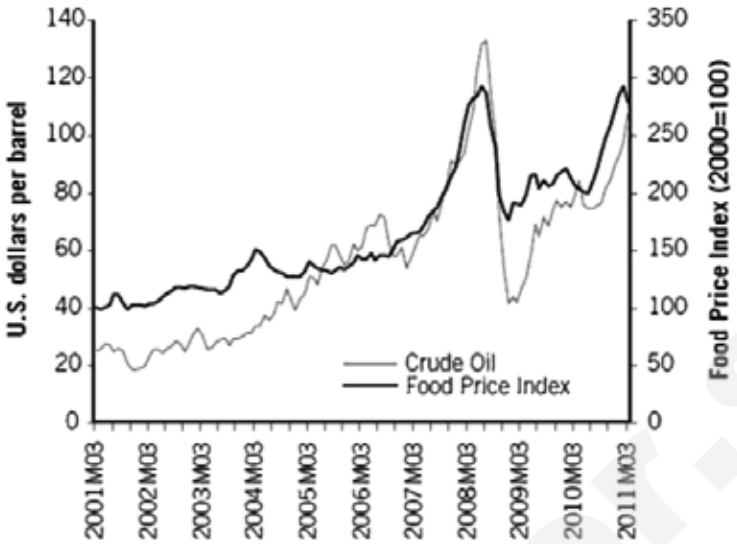
Extract 4: The Slow and Steady Way to Grow

Amidst the slow projected economic growth between 1 per cent and 3 per cent next year largely due to problems in Europe and the United States, inflation in Singapore will continue to be high. The high inflation is fuelled by persistently high prices of commodities, higher prices of cars and housing as well as higher wage demands due to tight labour markets.

Said DBS economist, "Every economy and country has physical limits, especially for a small economy like Singapore**.** There is only so much that technological innovation and the Internet can do to push Singapore's production frontiers."

Adapted from *The Straits Times*, 16 December 2011

Figure 1: Food and Fuel Price Trends, March 2001 – March 2011



Source: *World Bank*, April 2011

Questions

(a) Using Figure 1, compare the trend in food and fuel prices between March 2001 and March 2011. [2]

(b) With reference to Extract 1, explain why the Thai government must intervene in setting up infrastructures as such canals and flood control systems for a more efficient allocation of resources. [4]

(c) With reference to Extract 1 and Table 1, to what extent will the flood bring about harmful effects on the macroeconomic performance of Thailand? [6]

(d) **(i)** What is meant by price elasticity of demand? [1]

(ii) Comment on whether rising food price 'will reduce families' expenditure on other goods and services' (Extract 2). [3]

(e) Using supply and demand analysis, identify and explain reasons to account for the 'sharp increase in the region's food **price**s' (Extract 2). [6]

(f) As a consultant economist, what options would you present to the Singapore government in response to the high inflation in Singapore as described in Extract 4, and what would you recommend? Justify your answer. [8]

Question 2 Emerging Economies as Engines of Growth in the Global Economy

Extract 5: BRIC Economics as Future Powerhouses

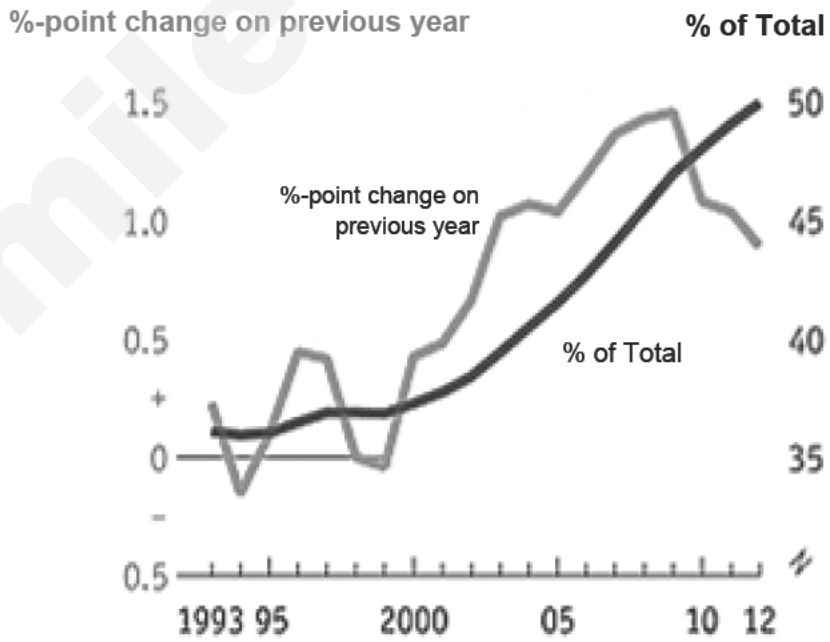
Following the global economic slowdown in 2009, emerging economies are leading the recovery with high rates of economic growth and increasing consumer demand. It is predicted that emerging markets will account for more than half of world GDP, according to the International Monetary Fund (IMF).

Among them, the four BRIC countries — Brazil, Russia India and China — are identified as the future economic powerhouses. These countries are propelling the global recovery as their economic growth rates exceed global averages. With the 42% of the global population that reside within them becoming more affluent and seeking higher living standards, the rise of the BRIC consumer will only become more marked over the next decade.

A new trend which has influenced the flow of goods and services is that of intra-BRIC trade. Previously, the BRIC countries were seen as the factories and commodity supplies to the world, but now they are working together as consumers and producers and trading with one another. Should we see a slowdown in the developed world, the BRIC countries are well-positioned to ride out the storm.

Adapted Source: *The Telegraph,* 11 Nov 2011

Figure 2: Emerging Market Share of World GDP



Source: *IMF Website*

Table 2: Real Economic Growth (Annual %)

	2009	2010	2011	2012
World	-2.2	4.0	2.8	2.2
Brazil	-0.3	7.5	2.7	0.9
Russia	-7.8	4.5	4.3	3.4
India	8.5	10.5	6.3	3.2
China	9.2	10.4	9.3	9.4

Source: *World Trade Organisation Website,* accessed on 7 August 2013

Table 3: Selected Economic Statistics, 2011

	Annual real % growth in GDP	GDP per capita at 2005 market price in US$	Total Trade as a % of GDP	Exports as % GDP	Imports as % of GDP
USA	1.8	43,063	32	14	18
Singapore	5.2	33,983	387	207	180
Brazil	2.7	5,721	25	12	13
India	6.3	1,107	54	24	30
China	9.3	3,348	67	31	37

Source: *The World Bank* Website

Extract 6: BRIC Nations Rocked by Aftershocks of Eurozone Crisis

The devastating slowdown in the European economies has shown that 'decoupling' – the idea that emerging countries would go on growing despite problems in the west -- is a myth. Plunging demand from the markets of Europe, many of which remain deep in recession, and collapsing global confidence in politicians' ability to stop the rot, has ruthlessly exposed the weaknesses of emerging markets.

The rupee plunged as investors take flight and head for the safety of the US dollar. China slowed most alarmingly. If the slowdown in its manufacturing output is serious enough to hit China's demand for imported oil, iron ore and industrial components, it could create problems for Brazil too.

Most analysts expect the radical shift of economic power from the west to the emerging markets to continue but as Europe and the US turn inwards to tackle their own crises, it could be a tough couple of years for the BRICs.

Adapted Source: *The Observer*, 24 June 2012

Extract 7: New-wave Economies Going for Growth

Economists say there are a number of key factors that will allow emerging countries to grow more quickly than the mature markets of the west. Firstly, they must have sound macro-economic policies, including control of inflation and budget deficits. Secondly, they must invest in human capital and improve their educational standards. Thirdly, they must be able to import new technologies from the west. Finally, they must have young and growing populations.

Source: *The Guardian*, 18 December 2012

Questions

(a) (i) Compare the growth rates of the BRIC countries between 2009 and 2011 in Table 2. [2]

(ii) Using Extract 5, explain how the growth rates in the BRIC countries affect the pattern of trade. [4]

(b) Comment on whether Table 3 and Figure 2 support the view that emerging economies will be the 'Engines of Growth in the Global Economy'. [6]

(c) (i) With reference to Table 3, which indicator would you use to assess the standard of living in a country? Justify your answer. [2]

(ii) Explain two other pieces of information that would be useful in assessing the standard of living in a country. [4]

(d) With reference to Extract 6 and using appropriate diagrams, explain why the rupee fell in value as investors took flight and headed for the safety of the US dollar. [4]

(e) Discuss the extent to which the factors highlighted in Extract 7 can help emerging countries sustain their economic growth. [8]

Section B

Answer **one** question from this section.

3 **(a)** Using the production possibility curve (PPC) diagram, explain the central economic problem that all societies have to address. [10]

(b) China is moving towards investment in clean technology and tradable pollution permits system. These policies also address rising concerns of China's air pollution blown eastward over to Japan.

Adapted from *Asahi Shimbun, AJW*, 4 February 2013

Discuss the view that tradable pollution permits is the best policy to correct China's air pollution problem. [15]

4 There are gains from globalisation as world trade and global production networks create opportunities for Singaporeans and domestic firms. However, globalisation could potentially lead to an increase in unemployment.

Adapted from *The Straits Times*, 23 September 2010

(a) Explain the benefits of globalisation. [10]

(b) Discuss the policy options that the government can adopt to reduce unemployment in Singapore. [15]

DUNMAN HIGH SCHOOL

H1 Preliminary Examinations 2013

Economics **8819**

Answer and Mark Schemes

Suggested Answers

Case Study Question 1

(a)	Using Figure 1, compare the trend in food and fuel prices between March 2001 and March 2011.	[2]
	This question requires candidates to describe the *1. similarity in the general trend observed for food and fuel prices over the stipulated period, and* *2. difference in the trend* Generally, both increased [1], but fuel price rose and fell more sharply than food prices. [1] ü 1 mark for similarity and 1 mark for difference	
(b)	With reference to Extract 1, explain why the Thai government must intervene in setting up infrastructures as such canals and flood control systems for a more efficient allocation of resources.	[4]
	This question requires candidates to *1. identify that these infrastructures exhibit the characteristics of public goods* *2. explain how these public goods cause the market to fail, which justifies why the Thai government must intervene to achieve a more efficient resource allocation* · Infrastructures such as canals and flood control systems are public goods that exhibit the characteristics of non-rivalry and non-excludability. · Non rivalry – A good is non-rivalled in consumption when the consumption of the good by one person does not diminish the quantity available for others to consume and benefit from. When the canals and flood control systems are built, all citizens who live in the vicinity of these infrastructures benefit from reduced risks of flooding, and such benefits will not be reduced with every additional consumption. Thus the marginal cost (MC) of preventing flooding via construction of infrastructures to an additional resident within the country is negligible. Since the allocative efficient outcome is at price = MC, where the value (price) that consumers place on these infrastructures is the same as the cost of the resources used to produce an additional unit for additional consumption, the price to charge for an efficient allocation of resources to the production of these infrastructures should be at zero. · Non excludability – A good is non-excludable when it is impossible or prohibitively expensive to prevent or exclude anyone including non-payers from consuming the good once it is produced. When these infrastructures are built, it is likely that there is less risk of flooding during the monsoon season. Even if one does not pay for these infrastructures, he / she will still be protected from flooding risks. Since there is enjoyment of protection without paying, this leads to the problem of free-riding, which is supported by the evidence in Extract 1 “a good that cannot be confined to those who have paid for it”. · Under the market forces, there will be no provision of these infrastructures because the price mechanism is unable to function, since consumers are not willing to pay for these infrastructures due to the ability to free-ride. This means that there is no effective demand for these infrastructures, causing profit-motivated producers to have no incentive to produce these infrastructures at all since there is no revenue to be earned, leading to no supply of these infrastructures by the private producers. This leads to complete market failure where there is zero production of infrastructures such as canals and flood control systems.	

- However, these infrastructures are desirable and beneficial to the society. Therefore, since the free market fails to allocate resources efficiently within the economy as no resources are allocated to the production of these infrastructures which leads to severe welfare loss for the society, the Thai government which acts in the interests of her citizens must intervene in setting up these infrastructures to bring about a more efficient allocation of resources.

✓ 2 marks for a well-developed explanation on each characteristic of public good

✓ Cap at 3 marks without referring to evidence and / or not applying to the context of infrastructures such as canals and flood control systems

(c) With reference to Extract 1 and Table 1, to what extent will the Thailand flood bring about harmful effects on its macroeconomic performance? [6]

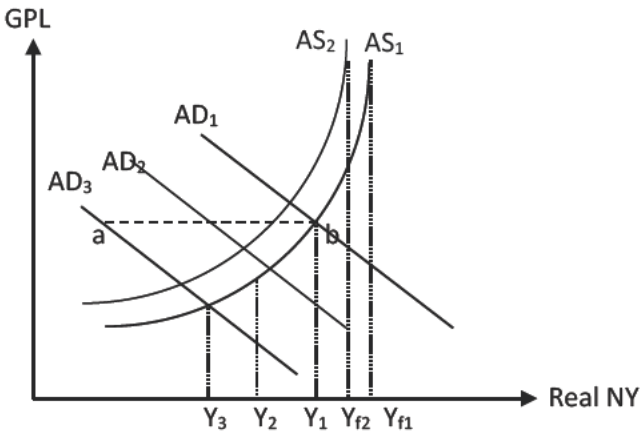
This question requires candidates to

1. *identify and explain the impact of the Thailand flood on the 4 macroeconomic goals*
2. *sieve out the relevant information from the case materials to determine if the harmful impact is to a large or small extent*

Macroeconomic performance – need to link to 4 macroeconomic goals

<u>Thesis: harmful effects to a large extent</u>

- As seen from Extract 1, the Thailand flood has claimed more than 300 lives and may lead to long-term loss of foreign direct investment (FDI) due to a lack of adequate infrastructure to handle flooding and poor governance that hurt Thailand's reputation as a reliable and conducive business environment for foreign investors. With a reduction in quantity of resources as well as a loss of FDI results in less transfer of technology and management expertise respectively, these will cause the aggregate supply (AS) to shift from AS_1 to AS_2, reducing the productive capacity of Thailand's economy from Y_{f1} toY_{f2}. Potential growth is thus hindered. Also, a fall in FDI causes aggregate demand (AD) to fall from AD_1 to AD_2, there exists a surplus leading to accumulation of inventories, and firms producing capital goods cut back production in the next production cycle. In the process, less workers are employed (rise in cyclical unemployment) who receive lower factor incomes, resulting in income-induced consumption to fall, thereby reducing AD further to AD_3. This is the reverse multiplier effect, which continues until the initial fall in injections equal total fall in withdrawals. The final outcome is a rise in cyclical unemployment from Y_1Y_f to Y_3Y_f.



- Furthermore, the Thailand flood is likely to have destroyed capital machinery in factories, hence disrupting the production of goods and services, causing firms to incur heavy losses. In order to minimise losses, firms lay off workers as evidenced from '14,000 companies employing more than 600,000 workers were forced to shut

down', especially the computer disk drive industry and the automotive industry which is one of the hardest hit industries. Given that the former is a leading exporting industry, Thailand's balance of trade (BOT) is expected to worsen as well. Coupled with a fall in FDI from 2010 to 2011 as seen from Table 1 where the net inflow of FDI fell both in percentage and absolute terms, the financial account of the balance of payments (BOP) declines, worsening Thailand's BOP.

Anti-thesis: harmful effects to a small extent

- According to Table 1, between 2008 and 2012, exports increased by the greatest percentage (5.6%) in 2011. Even though the leading export industry – computer disk drive industry was hit by the flood, exports did not face an adverse impact. Ceteris paribus, BOT improves.
- Components of AD – private consumption expenditure and gross fixed capital formation still increased both in absolute and percentage terms albeit the Thailand flood. This is further supported by the rise in real GDP in 2011, which shows that economic growth did not decline despite the flood.
- In the subsequent year 2012, Thailand received more net inflows of FDI both in absolute and percentage terms, reflecting that foreign investors still had confidence in Thailand economy, and still deems Thailand as an attractive investment country. Thus, potential growth is unlikely to be hindered, and the financial account of BOP improves.

In conclusion, the Thailand economy is affected adversely by the flood in the short run, but it recovered in 2012. However, for a more complete / accurate assessment as to whether the Thailand flood will bring about harmful effects on its economy to a large or small extent, more data such as the macroeconomic indicators over a longer time period after the 2011 Thailand flood is required.

Level	Mark	Descriptors
L3	5 – 6	2-sided, well-developed explanation of the impact of the Thailand flood on Thailand's economy based on at least two macroeconomic objectives / aims, supported with the use of contextual evidence from the case materials. Cap at 5m for an answer without any mention of FDI.
L2	3 – 4	- Undeveloped explanation of the impact of the Thailand flood on Thailand's economy based on at least 2 macroeconomic objectives / aims OR - Rigorous explanation of the impact of the Thailand flood on Thailand's economy but only for 1 macroeconomic objective / aim OR - 1-sided viewpoint on adverse impact to a large extent or adverse impact to a small extent OR - Theoretical explanation without the use of evidence from the case materials
L1	1 – 2	Identifying / stating the impact of the Thailand flood on Thailand's economy

(d) **(i)** What is meant by price elasticity of demand? [1]

Price elasticity of demand measures the responsiveness of a change in quantity demanded of a good to a change in its price, ceteris paribus.

(ii) Comment on whether rising food price 'will reduce families' expenditure on other goods and services' (Extract 2). [3]

		This question requires candidates to *1. identify that expenditure is measured by the product of price and quantity* *2. explain how rising food price reduce families' expenditure* *3. determine if other factors apart from price affects families' expenditure* Comment – 2-sided viewpoint <u>Thesis – yes, rising food price will reduce families' expenditure on other goods and services</u> The demand for food is price inelastic, as there are no close substitutes for food, and food is a basic necessity. Hence, a rise in food price leads to a less than proportionate fall in quantity demanded for food, resulting in an increase in total expenditure on food, which is calculated by the product of price and quantity. **For any given income**, the rise in food expenditure will thus 'reduce families' budget on other goods and services such as healthcare and education, especially the poor who spend 60 per cent of their household budget on food', as stated in Extract 2. <u>Anti-thesis – no, rising food price will not reduce families' expenditure on other goods and services</u> It is assumed that the incomes of families remain unchanged, hence the rise in food price will reduce families' expenditure on other goods and services. If the incomes of families rise, for e.g. general rising trend of real GDP in Thailand between 2008 and 2011, despite the rise in food price, families' expenditure on other goods and services will not fall. ü 2 marks for thesis, and 1 mark for anti-thesis. Candidate will still get the 1 mark for anti-thesis even if it is written as an assumption "for any given income".	
(e)	**(i)**	Using supply and demand analysis, identify and explain reasons to account for the 'sharp increase in the region's food prices' (Extract 2).	[6]
		This question requires candidates to *1. identify and explain the demand and supply reasons attributing to the rise in food prices* *2. sieve out the relevant demand and supply reasons from the case materials* *3. explain the extent / magnitude of the food price increase using PED & PES* <u>Supply reasons</u> · From Extract 2, extreme weather events such as droughts and floods across Southeast Asia caused production shortfalls due to destruction of agricultural crops. In addition, higher oil prices cause transport costs to rise, raising production costs of the food supply chain. · Therefore, farmers are less willing and able to produce agricultural crops at each and every price level, thereby reducing the supply of food. · Also, there were export bans by some food-producing countries to protect domestic supply, causing global supply of food to decline since farmers are less able to sell food on the global market. <u>Demand reasons</u> · Due to rising income in emerging economies such as China and India, consumers in these countries face higher purchasing power, causing them to	

be more willing and able to buy more normal goods and services at each and every price level. Hence, the demand for normal goods like food increases. This is supported by the evidence in Extract 2 “growing appetites for grains, oil, seeds, sugar and livestock in emerging economies such as China and India”.

- With a fall in supply of and rise in demand for food, there exists a shortage at the original price level, causing an upward pressure on price of food.
- Furthermore, demand is price inelastic due to lack of substitutes and high degree of necessity. A price inelastic demand means that for every price increase, quantity demanded falls by less than proportionately, ceteris paribus.
- Supply is also price inelastic in the short run as it takes time to grow and harvest agricultural crops / rear livestock to maturity. A price inelastic supply means that for every price increase, quantity supplied rises by less than proportionately, ceteris paribus.
- Hence, coupled with price inelastic demand and price inelastic supply, to eliminate the same shortage, price has to increase more sharply.

Level	Mark	Descriptors
L3	5 – 6	2-sided, well-developed explanation of why food price rise sharply. Cap at 5m for an answer without explaining price inelasticity of demand and supply.
L2	3 – 4	- Undeveloped explanation of why food price rise OR - 1-sided but rigorous explanation of why food price rise OR - Theoretical explanation without the use of evidence from the case materials
L1	1 – 2	Identifying / stating the reasons for food price increase

(ii) As a consultant economist, what options would you present to the Singapore government in response to the high inflation in Singapore as described in Extract 4, and what would you recommend? Justify your answer. [8]

This question requires candidates to

1. *sieve out at least two pertinent and relevant policies from the case materials that help to reduce high inflation in SG*
2. *explain how these policies work*
3. *sieve out relevant information from the case materials for evaluation of the policies, and thus come to a reasoned judgment as to which policy should be chosen in response to the high inflation in SG*

- Inflation is defined as the sustained increase in general price level. There are two main types of inflation, namely, demand-pull and cost-push inflation. Different policies are required to alleviate both types of inflation. The policies stated in the case materials are: (1) a broad range of supply side policies to reduce bottlenecks in commodity-based industries [Extract 2], (2) reduction of trade barriers [Extract 2] and source diversification [Extract 3] (through signing of more FTAs), (3) increasing productivity [Extract 2], (4) appreciation of Singapore dollar (SGD) against major trading partners of SG [Extract 3] and (5) technological innovation and internet [Extract 4]. The more relevant policies for Singapore are (2), (3), (4) and (5).

1) Broad range of supply side policies to reduce bottlenecks in commodity-based industries à not so relevant to Singapore that does not have much commodity-based industries

2) Reduction of trade barriers and source diversification (through signing of FTAs)

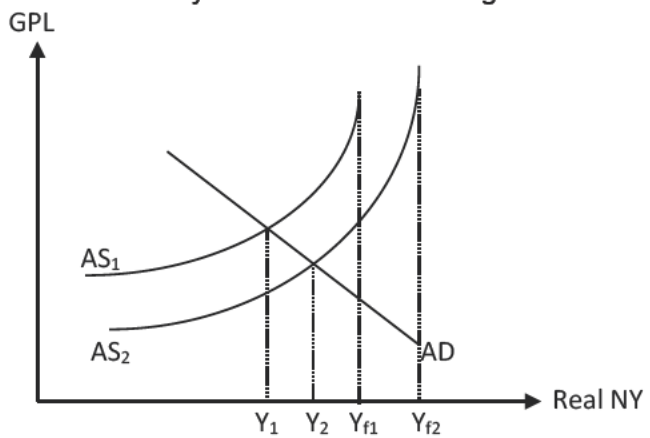
- Further reduction of trade barriers such between countries → SG firms are more able to gain access to a greater availability of factor inputs from abroad. Should there be local food shortages, lower trade barriers allow SG firms to import from surplus producers as stated in Extract 1. This reduces the possibility of cost-push inflation.
- Diversification of import sources. In light of the Thailand flood causing a supply shock of rice, a staple food for Asians, SG can still import rice from a variety of sources – including Vietnam, India and the United States. In addition, this helps to ensure a resilient supply of food and minimise volatility in food import prices caused by short-term supply shortages, thereby mitigating imported inflation.

<u>Pros and Cons of policy</u>

- This policy is more effective in relieving external sources of inflation. Nevertheless, if the inflation is domestically induced by "higher prices of cars and housing as well as higher wage demands due to tight labour markets" as stated in Extract 4, this policy is unlikely to alleviate the high inflation in Singapore. Other policies targeted at the specific markets will be more useful in reducing inflation caused by internal sources.
- If the inflation is a global phenomenon like what happened during 2007 food and oil inflation, this policy is of limited use to curb imported inflation, since all countries will be facing inflation.

3) Increasing productivity (through supply-side policies) → e.g. SG implements policies such as:

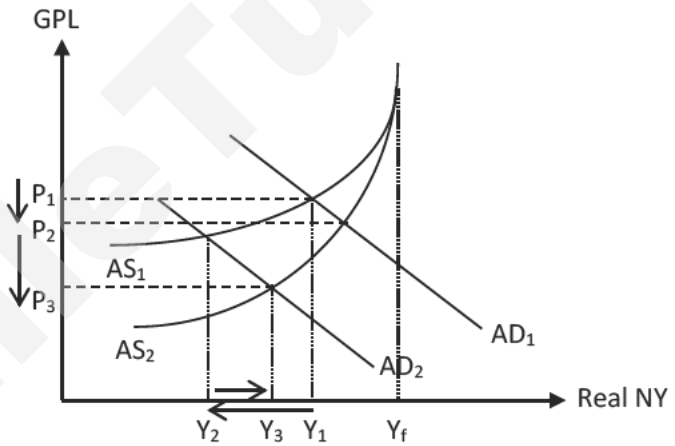
- Continuing Education and Training (CET) to boost productivity of the labour force → increase amount of output produced within a shorter time → c.p. reduce unit cost of production → AS shifts downwards
- Productivity and Innovation Credit (PIC) Scheme to encourage firms to raise productivity through automation or sending workers to upgrade their skills respectively
- Workfare Training Support (WTS) Scheme that encourages older low-wage workers to go for training to ensure that workers are constantly equipped with the necessary skills for the knowledge-based and rapidly changing economy → increases employability of workers → increases productive capacity of Singapore → AS shifts rightwards. These aim to raise the productive capacity of the economy from Y_{f1} to Y_{f2}, enabling SG to achieve non-inflationary sustained economic growth in the long run.



Pros and Cons of policy

- The success of this policy depends on the receptiveness of the labour force in wanting to upgrade their skills and their ability to learn new skills. Given SG's ageing population, it may be increasingly difficult to equip the elderly with new skills through retraining, as they may need more time to pick up these skills with relative ease.
- Training may take a while to completed (thus not a short term measure), which may increase the reluctance of the unemployed to undertake training. If inflation is of an immediate concern to SG, other short-run measures need to be implemented.
- If there is only one sole breadwinner for the family, during the course of training, the family may have to live on savings as there is no income received. Thus, employees may not be willing to take up the training course, especially for the WTS Scheme (for the low-wage workers).

4) Appreciation of SGD against SG's major trading partners → price of imports in SGD falls, and since Singapore lacks natural resources, the demand for imports is price inelastic. Hence, a fall in import price leads to a less than proportionate rise in quantity demanded for imports → total expenditure on imports (including factor inputs) fall → fall in unit cost of production (COP) → AS shifts downwards from AS_1 to AS_2 → firms pass on lower unit COP in the form of lower price to consumers from P_1 to P_2 → curbs imported inflation.



At the same time, price of exports in foreign currencies (SG's major trading partners) rise → quantity demanded for exports falls more than proportionately due to many available substitutes in the global market. Coupled with fall in domestic consumption assuming that consumers switch away from domestic goods to relatively cheaper imported goods, AD falls. Via the reverse multiplier effect as explained in part (c), the multiple fall in production of goods reduces demand and hence competition for factor inputs → decreases prices of factor inputs → unit COP of firms fall → pass on as lower price to consumers from P_2 to P_3 → fall in demand-pull inflation

Pros and Cons of policy

- This policy is particularly effective in relieving external sources of inflation. Given the sharp rise in food prices, this policy targets at the root cause – imported inflation, supported by Extract 3 evidence "helped to dampen the rise in prices of our food imports". Nevertheless, if the inflation is domestically induced, as explained earlier, other policies targeted at the specific markets will be more useful in reducing inflation caused by internal sources.
- However, a strong SGD reduces price competitiveness of SG's exports,

causing foreigners to switch away from consuming more expensive SG exports to relatively cheaper exports of other countries, causing actual growth to fall from Y_1 to Y_3. According to Extract 3, "the strong SGD could have played a significant part in July's poor figures, where electronics exports dived 16.9 per cent in July from the same month last year'.

5) Technological innovation à helps to raise productive capacity of the SG economy, thereby relieving inflationary pressures in the long run as explained earlier.

The Internet can quickly distribute information and knowledge to anyone in electronic format to anywhere in the world very quickly and easily at virtually no cost à reduces the quantity of resources such as land, labour and /or capital machinery used to:

- Ø manufacture paper
- Ø publish information / content on books,
- Ø transport these books to distribution centres and subsequently to bookstores

In turn, scarce resources can be used to produce more of other goods and services, increasing productive capacity of the SG economy. Also, since information can be efficiently disseminated at virtually no cost à help to greatly improve productivity and reduce unit COP à shifts AS downwards. As explained earlier, SG achieves non-inflationary sustained economic growth in the long run.

<u>Pros and Cons of policy</u>

- · Policy takes time to take effect.
- · Given the size constraints of SG, it is not possible to merely rely on technological innovation and internet to push production frontiers. As stated in Extract 4, 'every economy and country has physical limits, especially for a small economy like Singapore; … only so much that technological innovation and the Internet can do to push Singapore's production frontiers'. Other policies are required to complement this policy.

<u>Conclusion</u>

Choice of policy depends on:

- ü Root cause of inflation – internal (domestic) or external source
- ü Time lag of policy – consider policies that take effect more immediately vs. those that require a long gestation period
- ü Side effects of policy – select policies with minimal side effects or result in minimal trade-offs with other macroeconomic goals

è Multi-pronged approach or complementary / combination of policies (both demand management and supply-side policies) should be implemented simultaneously to reduce high inflationary pressures in SG.

Level	Mark	Descriptor
L3	5 – 6	· Judicious reference to the case material. · A 2-sided well-developed discussion on at least two policies to reduce high inflation in SG, analysing both pros and cons of policies. · Well-illustrated AD / AS diagrams. Cap at 5m if no appropriate diagram is drawn and explained. · Must explain about exchange rate policy.

		L2	3 – 4	Undeveloped attempt at explaining points stated. Such an answer is likely to be: - 1-sided (i.e. only thesis <u>or</u> anti-thesis <u>or</u> explains + evaluates only <u>one</u> policy in great detail) or - lacks depth in explanation / analysis or - limited in making reference to case material - Cap at 3m if the candidate provides a purely theoretical analysis and evaluation of at least two policies without any reference to case material.	
		L1	1 – 2	· Undeveloped analysis of the policies. Some valid points.	
		E	1 – 2	· Evaluative judgement using economic reasoning to justify which policy should be chosen.	

Case Study Question 2

a. (i)	Compare the growth rates of the BRIC countries between 2009 and 2011 in Table 2.	[2]

	2009	2010	2011	2012
World	-2.2	4.0	2.8	2.2
Brazil	-0.3	7.5	2.7	0.9
Russia	-7.8	4.5	4.3	3.4
India	8.5	10.5	6.3	3.2
China	9.2	10.4	9.3	9.4

The four countries experienced positive growth rate in general for the three year period except for Brazil and Russia which experienced negative growth at the start of the period in 2009.
Except for India, the economic growth rate increased over the given period from 2009 - 2011
Their economic growth rates actually peaked in 2010 and fell after that.
China consistently achieved the highest growth rate over the three year period

(Any two comparison for 2 m)

(ii)	Using Extract 5, explain how the growth rates in the BRIC countries affect the pattern of trade.	[4]

From Extract 5
Among them, the four BRIC countries — Brazil, Russia, India and China — are identified as the future economic powerhouses. These countries are propelling the global recovery as their economic growth rates exceed global averages. With the 42% of the global population that reside within them becoming more affluent and seeking higher living standards, the rise of the BRIC consumer will only become more marked over the next decade.

A new trend which has influenced the flow of goods and services is that of intra-BRIC trade. Previously, the BRIC countries were seen as the factories and commodity suppliers to the world, but now they are working together as consumers and producers and trading with one another. Should we see a slowdown in the developed world, the BRIC countries are well positioned to ride out the storm.

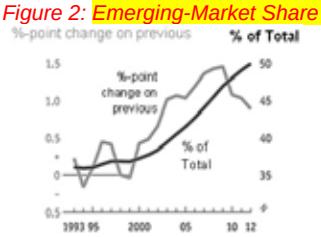
BRIC countries experienced positive growth rate and higher than that of the global average-> HH Ys increase relative to the rest of the world -> higher purchasing power -> greater ability to import goods and service. -> change in trade patterns in terms of volume, type of goods/svs trades and trading partners.
Change in the types of goods traded (from exporting low-valued goods and commodities to exporting higher-valued consumer goods/svs; and perhaps

from importing capital equipment to importing consumer goods/svs), change in trade volume (increasing imports) and change in trading partners (from BRIC-rest of the word trade to intra-BRIC trade)

(Any two changes to trade pattern to achieve 2 m)

(b) Comment on whether Table 3 and Figure 2 support the view that emerging economies will be the 'Engines of Growth in the Global Economy'. [6]

Figure 2: Emerging-Market Share of world GDP



Source: IMF Website

Table 3: Selected Economic Statistics, 2011

	Annual real % growth in GDP	*GDP per capita at 2005 market price in US$*	*Total trade as % of GDP*	*Exports as % GDP*	*Imports as % of GDP*
USA	*1.8*	*43,063*	*32*	*14*	*18*
Brazil	*2.7*	*5,721*	*25*	*12*	*13*
India	*6.3*	*1,107*	*54*	*24*	*30*
China	*9.3*	*3,348*	*68*	*31*	*37*

Source: The World Bank Website

Introduction

'Engines of growth in the global economy' means 'forces that drive economic growth in the global economy

Thesis

- Figure 2 – shows that the share of emerging countries' GDP as a % of total World GDP has been increasing and accounts for more than 50% of world GDP. Increase in relative GDP -> higher purchasing power -> higher demand for imports > helps in creating X dd for trading partners -> spur economic growth of its trading partners -> driver of global demand -> engine of growth
- Table 3 – real GDP growth for BIC in 2011 -> increase in PP -> increase in dd for M and hence drive global growth (consistent with Figure 2), their imports as a % of GDP are high compared to US too.

Anti-thesis

- Figure 2 also shows that rate of increase in emerging market's share of GDP has been falling since 2009 -> contradicting data as it raise question on the sustainability of emerging countries to drive economic growth
- Figure 2 only shows that share of emerging countries' GDP as a % of total World GDP. It does not show if GDP is increasing. .
- Table 3 does show the growth in GDP but restricted to only 3 of the BRICS countries and for one year only. Hardly conclusive -> insufficient data.
- Data on GDP per capita is not useful as population size is not given. It is the real GDP figures (i.e. aggregate figures) that reflect the purchasing power and hence importance of a country.

Judgment

Data from Figure 2 and Table 3 reinforce each other to show the

<table>
<tr><td></td><td>increasing importance of emerging countries in stimulating global economic growth through increasing imports. However, it is difficult to gauge as data are contradicting and insufficient as well.

<table><tr><td>L1 (1 – 2 m)</td><td>Do not understand the meaning of ‘engine of economic growth’. Answer it as ‘whether the emerging economies can continue to achieve economic growth’. Do not understand the question requirement which is to critique the data.</td></tr><tr><td>L2 (3 – 5 m)</td><td>Understand the meaning of the term ‘engine of economic growth’. A balanced discussion on whether the data is supportive of the view that emerging countries are indeed the engine of growth using evidence from the data provided.</td></tr><tr><td>E1 (1 m)</td><td>Judgment with stated criteria</td></tr></table></td><td></td></tr>
<tr><td></td><td></td><td></td></tr>
<tr><td>c. (i)</td><td>With reference to Table 3, which indicator would you use to assess the standard of living in a country? Justify your answer.

GDP per capita at 2005 market price in US$. Takes into consideration the population size. Rep the average income per person -> average purchasing power -> average consumption per person which is a good indicator of the material SOL.

(1m for identifying the indicator and 1 mark for justification)</td><td>[2]</td></tr>
<tr><td></td><td></td><td></td></tr>
<tr><td>(ii)</td><td>Explain two other pieces of information that would be useful in assessing the standard of living in a country.

Highlight that there is both material and non-material SOL. To suggest two appropriate indicators, e.g infant mortality rate, literac (preferably one to assess material SOL and one to assess non-material SOC). For each indicator, explain how it can be used to assess the SOL of a country.

· Education: literacy rate - With better education, the people in a country will be able to read and appreciate aesthetics or literacy work, enjoy the fine arts and engage in pursue of their own aspirations. This ability to pursue self-realisation is a non-material aspect of SOL.

· Health: Infant mortality rate, life expectancy, quality adjusted life years, availability of medical infrastructure per 1000 person - Infant mortality measures the proportion of babies born who die before the age of one out of total births. A low infant mortality rate signals availability and accessibility healthcare services. This would indicate both material and non-material SOL.

(2 m for each indicator which explain clearly how it can be used to asses a country’s SOL)</td><td>[4]</td></tr>
<tr><td></td><td></td><td></td></tr>
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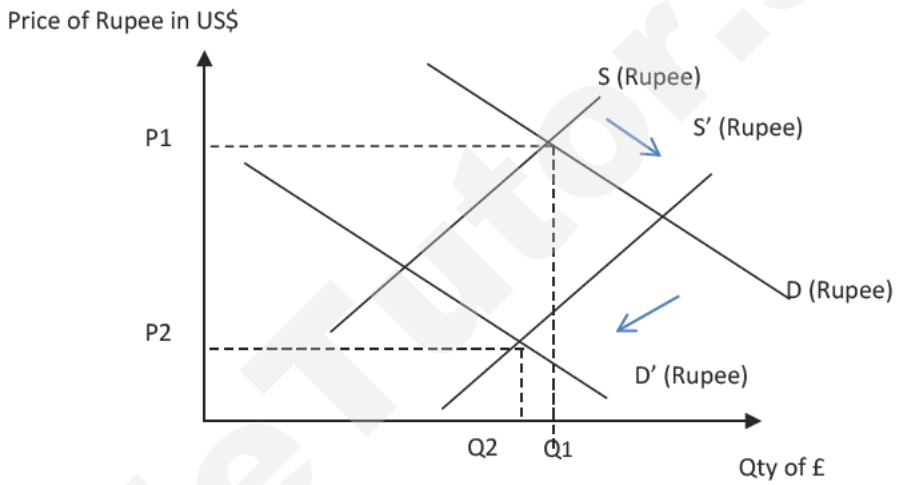
(d)	With reference to Extract 6 and using appropriate diagrams, explain why the rupee fell in value as investors took flight and headed for the safety of the US dollar. Investors 'take flight' and head for the safety of US dollar-> hot money outflow from India to US -> Rise of Rupee SS in the exchange rate market; At the same time, there is less inflow of hot money -> fall in Rupee DD -> increase in SS and fall in DD -> excess ss of rupee in the market. Assuming free exchange rate system -> rupee depreciates until market clears.  (2m for diagram which are well-labelled and referred to 2 m for explanation. Must include effect of increase in ss of rupee due to capital flight given that it is in the question.)	[4]
(e)	Discuss the extent to which the factors highlighted in Extract 7 can help emerging countries sustain their economic growth.	[8]
	Explain how each of the factors will help emerging countries grow • Sound macro-economic policies to control of inflation rate and budget deficits -> build consumers' and investors' confidence -> ensure healthy C and I -> promoting both actual and potential Economic Growth through AD and AS • Investment in human capital and improvement of educational standards -> improve qlty of fop • Import new technologies from the west -> increase in qlty of fop -> as above • Finally, they must have young and growing populations -> increase in quantity of labour -> as above • Point 2 to 4 are similar -> increase productivity -> productive capacity -> reduce unit cost -> increase AS -> attract foreign investment -> facilitate restructuring of economy -> build up the value-added chain -> increase potential growth	

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Discuss whether the factors can help emerging countries sustain its economic growth. Depends on

Ability of macro-economic policies to help emerging countries sustain EG - Depends on effectiveness, sustainability, appropriateness etc of the policies
Current economic condition of the economy – If there is an economic downturn / inflationary pressure / chronic budget deficit - Need to be resolved through demand-management policies and not supply
Economic characteristics of the economy – urgent need to invest in human capital and import new technologies if the country is short of these resources. For example, India may not place this as the top priority given its abundance unlike other less developing countries like Mexico

<table>
<tr><td>L1 (1 – 3 m)</td><td>Merely explain how the factors affect economic growth</td></tr>
<tr><td>L2 (4 – 6 m)</td><td>Explain the factors may affect economic growth. Comment on the importance of each of the factors in affecting economic growth for the countries</td></tr>
<tr><td>E (1 – 2 m)</td><td>Make a judgment based on economic reasoning</td></tr>
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3 **(a)** Using the production possibility curve (PPC) diagram, explain the central economic problem that all societies have to address. [10]

(b) China is moving towards investment in clean technology and tradable pollution permits system. These policies also address rising concerns of China's air pollution blown eastward over to Japan.

[15]

Adapted from *Asahi Shimbun, AJW*, 4 February 2013

Discuss the view that tradable pollution permits is the best policy to correct China's air pollution problem.

<u>Suggested Answers</u>

Part (a)

<u>Introduction</u>

Ø State and explain the central economic problem.

· 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.

· 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.

<u>Paragraph 2</u>

Ø 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.

<u>Paragraph 3</u>

· The concepts of scarcity, choice and opportunity cost can be illustrated graphically by using a production possibility curve (PPC) or production possibility frontier (PPF).

Ø Explain the PPC / 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.

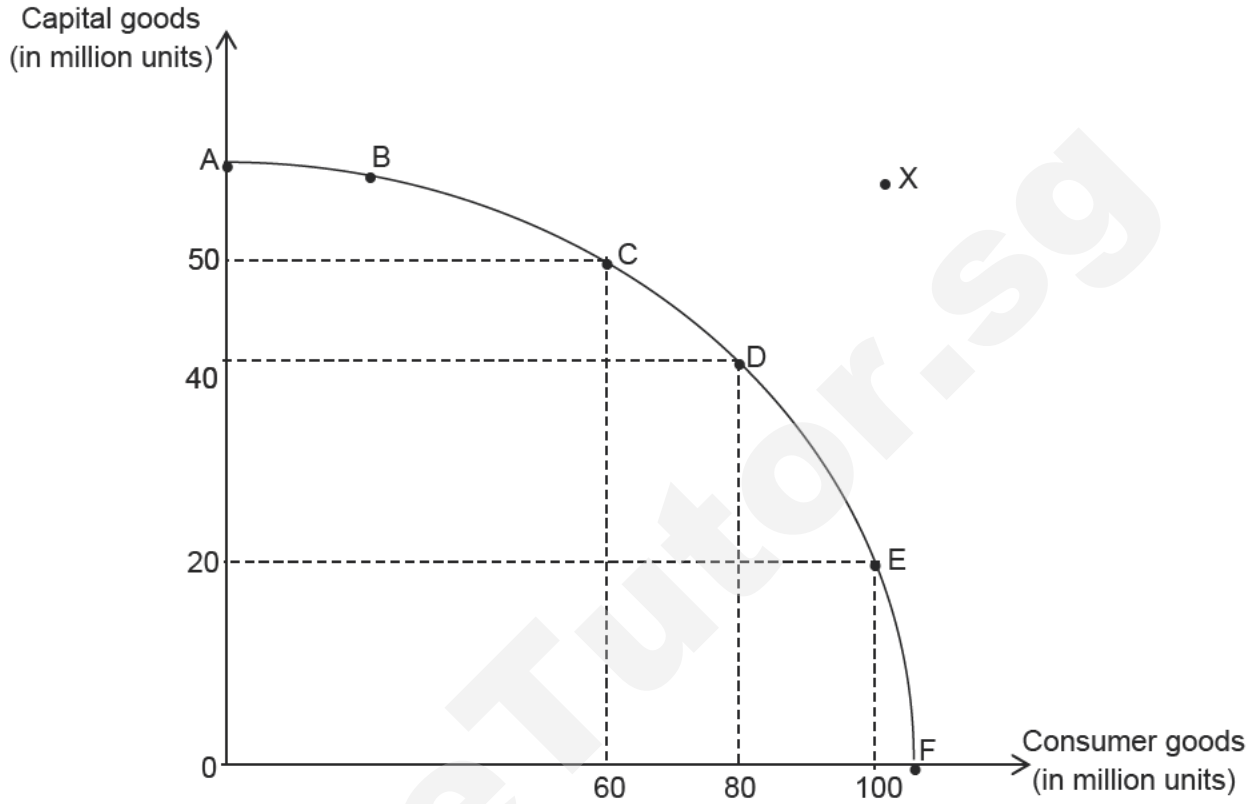


Figure 1: Production Possibility Curve (PPC) or Production Possibility Frontier (PPF)

➢ 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

Level	Marks	Descriptors
L1	1 – 4	For an answer that shows some knowledge of what scarcity is but lacking in economic analysis.
L2	5 – 6	For an answer that · Explains the central economic problem but unable to link the related concepts of scarcity, choice and opportunity cost to resource allocation. · Makes scant or unclear reference of the above economic concepts to the PPC diagram.
L3	7 – 10	For a well-developed answer that demonstrates · Scope and detailed economic explanation of the central problem using the PPC framework linking to concepts of scarcity, choice, opportunity costs and resource allocation. · Clear reference of the above concepts made to the PPC diagram.

Part (b)

Introduction

China has experienced rapid economic growth rate which has raised material standard of living (SOL) of her citizens. However, with increased production of goods and services coupled with lax legislation, in 2009, China was the most polluted country in the world, adversely affecting the non-material SOL of the Chinese citizens. Inevitably, the negative externality of pollution as a by-product of production processes has led to rising concerns in Japan due to China's polluted air blown eastward over to Japan.

Body

Market failure occurs when the free market does not allocate resources efficiently. Efficiency is concerned with the optimal production and distribution of these scarce resources.

Economic efficiency is the situation in which it is impossible to generate a larger welfare improvement from the available resources. It is a situation where some people cannot be made better-off by reallocating the resources or goods, without making others worse-off. From society's perspective, economic efficiency refers to both productive and allocative efficiency being attained.

Productive Efficiency

Productive efficiency occurs when the firm operates at a level of output consistent with minimum average total cost. There is minimisation of wastage of resources in the production process.

Allocative Efficiency

Allocative efficiency occurs when firms produce the combination of goods that is most preferred by consumers. Resources are allocated in such a way that the right quantity of every commodity is produced. It is achieved when every market produces the social optimum output, where marginal social benefit (MSB) = marginal social cost (MSC). At this output level, welfare to society is maximised.

- Negative externalities or external costs occur when third parties who are not directly involved in the consumption of production of the goods are affected adversely.
- In the absence of government intervention, both consumers and producers only take into account private costs and private benefits, ignoring the negative costs incurred by third parties.
- Oil refinery producers or factories that burn fossil fuels to generate electricity to power machinery / industrial processes gain private benefits of earning revenue from the final products sold.
- The private costs of producing refined oil incurred by oil refinery producers include production costs of refining oil and opportunity costs such as leisure foregone.
- There are however, external costs of producing refined oil on third parties. With increased refined oil production, profit-motivated producers employ cheapest production method and do not clean up air pollution that arise from production. The increased air pollution results in third parties who are not involved in the economic transaction (production and consumption) of refined oil to suffer from respiratory issues / breathing difficulties, eye infection, poor health etc. when they get into contact with polluted air, or even global warming issues. Furthermore, China's air pollution has escalated into a transnational issue – China's polluted air being blown eastward over to Japan, causing the Japanese to suffer from adverse third party effects.

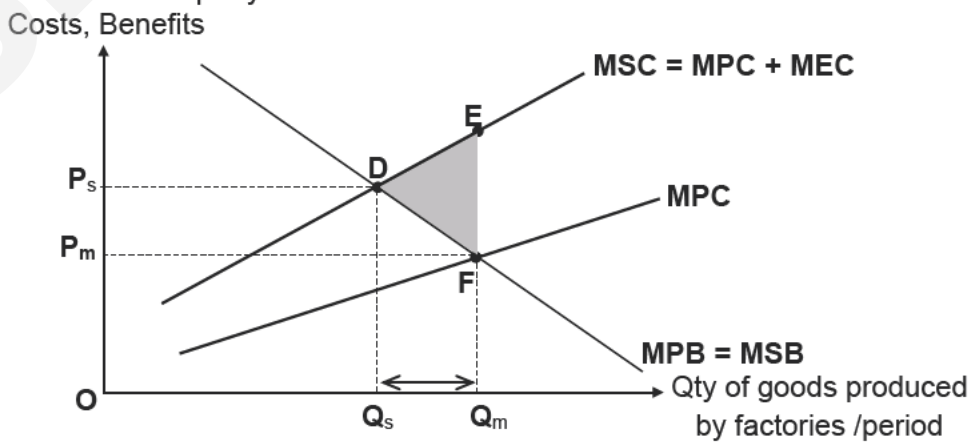


Figure 2: Market Failure due to Negative Externalities

With reference to Figure 2, assume that production of refined oil does not confer positive externalities on third parties, that is, MSB = MPB. Since refined oil production confers negative externalities on third parties, at every output level, MSC > MPC, where the vertical

distance between MPC and MSC is the marginal external costs (MEC). Since rational individuals only consider MPB against MPC and ignore external costs, profit-motivated refined oil producers will produce goods up to the quantity Q_m, where MPB = MPC. However, if all possible benefits and costs were accounted for, the optimal quantity of production occurs at quantity Q_s, where MSB = MSC. Hence over-production of Q_sQ_m amount occurs, where there is an over-allocation of resources to oil refineries and under-allocation of resources for other markets. This leads to a deadweight loss of area DEF as the additional costs (area DEQ_mQ_s) exceed the additional benefits (area DFQ_mQ_s).

Explain how tradable pollution permits help to correct China's air pollution problem

- The system of tradable pollution permits is a combination of command-and-control and market-based system of resolving externalities, based on the concept of property rights. The government owns, on behalf of the people, the right to pollute the atmosphere in its country. The government may then decide that some pollution is allowable – for example to emit a given number of tons of pollution (e.g. carbon) because the costs of eliminating all air pollution outweigh the benefits.
- Once the total allowable pollution has been calculated, the government subdivides the allowable emissions in the form of permits among industries. Firms are allowed to trade permits. If the firm produces less emission 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 indirect taxes, the external cost is internalised in the form of price paid for the permit

Pros of policy

- The trade in pollution permits allows pollution reduction to be concentrated where it can be achieved at the lowest cost. Firms that are able to reduce pollution cheaply will do so and sell their unused credits to firms that find it more costly to reduce pollution. If it costs firm B more to reduce its pollution than firm A, the permits could be sold from A to B at a price that is profitable to both, i.e. at a price above the costs of emission reduction to A, but below the costs of emission reduction to B. Hence, pollution is reduced in the cheapest possible way.
- In addition, the total amount of pollution by the whole industry can be fixed at a certain socially acceptable level, since the price of the permit will vary automatically with changes in demand to pollute as the permits are traded among the firms.

Limitations of policy

- Nevertheless, a main problem of the cap-and-trade system is deciding how to allocate the permits to firms – should permits be equally distributed to all firms? To all industries? Which firms should get more? Based on how important the firm is to the country? Or based on the size of firm? How much more?
- Furthermore, it is difficult to determine the socially optimum level of pollution as there is imperfect information about the monetary value of the external costs. If there is wrong estimation by the government, the issue of China's polluted air will still be significant.
- This policy is likely to allow the more polluting firms to continue producing and polluting (instead of investing in clean technology – see the sub-bullet below), 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. Also, if many firms choose to produce lesser output, China's real national output falls, affecting China's economic growth negatively.
- Unlike the case of a pigouvian tax where the firms know for sure how much the cost savings from each tonne of emission reduction is, the returns from investment in green technology is more uncertain under the cap-and-trade scheme. 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.

- With this policy in place, it is more expensive for firms to produce goods due to the extra costs incurred (either clean-up costs or costs to purchase the tradable permits). This may hence deter foreign direct investments into China, causing economic growth to decline.
- The government incurs monitoring costs to ensure that firms do not pollute beyond the allowable emissions. Especially for China which is such a big country that has many factories, the monitoring costs are likely to be high. As such, given the high monitoring costs, this policy is more applicable to the relatively fewer number of firms rather than the extensive mass of households and automobiles that pollute the air as well.
- Profit-motivated firms may want to be free riders, hence apply political pressure (lobby) to the government for greater amounts of permits to be issued. If the Chinese government gives in to such pressure, China's air pollution can only be reduced by a small extent.
  - For instance in 2010, a European business lobby group remarked that extra "permits" to pollute the atmosphere should be given to corporations investing in areas near tropical rainforests.[1]
  - In addition, the EU's Emissions Trading System has not been effective in reducing CO_2 emissions due to a huge oversupply of permits, owing to the economic downturn and lobbying by industry, which has caused the price paid to emit a tonne of carbon to crash in recent years.[2]

Explain how clean technology help to correct China's air pollution problem

- The shift towards clean energy investment could mean that the Chinese government is channelling resources to solar and wind energy projects, such as installing solar panels and wind turbines, as such technologies have become cheaper over the years.
- China advanced its position as the epicentre of clean energy finance, drawing $65.1 billion clean energy investments – 25% of the worldwide investments in solar, 37% in wind and 47% of other types of renewable energy, from small hydropower to geothermal.[3] Furthermore, China is already investing $375 billion dollars in energy savings and emissions reduction in the 5 years through to 2015.[4]
- Fundamentally driven by improvements in technology and economies of scale throughout the supply chain, photovoltaic (PV) module prices have fallen 80 percent since 2008, 20 percent in 2012 alone.[5] This fall in unit cost of production due to cheaper factor inputs incentivises firms to be more willing and able to switch towards the use of solar panels.
- Such clean energy investments can help to fuel economic development of China, yet reduce the negative environmental impact, since the demand for burning of fossil fuels will decline as producers switch to the use of clean energy.

Pros of policy

- Unlike the tradable pollution permits system which may compromise on economic growth, firms can continue using clean energy to produce goods.
- With government investment in the solar panel and wind turbine industries, AD rises, and via the multiplier effect, creates new employment opportunities and generate more economic growth for China.

Limitations of policy

- As long as there is no disincentive on firms such as heavy fines if they continue to burn fossil fuels to generate electricity, pollution will continue to be a problem for China.[4] Especially since pollution discharge is too cheap compared to the cost of installing and

[1] http://www.upi.com/Science_News/2010/09/16/EU-business-lobby-eyes-pollution-permits/UPI-74191284690710
[2] http://www.bristolgreenparty.org.uk/news/small-step-towards-fixing-eus-emissions-trading-scheme-say-greens
[3] http://www.forbes.com/sites/uciliawang/2013/04/17/china-japan-lure-big-clean-energy-investments
[4] http://www.abc.net.au/news/2013-08-13/china-to-invest-more-in-clean-technologies/4882244
[5] http://www.triplepundit.com/2013/05/bloomberg-new-energy-finance-explains-cleantech-investment-down

running the pollution alleviation equipment[4], it is likely that this shift towards clean energy will take a much longer time than expected to materialise.

Explain how legal regulations help to correct China's air pollution problem

- Governments may impose direct regulation (backed by fines or other forms of punishment) to influence firms' or consumers' behaviour. These are command and control measures that do not merely raise or lower prices but also compel firms and consumers to moderate their actions as a result.
- In this case, the Chinese government may impose 'emission standards' on automobile and factories that emit polluting greenhouse gases to limit the externalities generated.
- With this law, car owners may install catalytic converters on their cars to convert toxic by-products of combustion in the exhaust of an internal combustion engine to less toxic substances by way of catalysed chemical reactions. This thus reduces the problem of air pollution in China.
- In order to avoid being fined by the government, factory owners may switch to cleaner methods of production so as to reduce carbon emissions.

Pros of policy

- Regulations are easy to understand, implement and monitor. Random spot checks or checks based on public complaints can be made, and those who flout the regulations are then heavily fined or punished, for example car license revoked for a few months, or firm is forced to stop production for a few months. Set high enough, these penalties act as an effective deterrent to prevent the undesirable behaviour that imposes negative externalities.

Limitations of policy

- Like the tradable pollution permits, this policy also incurs high monitoring costs, which may make this solution inefficient in achieving the desired result.
- There is a lack of an incentive for firms to do better. Emission standards only give firms the incentive to do enough to meet the standards but not to reduce the externalities any further once the standards are met.
- Furthermore, emission standards do not result in reducing pollution at the least cost, unlike tradable pollution permits.

Conclusion

With the atmosphere / air being a common / shared resource among individuals, who act independently and rationally according to one's self-interests, it is inevitable that the tragedy of the commons[6] occur, despite their understanding that depleting the common resource is contrary to the group's long-term best interests. With the air surrounding us that cannot readily be fenced and impossible to be assigned property rights, the tragedy of the commons must be prevented by different means.[7]

Any solution requires that we, as a society, change our values of morality. For example, we may decide that unlimited use of air is no longer morally acceptable. Hardin states one solution is "*Mutual Coercion Mutually Agreed Upon*." We, as a society, agree that some actions are not allowed (the mutual agreement), and that violations of the agreement leads to fines or prison terms (the Coercion)[8], such as laws or taxing devices that make it cheaper for the polluter to treat his pollutants than to discharge them untreated.[7] For example, the US Environmental Protection Agency that regulates the amount of pollutants that can be

[6] In the 1960s, ecologist Garrett Hardin invoked the analogy of a "commons" in support of his thesis that as human populations increased, there would be increasing pressure on finite resources at both the local and particularly the global levels, with the inevitable result of overexploitation and ruin. He termed this phenomenon the "tragedy of the commons." More specifically, this phrase means that a rise in human population creates an increased strain on limited resources, which jeopardises sustainability.[7]

[7] http://www.sustainable-environment.org.uk/Earth/Commons.php

[8] http://oceanworld.tamu.edu/resources/oceanography-book/tragedyofthecommons.htm

released into the air. Failure to comply with the regulations leads to fines or prison sentences.[8] Another example of mutual agreement include concerted efforts by different governments who have recognised the importance of taking care of the atmosphere, to sign international agreements to reduce carbon emissions. The Kyoto Protocol, which has attempted to bring nations together in reducing greenhouse gas emissions and slowing global climate warming. Multiple nations recognised that everyone had an interest in preserving this common resource for the future and agreed to look beyond short-term gain and immediate self-interest to a sustainable future.[9]

Choice of policy depends on:

- ü Time lag of policy – consider policies that take effect more immediately vs. those that require a long gestation period à clean energy investment is likely to take effect more in the long run than short run, hence the Chinese government ought to implement multi-pronged approach or complementary / combination of policies (both short-run and long run measures) simultaneously to reduce China's air pollution
- ü Side effects of policy – select policies with minimal side effects or result in minimal trade-offs with other macroeconomic goals

<u>Mark Scheme</u>

Level	Marks	Descriptors
L1	1 – 5	For an answer that shows some knowledge of how the market fails and / or the policies that can be implemented but lacking in economic analysis.
L2	6 – 8	For an answer that · Only addresses part of the question, i.e. provides a developed analysis of the various benefits and costs applied to the context of the question as well as how the deadweight loss area is derived, but only explains how the policies (at least three) work, without evaluation of the policies OR · Provides a well-developed explanation and evaluation of the policies (at least three) but does not explain how the market fails OR · Provides a well-developed explanation on how the market fails and the policies, including evaluation (but only two policies) · Makes scant or unclear reference of the above economic concepts to the market failure diagram. · Cap at 8m if policies explained are not those stated in the preamble
L3	9 – 11	For a well-developed answer that demonstrates · Scope and detailed economic explanation of China's air pollution using the market failure diagram linking to concepts of benefits, costs and deadweight loss. · Well-developed explanation and evaluation of at least three policies (including those stated in the preamble)
E1	1 – 2	Unexplained assessment on which is the best policy that should be undertaken by the Chinese government to reduce air pollution.
E2	3 – 4	Economic justification on which is the best policy that should be undertaken by the Chinese government to reduce air pollution.

[9] http://www.dummies.com/how-to/content/ten-reallife-examples-of-the-tragedy-of-the-common.html

4 There are gains from globalisation as world trade and global production networks create opportunities for Singaporeans and domestic firms. However, globalisation could potentially lead to an increase in unemployment.

Adapted from *The Straits Times*, 23 September 2010

(a) Explain the benefits of globalisation. [10]

(b) Discuss the policy options that the government can adopt to reduce unemployment in Singapore. [15]

Part (a)

Introduction

Definition of globalisation: Globalisation is the increasing integration of economies around the world, particularly through the movement of goods, services, capital, people (labour) and knowledge (technology) across international borders.

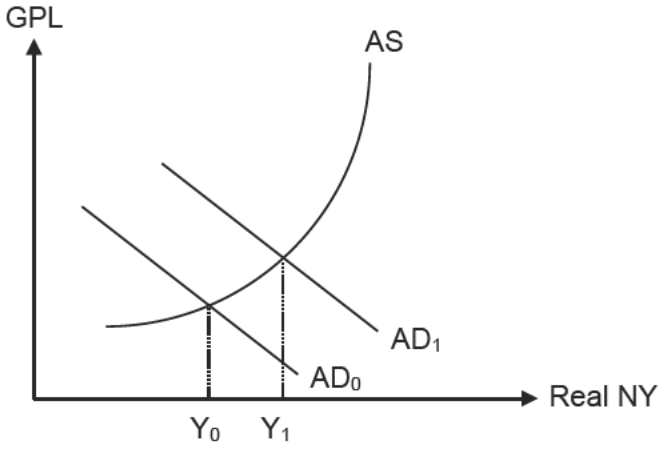
- Increase in international trade at a much faster rate
- Increase in international flow of capital including foreign direct investment
- An increase in movement of labour across boundaries
- An increase in international outsourcing and offshoring by multinational corporations (MNCs)

Body

(i) Freer flow of trade in goods and services

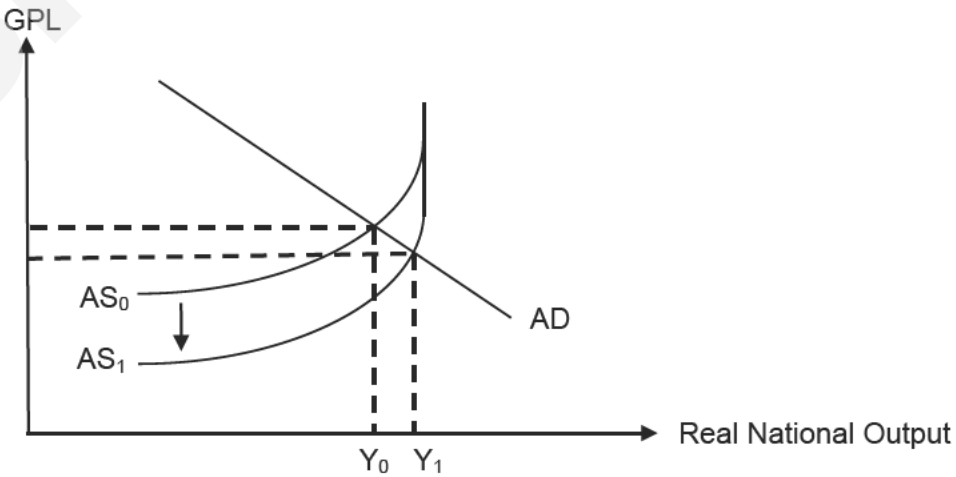
- The reduction / removal of trade barriers enables Singapore to specialise and trade in line with the Theory of Comparative Advantage. As Singapore divert resources to produce goods and services that they can produce at lower opportunity cost than other countries (i.e. in which they enjoy comparative advantage) and using these goods and services to exchange for others which they can only produce at higher opportunity cost, the total quantity of good and services available for consumption increases. The goods and services are produced in countries which opportunity cost is lowest. This means that the world can produce more output with its given resources. With a mutually beneficial TOT, Singapore and her trading countries can consume outside their PPC, ↑ material SOL. <benefit to Singaporeans>

- Removal of trade barriers across countries allow Singapore to specialise and export goods that it has comparative advantage in. These include products such as semiconductor chips, pharmaceuticals and petrochemicals. On the other hand, Singapore imports low value added manufactured goods such as textiles from emerging economies such as China and India. ↑ in DD for exports in petrochemical, pharmaceutical sectors è ↑ in export revenue and rise in net X, ceteris paribus, rise in AD, NY and actual growth, employment (please explain with the aid of AD-AS diagram, including the multiplier effect).



- The increase in X will lead to an increase in AD from AD_0 to AD_1. There will be excess demand at the given level of NY at Y_0. As firms drawn down inventories to meet the excess demand, unplanned disinvestment occurs. Firms will receive signal to produce more. They will employ more factors of production (FOP), including more units of labour. <benefit to Singaporeans> The increase in employment of FOP will lead to increase household income, and they will spend part of their additional income earned on domestically produced good and services, which would be reflected as an increase in C_d, the extent of which depends on the size of MPC_d. However, the increase in C is lesser than the increase in additional income due to the presence of leakages, where part of the additional income is spent on imports, used to pay tax or kept as savings. The increase in C_d will lead to further increase in AD and subsequently excess demand. The firms will again employ more FOPs to expand production. This process continues and multiple increases in C ensue. Note however that this process does not continue indefinitely due to the existence of leakages (S, M, T) that does not feedback into the circular flow of income.

- Trade also allows Singapore to import semi-finished goods and raw materials from other countries, thus allowing Singapore to enjoy low unit cost of production (COP), reducing AS. <benefit to domestic firms and lower price of goods, benefit to Singaporeans>



- Rise in NX also improves BOT, ceteris paribus, improves current a/c and BOP. This is assuming that the increase in X revenue is larger than the increase in M expenditure.

- Other benefits of ↑ competition: (i) there will be greater variety of goods and services available to consumers, <benefit to Singaporeans> (ii) there will be economies of scale to be gained where producers/firms experience fall in unit COP as they produce more output due to specialisation based on comparative advantage theory to serve both the export and domestic markets. (explain and exemplify, relate to gains to different groups of stakeholders) <benefit to domestic firms>

(ii) Freer flow of capital

- Freer capital flow will lead to FDI inflows. MNCs may outsource their production process into Singapore to take advantage of the cheaper high-skilled labour and other resources to lower their production costs. <benefit to Singaporeans> This will lead to increase in investments in Singapore. The net inflow of FDI è AD increases è NY increases (through the k-process) è EG (actual growth), lower UN rate. There will also be to an improvement in the capital account and BOP in the short run.

- FDI inflow will help Singapore to develop its physical infrastructure and benefit from technology transfer at a faster rate. <benefit to domestic firms> This will help accelerate its rate of sustaining economic growth over time (increase AS à non-inflationary growth), especially in view that Singapore is already operating very near full employment and needs to expand its AS. [include a well-referenced diagram]

(iii) Freer movement of labour

- Augment talent pool as increase in the supply of skilled and talented labour in Singapore if MNCs send skilled professionals to manage the local business activities. Influx of foreign talent à enhances quality of labour à Increase in productive capacity è increase in AS è potential growth

- Influx of foreign talent allows Singapore to develop new niche areas especially in diversifying the economy by allowing the economy to move up the higher value-added manufacturing ladder, or move into the services sectors. <benefit to domestic firms and Singaporeans>

- The influx of low skilled labour will also help Singapore manage its labour force and allow jobs that locals normally shun to be filled up. This helps to ensure that firm operations can be managed and completed at a low cost, contributing to the overall competitiveness of the economy. <benefit to domestic firms>

<u>Conclusion</u>

Not all economies are the same and hence would benefit from globalisation to different degrees:

- Small and open economies like Singapore benefit from globalisation more than large and less open economies as they are less likely to be able to be self-sufficient in goods and services in the event of no trade. <benefit to Singaporeans> The small domestic markets will restrict the growth of local firms and it will be beneficial for firms to be able to outsource or expand their operations into other countries. <benefit to domestic firms>
- Whether there are policies to (i) manage the costs of globalisation, (ii) ensure that the benefits of growth is distributed to the wider population, (iii) maintain the growth in the LR

Knowledge, application, understanding, analysis		
L1	· For an answer that is descriptive and lacks the use of economic framework/concepts in analysis · Glaring conceptual errors · Lacks application to Singapore context	1-4
L2	· Use of appropriate economic framework/concepts in analysis à AD-AS diagram · Sufficient scope of coverage è At least 2 aspects of globalization discussed è If only 1 aspect of globalization well explained – Max 5 marks è Ability to link to at least 2 macroeconomic effects · Sufficient depth of analysis · Some application to Singapore · Lacks application to Singapore context – Max 6 marks	5-6
L3	· Good use of economic framework/concepts in analysis à AD-AS diagram · Good scope of coverage · 2-3 aspects of globalisation discussed · Ability to link to both macroeconomic and microeconomic effects · Good depth of analysis · Good application to Singapore context.	7-10

Part (b)

<u>Introduction</u>

Define unemployment (rate): The unemployment rate is a measure of the percentage of the labour force of legal working age who are without jobs but are available for work, willing to work and actively seeking work at current wage rates.

Types of unemployment that Singapore suffers from:

(i) Cyclical unemployment
(ii) Structural unemployment
(iii) Frictional unemployment (optional)

<u>Body</u>

Thesis: The policy options that can reduce unemployment in Singapore

(i) On cyclical unemployment

Globalised countries are susceptible to the problems of volatility in EG and cyclical unemployment. These shocks can be transmitted from one country to another through various channels – trade, financial and investment spill overs.

Being open to free trade, Singapore will be more prone to contagion effects of other countries' economic crisis, resulting in AD to fall significantly, causing economic growth to fall and cyclical unemployment to rise by a larger extent. By contagion effect, it means that if the NY of Singapore's trading partners fall, they are likely to buy less of Singapore's X and I lesser in Singapore. A large proportion of Singapore's AD is made up of X and foreign I; thus the fall in X and I is likely to result in AD falling by a significant extent.

Government can implement policies to adjust the rate of cyclical unemployment due to these contagion effects.

To introduce expansionary demand management policies to increase AD in the short run when there is a recession causing exports to fall. This can be achieved either through

1. increase in G and/or fall in T (expansionary fiscal policy),
2. devaluation of exchange rate (expansionary exchange rate policy) or

3. sign more FTAs.

(In Singapore context, it is not likely for Singapore to use interest rate as a policy tool due to the openness of economy leading to destabilising effects on its exchange rate.)

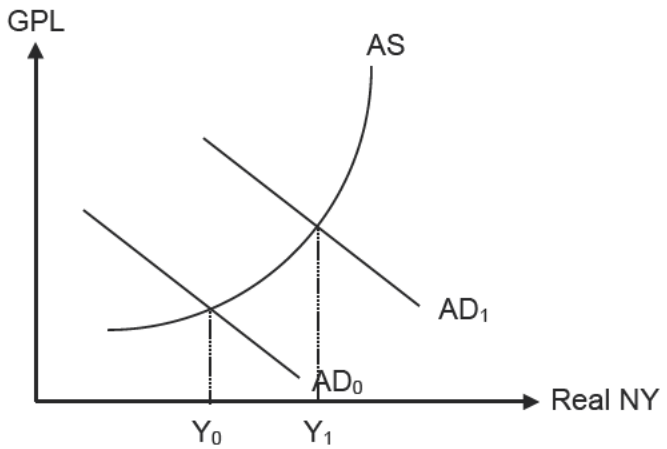
1. Increase in G
   The Singapore government has accumulated budget surpluses from previous years to finance increase G in the event of recession resulting in high unemployment. The increase in G directly increases the AD, causing the NY to increase. The increase in production of goods and services will lead to the employment of more factors of production, including labour.

2. Devaluation of exchange rate
   Singapore can consider allowing the exchange rate to depreciate. In view that SGD is likely to experience reduced upward pressure due to the weakened demand for SGD by trading partners falling into recession and purchasing lesser Singapore exports, Monetary Authority of Singapore (MAS) can adjust the policy band downwards, allowing SGD to depreciate.

   The depreciation of the SGD will result in Px to fall in terms of foreign currency, thus increasing the Qd of Singapore exports. On the other hand, Pm will rise in terms of SGD, reducing the Qd of foreign imports. This prompts locals to switch to local goods which are substitutes to these foreign imports. The increase in X and Cd increases the AD, causing the NY to increase. The increase in production of goods and services will lead to the employment of more factors of production, including labour.

3. Sign more FTAs
   To sign more FTAs with many different countries so as to diversify trading partners. If a particular trading partner is experiencing a recession, the country can still fall back on other trading partners for exports – decoupling effect. The signatory of FTAs with other countries is to secure the quantity of X Singapore has with her trading partners. This will aid in stabilising the fall in X during external led recession. The increase in X and Cd increases the AD, causing the NY to increase. The increase in production of goods and services will lead to the employment of more factors of production, including labour.

   (Explain the above with reference to a graph)



There will be excess demand at the given level of NY at Y_0 when AD increases. As firms drawn down inventories to meet the excess demand, unplanned disinvestment occurs. Firms will receive signal to produce more. They will employ more FOP, including more units of labour. This helps to reduce unemployment in Singapore. The increase in employment of FOP will lead to increase HH income, and they will spend part of their additional income earned on domestically produced goods and services, which would be reflected as an increase in C_d, the extent of which depends on the size of MPC_d. The increase in C_d will lead to further increase in AD and subsequently excess demand. The firms will again employ more FOPs to expand production. This allows unemployment to fall further. This process of unemployment reduction continues until there is no more increase in C_d.

(ii) On structural unemployment
If the globalisation leads to rapid economic changes, this can result in various negative outcomes / costs such as high unemployment in the sunset industries that have lost CA. During boom times, Singapore is also likely to suffer some form of structural unemployment. Structural unemployment occurs when the structure of the economy changes, which leads to changes in the skills and knowledge required to perform certain jobs, or, a change in the location of jobs. Employment expands in certain industries and contracts in others. Retrenched workers in the contracting industries may not have the relevant expertise to find jobs in the expanding industries, leading to structural unemployment.

Government can implement interventionist supply side policies in view of structural unemployment.

This involves retraining and upgrading the skills of displaced workers whose skills have become obsolete. Governments can provide tax incentives or subsidies to firms to induce them to send their workers for upgrading courses.
E.g. The enhanced training support scheme for SMEs is extended to local employees of SME establishments (not hiring more than 200 employees) registered or incorporated in Singapore. More than 8,000 courses fall under this scheme including certifiable courses supported by WDA and academic CET courses offered by the five Polytechnics and Institutes of Technical Education. Under the 3-year initiative that took effect from 1 Jul 2012, SMEs can enjoy greater training support which includes:

- Higher Course Fee Funding of 90% when SMEs sponsor their employees for the above-mentioned CET courses; and
- Increased absentee payroll cap of $7.50 per hour. Absentee payroll rate remains unchanged at 80% of basic hourly salary.

In addition, the government can revamp and gear the education system towards the needs of the global economy.
E.g. Develop higher valued-added industries; establish tertiary institutions to overcome the shortage of skilled labour.

Antithesis: The limitations of policy options used to reduce unemployment in Singapore

Expansionary Fiscal policy
(i) The extent of fall in cyclical unemployment depends on the size of the multiplier. The larger the multiplier, the larger the amount of national income generated from the G; hence more jobs created to reduce cyclical unemployment.
(ii) In Singapore, G takes up only around 10% of GDP. The increase in G during times of recession may not result in significant increase in AD. This will limit the extent of boost to AD in reducing cyclical unemployment. This is especially a concern when X could have

fallen rather extensively, and that X takes up a large proportion of AD; the increase in G is unable to offset the fall in X.

Expansionary Exchange Rate policy
Singapore manages a modest, gradual appreciation of SGD in order to rein in cost-push inflationary pressures from imported sources. The depreciation of SGD may result in an increase in unit COP as essential imported raw materials and semi-finished goods are now higher priced in SGD, resulting in cost-push inflation. It will be a conflict for Singapore as unit COP is raised while the depreciation of SGD was meant to make exports cheaper. If the firms pass on the higher costs in the form of higher export prices, this will negate part of the lowered export price achieved through depreciation.

Sign more FTA
A shortcoming of this policy is that it merely slows down the contagion effect, but it may be unable to prevent an export-oriented economy from slipping into a recession, especially when there is a global recession which affects all economies.

The effectiveness of such policies is limited since the recession is externally induced, and especially since Singapore is highly dependent on trade. Although such policies may be ineffective to offset the negative impact of a fall in exports, they are still important and necessary as they help to cushion the adverse impact that could be sustained in Singapore.

Interventionist Supply Side policies
(i) Workers may not be receptive to such schemes hence such measures may not decrease structural unemployment significantly. Workers could resist such schemes due to lack of motivation or language barrier in pursuing the courses, especially in the case of workers in the older age group. The government may have to come up with campaigns to promote life-long learning and benefits of skills upgrading, and to provide bridging courses to improve the language or IT skills of these workers before they can access actual skills upgrading courses.
(ii) Retraining takes time. In the short run, the unemployed and their families may face difficulties maintaining basic standards of living. The Singapore government has adopted schemes such as rebates on conservancy charges, freezing of repayment of housing as well as education loans to help low-income families.

<u>Conclusion</u>
Type of policy implemented depends on economic conditions of Singapore economy, which determines the type of unemployment faced.
The economic characteristics of Singapore economy are likely to cause Singapore to be highly susceptible to cyclical unemployment.
The depreciation of exchange rate is likely to be limited in the Singapore context due to the balance required in managing cost-push inflation and maintaining X competitiveness.
Supply side policies are suggested as it can also be used to manage cyclical unemployment as well. However, these policies are likely to take time for results to be seen.

Knowledge, application, understanding, analysis		
L1	· For an answer that is descriptive and lacks the use of economic framework/concepts in analysis · Glaring conceptual errors · Lacks application to Singapore context – Max 5 marks	1-5
L2	· Use of appropriate economic framework/concepts in analysis à AD-AS diagram · Sufficient scope of coverage è T-A structure, at least 2 policies aimed at reducing unemployment discussed · Sufficient depth of analysis · Discussed only cyclical unemployment · Some application to Singapore context.	6-8
L3	· Good use of economic framework/concepts in analysis à AD-AS diagram · Good scope of coverage on both cyclical and structural unemployment · Good depth of analysis · Good application to Singapore context.	9-11
Evaluation		
E1	· Unexplained judgement that is not supported by economic analysis	1-2
E2	· Evaluative assessment and judgement supported by economic analysis. Excellent synthesis in which the student is able to justify and arrive at a convincing stand (based on earlier arguments and counter arguments)	3-4

Name:		Index Number:		Class:	

DUNMAN HIGH SCHOOL
Preliminary Examination
Year 6

ECONOMICS
(Higher 2)
Paper 1

9732/1

25 September 2013
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 **8** printed pages, including this page.

[Turn over

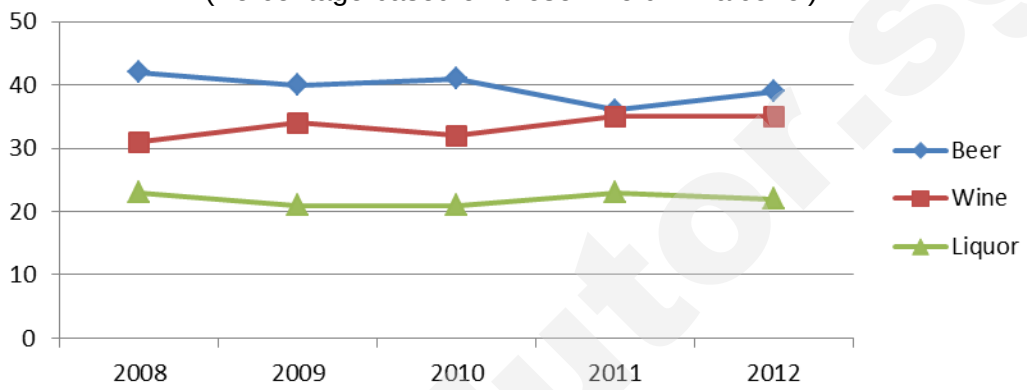
Answer **all** questions.

Question 1

The US Brewing Industry

Figure 1: Consumption of wine, beer and liquor in the USA

(Percentage based on those who drink alcohol)



Source: www.dailymail.co.uk

Extract 1: More American Drinkers Turning Against Beer

Few years ago beer was by far the most popular alcoholic drink across the country. But now trouble is brewing in the beer business, for Americans appear to be turning their backs on beer for a more refined taste of wine as beer prices are rising faster than Consumer Price Index.

Adapted from www.usnews.com, August 2012

Extract 2: Trouble brewing for the US Brewers as barley price increases

Dismal harvests for barley, weak dollar and farmers' shift to more profitable crops are set to drive up the price of barley and that will likely translate into more expensive brews. In the short term, barley prices are susceptible to weather conditions such as droughts, whereas in the long term, barley could become increasingly scarcer as demand for biofuel, such as corn-based ethanol increases. Furthermore, the weak dollar also has made it more expensive for the U.S. brewers to buy commodities from Europe.

The beer industry is the leading user of barley, an essential component of the brewing process. The rise in production costs will not likely have an effect on larger brewers until 2012. Brewers such as AB-InBev buy as much produce in advance as possible or have hedged pricing (longer contracts with barley producers, locking the price of barley), making them less susceptible to agro-market changes, said Eric Shepard, executive editor of Beer Marketer's Insights, Inc. The majority of the pressure is on the smaller brewers, he said. Microbrewers also known as 'Craft Brewers' in the U.S. will likely take more of a hit because they buy barley in smaller quantities and generally have shorter contracts with producers. Hence, the only alternative for craft beers to maintain profits is to increase the beer prices.

Adapted from www.uticaod.com, July 2011

Table 1: Leading Companies in the U.S Beer Market in 2010
(Market Share Percentage, By Volume)

	Company Name	% Share
1	AB-InBev	49.3
2	MillerCoors	30.2
3	Crown Imports (E.g. Corona)	5.3
4	Heineken USA	4.0
5	Pabst	2.7
6	Diageo-Guinness	1.2
7	Others	7.3

Source: The AAI Report, 2012

Extract 3: Tough to Swallow

AB-InBev, the world's biggest beer maker, announced it would take full control of Mexico's Grupo Modelo for more than $20 billion. A "tremendous opportunity", crowed AB InBev's boss, Carlos Brito. Mr Brito promised $600m of annual cost savings and other "synergies" from the deal, such as increased dividend payments and higher share values. He emphasised that the new merger will focus on reduction of redundant employment, and elimination of executive assistants and private secretaries for management. However, Mr Brito did not mention that it would give AB-InBev, which sells 48% of the beer consumed in America, more power over pricing in the world's second-biggest market (after China). But the country's Department of Justice thinks that is exactly what will happen. On January, it filed a lawsuit to block the deal.

American brewers generally follow AB InBev's lead in setting prices, the complaint noted. Modelo conspicuously does not. This makes Modelo "a particularly important competitor" in the American market, as customers can switch to Modelo and enjoy a greater variety at relatively lower prices. The merger would lead to increase in concentration, boost AB-InBev's market power to raise prices and stunt innovation, the Justice Department alleged. Thus, while the corporations and their shareholders will benefit, U.S. consumers have had to pay higher prices. However, the merger can also lead to cross nation exchange of experience and product differentiation, i.e., a mix of local and globally advertised brands.

Adapted from The Economist and The New York Times, February 2013

Extract 4: Little justification for alcohol taxation

With cities across the USA facing their fifth straight year of declining GDP and states cutting services and laying off workers, raising money from people who enjoy a cocktail is becoming an increasingly attractive option. Furthermore, alcohol taxation is warranted as it will make beverage alcohol more expensive, per capita consumption will decrease and with it the incidence of societal costs. The potential harm related to alcohol consumption can cover a range of economic, social and health outcomes both for those who drink and for others around them. Irresponsible or abusive drinking patterns contribute to lost productivity, absenteeism and poor workplace performance, as well as to the cost of healthcare for those injured as a direct or indirect result of their own or others' drinking.

However, taxation does not effectively target those who abuse after alcohol consumption or who have risky drinking patterns. The question of the external cost of alcohol use, as contrasted to alcohol abuse, is complex and paradoxical. It is complex because societal cost of alcohol consumption is associated mainly with abusers but both abusers and moderate drinkers

pay the tax because it is impossible to differentiate between the two at the point of sale. It is paradoxical because it is well known that moderate drinkers have above-average health, as compared to the abusers. Research has provided increasing evidence that moderate alcohol consumption is associated with a decreased occurrence of coronary artery disease and increased longevity. Thus, the health problems associated with abusers increase the medical insurance premium, an additional cost borne by moderate drinkers.

Alcohol taxes raise revenue by transferring money from those who continue to buy the taxed items straight to the coffers of the public treasury. This further lowers the validation of alcohol taxation as revenue generated from it is used for general spending and not education campaigns to reduce negative consequences of alcoholism.

Adapted from the New York Times, September 2011 and CATO Journal, Vol 15

Questions

(a) Compare the trends in wine and beer consumption between 2008 and 2011. [2]

(b) **(i)** Using a relevant elasticity concept, explain why the Americans are turning towards wine consumption. [2]

(ii) With the aid of diagrams, explain the impact of a rise in demand for corn-based ethanol on the price of US beer. [4]

(c) **(i)** Describe the type of market structure operating in the US brewing industry. [2]

(ii) With reference to the data where appropriate, discuss whether market concentration or cost of raw materials is the key factor in influencing US brewer's pricing decision. [8]

(d) Referring to Extract 4, explain why 'raising money from people who enjoy a cocktail is becoming an increasingly attractive option' for the US government? [2]

(e) Using the evidence from Extracts 3 and 4, to what extent should the U.S. government intervene in the market for alcohol? [10]

Question 2

Emerging Economies as Engines of Growth in the Global Economy

Extract 5: BRIC economies as future powerhouses

Following the global economic slowdown in 2009, emerging economies are leading the recovery with high rates of economic growth and increasing consumer demand. It is predicted that emerging markets will account for more than half of world GDP on the basis of purchasing power, according to the International Monetary Fund (IMF).

Among them, the four BRIC countries — Brazil, Russia, India and China — are identified as the future economic powerhouses. These countries are propelling the global recovery as their economic growth rates exceed global averages. With the 42% of the global population that reside within them becoming more affluent and seeking higher living standards, the rise of the BRIC consumer will only become more marked over the next decade.

A new trend which has influenced the flow of goods and services is that of intra-BRIC trade. Previously, the BRIC countries were seen as the factories and commodity suppliers to the world, but now they are working together as consumers and producers and trading with one another. Should we see a slowdown in the developed world, the BRIC countries are well positioned to ride out the storm.

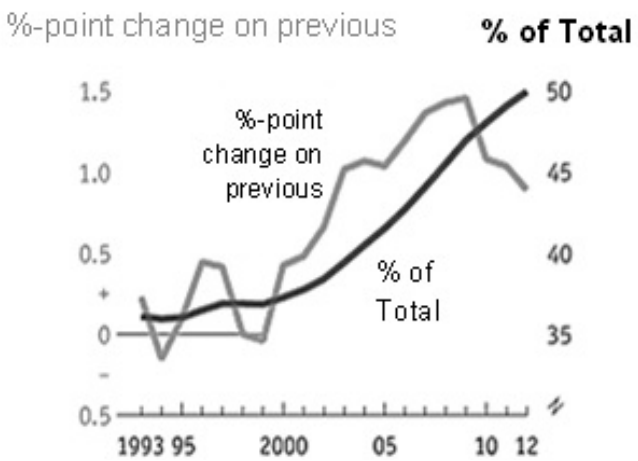
Adapted Source: The Telegraph, 11 Nov 2011

Table 2: Real Economic Growth (Annual %)

	2009	2010	2011	2012
World	-2.2	4.0	2.8	2.2
Brazil	-0.3	7.5	2.7	0.9
Russia	-7.8	4.5	4.3	3.4
India	8.5	10.5	6.3	3.2
China	9.2	10.4	9.3	9.4

Source: *World Trade Organisation Website,* accessed on 7 August 2013

Figure 2: Emerging-Market Share of world GDP



Source: IMF Website

Table 3: Selected Economic Statistics, 2011

	Annual real % growth in GDP	GDP per capita at 2005 market price in US$	Total trade as % of GDP	Exports as % GDP	Imports as % of GDP
USA	1.8	43,063	32	14	18
Brazil	2.7	5,721	25	12	13
India	6.3	1,107	54	24	30
China	9.3	3,348	68	31	37

Source: The World Bank Website

Extract 6: Risks of overheating rise in emerging economies

Since early 2011, risks of overheating have increased as inflationary pressures are rising in many of the emerging economies. The rising inflationary pressures are fuelled by high food and energy prices, a credit boom and rising asset prices like equities and real estate.

The emerging economies are taking mitigating policy actions like monetary tightening measures to cool down domestic economies. Since October 2010, China's central bank has raised its interest rate five times to 3.5% to curb food and property prices; Brazil, is also increasing taxes on foreign investors in order to slow down the flow of investments and curb inflationary pressures. However, the economic slowdown in the emerging economies could harm the global economy amid the uncertainties generated by the US and eurozone debt crisis.

Source: Euromonitor International, 24 October 2011

Table 4: Inflation Rate (Annual %)

	2009	2010	2011	2012
Brazil	4.9	5.0	6.6	5.4
Russia	11.7	6.9	8.4	5.1
India	10.9	12.0	8.9	9.3
China	-0.7	3.3	5.4	2.6

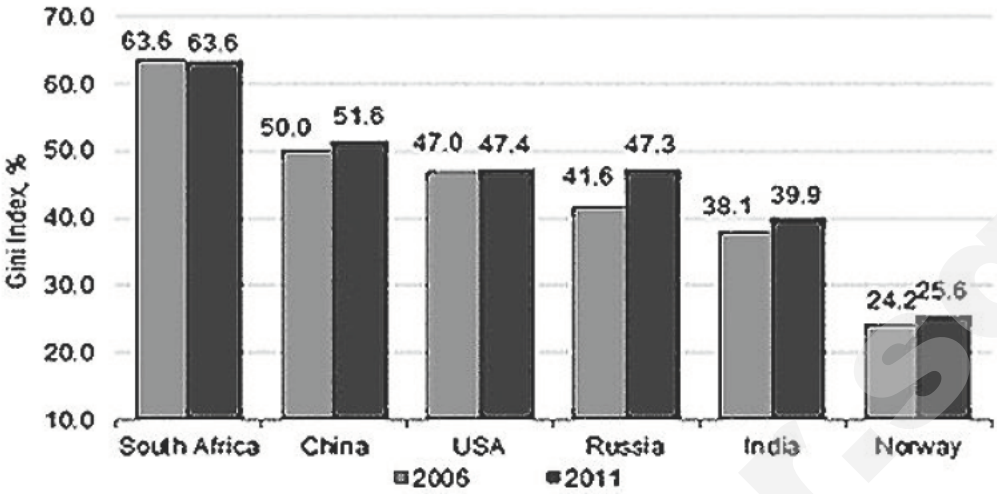
Source: OECD Website, accessed on 15 August 2013

Extract 7: Income inequality rising in emerging economies

Income distribution has become more uneven in the emerging economies as the benefits of rapid economic growth are unequally distributed, especially true in natural resources-rich nations where export revenues are controlled by a small elite. A lack of adequate government policy and resources to help the poor also contribute to poor distributions of income.

Rising income inequality is a source of concern as it can lead to social discontent and higher crime rates, in turn undermining investor confidence and adversely affecting the business environment and a country's economic growth.

Figure 3: Income Disparity in Selected Economies



Note: An economy that scores 0% on the Gini index has perfect equality, where every inhabitant has the same income. The higher the number over 0%, the higher the inequality, and a score of 100% indicates total inequality, where only one person receives all the income.

Source: Euromonitor International, 12 March 2012

Extract 8: BRIC nations rocked by aftershocks of eurozone crisis

The devastating slowdown in the European economies has shown that 'decoupling' – the idea that emerging countries would go on growing despite problems in the west – is a myth. Plunging demand from the markets of Europe, many of which remain deep in recession, and collapsing global confidence in politicians' ability to stop the rot, has ruthlessly exposed the weaknesses of emerging markets.

Most analysts expect the radical shift of economic power from the west to the emerging markets to continue but as Europe and the US turn inwards to tackle their own crises, it could be a tough couple of years for the BRICs.

Adapted Source: *The Observer*, 24 June 2012

Extract 9: New-wave economies going for growth

Economists say there are a number of key factors that will allow emerging countries to grow more quickly than the mature markets of the west. Firstly, they must have sound macro-economic policies, including control of inflation and budget deficits. Secondly, they must invest in human capital and improve their educational standards. Thirdly, they must be able to import new technologies from the west. Finally, they must have young and growing populations.

Source: The Guardian, 18 December 2012

Questions

(a) **(i)** Compare the growth rates of the BRIC countries between 2009 and 2011 shown in Table 2. [2]

(ii) Explain how the growth rates in the BRIC countries have affected the pattern of trade. [2]

(b) **(i)** Using a diagram, explain the causes of inflation faced by emerging economies. [4]

(ii) Discuss whether the measures adopted in China and Brazil are effective in curbing their inflationary pressures. [8]

(c) Explain whether governments in emerging economies should intervene to reduce income disparity. [4]

(d) Assess whether emerging economies can really be the 'Engines of Growth in the Global Economy'. [10]

Case Study Question 1 - Answer and Mark Scheme:

(a) Compare the trends in wine and beer consumption between 2008 and 2011. [2]

- Consumption of beer in the USA has always been higher than the consumption of wine. [1m]
- US consumption of beer as a percentage of those who drink fell from 2008 to 2011, while that for wine increased during the same period. [1m]

Note: Answers that state "US beer consumption fell from 2008 to 2011 while that for wine increased" will be marked incorrect as the values are percentage NOT absolute figures.

(b) (i) Using a relevant elasticity concept, explain why the Americans are turning towards wine consumption. [2]

Identify the relevant elasticity concept **[1m]:** Beer and wine both being alcoholic drinks are close substitutes in consumption, **with cross elasticity of demand being more than 1.**

Reasoning **[1m]:** As evident from extract 1, "beer prices are rising faster than Consumer Price Index." As beer price increases, by law of demand it will lead to a fall in quantity demanded, ceteris paribus. Although there is no change in absolute price of wine, its relative price becomes lower. Consumers who were previously consuming beer will switch over to consume wine, thus increasing the demand for wine.

(ii) With the aid of diagrams, explain the impact of a rise in demand for corn-based ethanol on the price of US beer. [4]

Corn-based ethanol and barley are in competitive supply [1m]

- Both corn and barley are in competitive supply, as they required the same factor of productions, such as land and fertilizers. An increase in demand for corn-based ethanol will increase the derived demand for corn from D_0 to D_1 in fig 1(a), signaling a rise in price of corn. Farmers will increasingly shift towards planting more corn and increasing the quantity supplied of corn from Q_0 to Q_1. This will result in fall in supply of barley, from S_0 to S_1 in fig 1(b).
- *Evidence from Extract 2*: "barley could become increasingly scarcer"

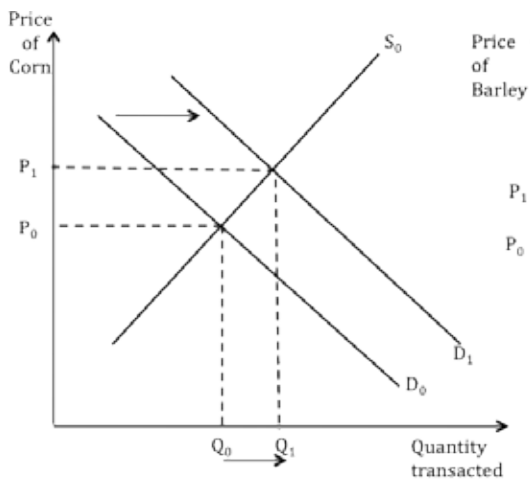


Fig 1(a): Market for Corn

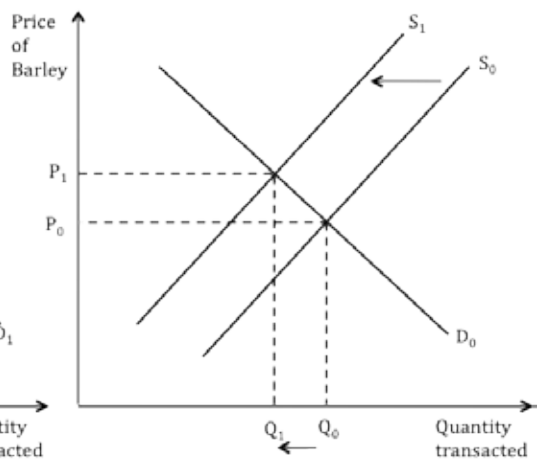


Fig 1(b): Market for Barley

Explanation of the price-adjustment process with diagrams [2m]

- The fall in supply of barley will create a shortage at the initial equilibrium price, P_0 in Fig 1(b) à Consumers who strongly want to consume barley will be willing and able to pay a price higher than current equilibrium price. Producers observing such behavior of consumers (prices are increasing) are more willing and able to increase the quantity of barley supplied. However, as prices increase, some consumers whose utility of consuming barley is not maximized at price higher than equilibrium price will decide to leave the market. Thus as prices of barley rises, quantity demanded falls. This process will continue and stop when the demand and new supply of barley meets each other at the higher equilibrium price, P_1.

Increase in price of barley, increases the cost of production of beer, thus resulting in a rise in price of beer [1m]

- Increase in price of barley, will increase the cost of production of beer, as "the beer industry is the leading user of malting barley, an essential component of the brewing process", evident from Extract 2.
- With increase in cost of production, producer will decrease the quantity supplied of beer at each and every price level, reducing the supply of beer.
- This will result in a shortage and price of beer will go up to clear the market.
- The new equilibrium price of beer will rise up to P_1 from P_0.

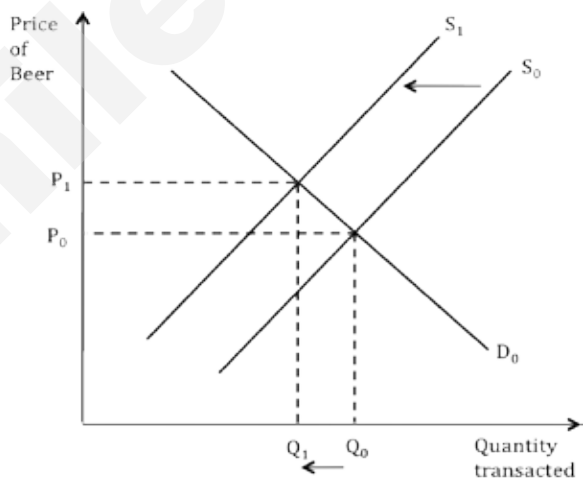


Fig 1(c): Market for Beer

Overall, an increase in demand for corn-based ethanol will increase the price of US beer.

(c) (i) Describe the type of market structure operating in the US brewing industry. [2]

Identify the market [1m]: Oligopoly (or, duopoly)

Use Table 1 as evidence [1m]: Market is concentrated in the hands of few firms, such as AB-InBev and MillerCoors, owning approxiamtely 79.5 % market share.

(ii) With reference to the data where appropriate, discuss whether market concentration or cost of raw materials is the key factor in influencing US brewer's pricing decision. [8]

1. Explain how market concentration affect firm's pricing decision

As identified in c(i), the alcohol industry is a highly concentrated market exhibiting strategic interdependence in oligopolies, i.e. the actions of a major firm in the oligopoly typically cause reactions by the other firms in the industry.

Oligopolists pricing decisions may be undertaken for strategic reasons, independent of input cost.

A) The Kinked Demand Curve Model

With a rise in input cost, firms in the alcohol industry may not raise prices.

Firms, looking to protect and maintain their market share, are unlikely to match another's price increase but may match a price fall. For example, if one firm lowers its price, other firms will lower their price in order to remain competitive. This will cancel out any potential benefits of a price reduction, as the firm initiating the price cut will not be able to lure many customers away from his rivals. But if the firm increases its price, rivals firms are unlikely to react because they will gain as customers turn to their products, which are now relatively cheaper. If this theory holds true, then an oligopolist's demand curve will be kinked at the prevailing price – more elastic above the prevailing price but less elastic below the prevailing price. Associated with each demand curve (AR) is its MR. This explains why at the kink of the demand curve, the MR is discontinuous.

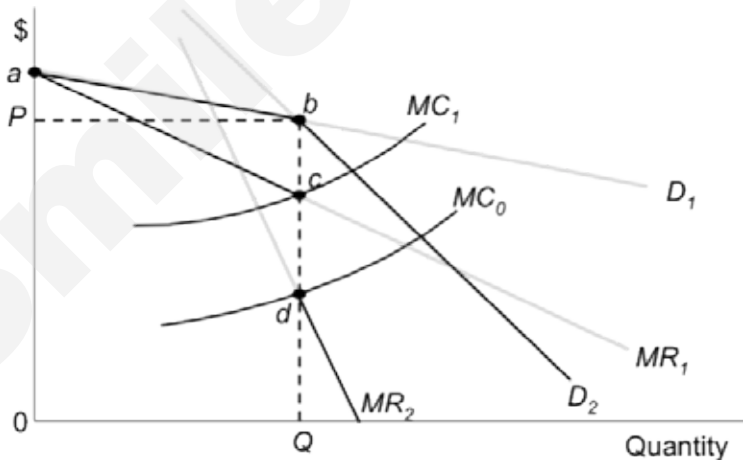


Fig 2: The Kinked Demand Curve explaining price rigidity

Since the profit maximising output level is where MR = MC, any MC curve between the upper limit of MC_1 and a lower limit of MC_0 intersects MR at quantity OQ and price OP. In other words, the oligopoly is reluctant to raise prices even as its marginal cost increases from MC_0 to MC_1.

This results in price rigidity. Price remains unchanged over a wide range of costs.

B) Hedged Pricing

Evidence from extract 2: "The rise in production costs will not likely have an effect on larger brewers". This is because the large firms in the alcohol industry, such as AB-InBev, has high bargaining power to engage in hedged pricing, whereby they form longer contracts with barley producers and thus lock the price of barley. This makes the large firms less susceptible to fluctuations in cost of raw materials.

2. Explain how rise in cost of raw materials will affect firm's pricing decision

As evidence from extract 2, barley prices are increasing due to (i) dismal harvest and (ii) increase in demand for biofuels à both resulting in a fall in supply and hence an increase in price of barley. Barley being an essential component of the brewing process for the beer industry, an increase in price of barley will increase the marginal cost of production of beer, thus shifting the MC curve from MC_0 to MC_1.

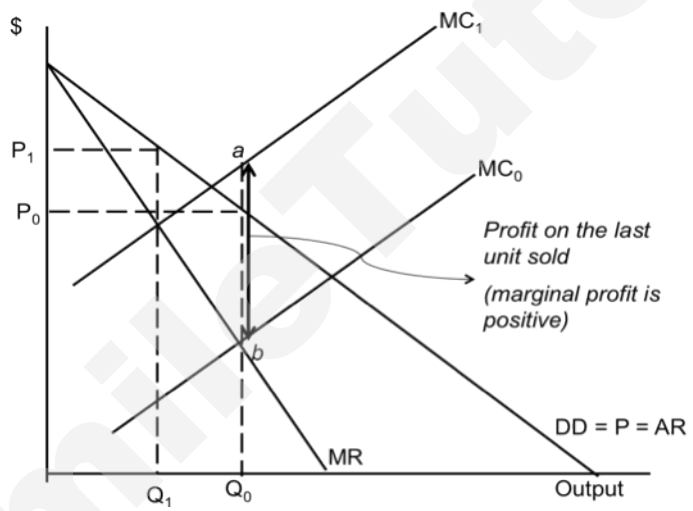


Fig 3: Increase in price due to increase in input cost

Explain the adjustment process:

At the original output Q_0, MC (aQ_0) > MR (bQ_0) à the last unit sold adds more to firm's cost than it does to firm's revenue à to avoid the loss on the marginal unit of output firm would reduce output à it will continue to cut output up to the point where MR = MC_1 à *last unit produced adds as much to the firm's revenue as it does to the firm's cost* and firm's profits cannot increase further by decreasing production. The new profit-maximising output is at Q_1 and firm charges price P_1, up from the original P_0

Evidence from Extract 2:

Microbrewers also known as 'Craft Brewers' in the U.S, likely will take more of a hit from rise in price of barley. Hence, the only alternative for craft beers to maintain profits is to increase the beer prices.

Evaluation

3. Identify and explain the key factor in influencing US brewer's pricing decision.

Judgement:
Market concentration is the key factor influencing firms' pricing decision.

Specifically, in industries with low market concentration, firms' pricing decisions depend largely on cost conditions. Conversely, in industries dominated by a few large firms (high market concentration), firms' pricing decisions are less sensitive to cost conditions and more sensitive to the reactions by rival firms in the same industry.

Reasoning:

- Low market concentration à thin profit margins, mostly making normal profits in the LR, limited reserves to sustain protracted losses à firms unable to deviate from the profit-maximising output where MC = MR for long à any change in input cost (MC) à firms adjust output and price accordingly
- High market concentration à firms tend to make supernormal profits both in the SR and LR à room to choose output / price that does not necessarily maximize profits yet still avoid losses à less responsive to changes in input prices, able to deviate from profit-maximising behavior in the SR

Mark Scheme

L3 (6-7)	For an answer that · demonstrates depth and scope, i.e. consistently uses economic framework (Revenue & Cost curves) to analyse the effects of market concentration and input cost on firms' pricing, using the marginalist principle, **with well explained diagrams** · explicit reference to the case material
L2 (3-4)	For an answer that · attempts to use economic framework (Revenue & Cost curves) to analyse the effects of the two factors on firms' prices · is lacking in either depth or scope (weak analysis of the marginalist principle) · is largely theoretical, limited application to the case material
L1 (1-2)	For an answer that · is largely descriptive · does not attempt to answer the question
E (1-2)	· Elaborated on the reasoning behind the given judgement (2m) · Stated judgement with weak substantiation (1m)

(d) Referring to Extract 4, explain why 'raising money from people who enjoy a cocktail is becoming an increasingly attractive option' for the US government? [2]

Significant increase in tax revenue collected [1m]:

- Decrease in supply: Increase in indirect tax rates on cocktail will increase marginal cost of supplying cocktails in the market, decreasing supply and prompting producers to increase the minimum price that they are willing and able to accept to supply the same unit of the good.
- Demand for alcoholic beverages being price inelastic due to its addictive nature an increase in price from P_0 to P_1 will result in a less than proportionate fall in quantity demanded from Q_0 to Q_1 and TR (inclusive of tax revenue) will increase.
- Consumers will bear a larger incidence of tax: As demand is price inelastic producers will be able to pass on the indirect tax to consumers in the form of higher price.

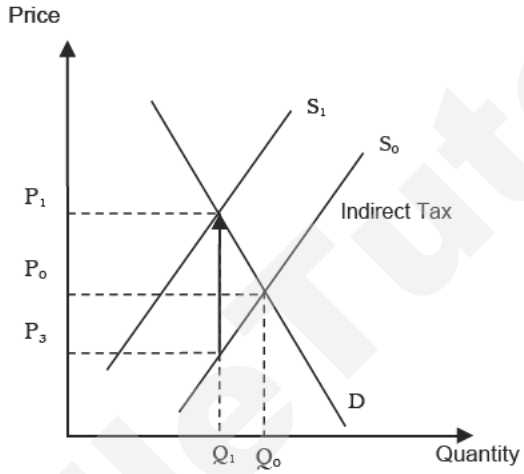


Figure 4: Incidence of specific tax on cocktails (Inelastic demand)

Why 'increasingly attractive'? As tax revenue from other sources such as income tax is falling [1m]:

- Evidence from Extract 4, "with cities across the USA facing their fifth straight year of declining GDP and states cutting services and laying off workers".
- This implies a fall in tax revenue collected from alternative sources, such as income tax, because of rising unemployment and falling GDP.

(e) Using the evidence from Extracts 3 and 4, to what extent should the U.S. government intervene in the market for alcohol? [10]

Thesis Statement: **The US government should intervene in the market for alcohol if alcohol production and consumption fail to meet the government's goal of efficiency.**

1. Two main sources of market failure in the market for alcohol are:
   (i) generation of negative externalities in the consumption of alcohol
   (ii) market dominance by firms causing a restriction in output

(i) **Generation of negative externalities in the consumption of crude oil**

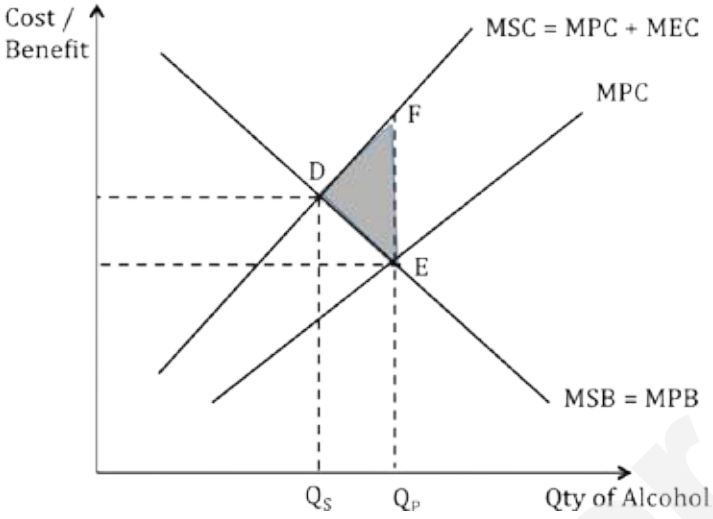


Fig 5: Market Failure due to Negative Externalities in Consumption of Alcohol

- Explain the divergence between MPC and MSC, due to the external cost on third-parties not directly involved in the consumption of alcohol

  Evidence from Extract 4: "The potential harm related to alcohol consumption can cover a range of economic, social and health outcomes both for those who drink and for others around them. Irresponsible or abusive drinking patterns contribute to lost productivity, absenteeism and poor workplace performance, as well as to the cost of healthcare for those injured as a direct or indirect result of their own or others' drinking."

  Thus, the MSC is more than the MPC of alcohol consumption, as illustrated in Fig 4.

- Private benefit of alcohol consumption is the higher utility derived and "decreased occurrence of coronary artery disease and increased longevity" due to moderate alcohol consumption, as evident from Extract 4.

- Private cost includes the implicit cost of alcohol consumption, such as increased cost of healthcare and the explicit cost, such as the cost of purchase of a bottle of wine or a barrel of whiskey.

- **State the implicit assumptions:**
  1) *Individuals are motivated by self-interest*: In the absence of government intervention, consumers only take into account private costs and private benefits, ignoring the negative costs incurred by third parties.

  2) *Alcohol consumption does not confer positive externalities on third parties*, that is, its marginal social benefit (MSB) is equivalent to marginal private benefit (MPB).
- **Derive the deadweight loss triangle:**
  Rational individuals only consider MPB against MPC and ignore external costs, they will consume alcohol up to Q_p, where MPB = MPC. However,

the socially optimal quantity of alcohol that should have been consumed occurs at quantity Q_s, where MSB = MSC. Hence there is an over-consumption of alcohol by the amount Q_sQ_p. This leads to a deadweight loss of area DEF as the additional costs to society of producing Q_sQ_p (area DEQ_pQ_s) exceed the additional benefits to society (area DFQ_pQ_s).

- **<Link>** The government thus needs to step in to reduce the over consumption of alcohol. The extent of intervention depends on the extent of the MEC. The greater the MEC, the greater the overconsumption and hence the greater the intervention.

(ii) **Market dominance by firms causing a restriction in output**

The alcohol industry in US is likely oligopolistic due to high market concentration.

Evident from Extract 3, the US Department of Justice highlighted the merger between AB-InBev (which sells 48% of the beer consumed in America) and Grupo Modelo will give more power to AB-InBev over pricing. This shows that AB-InBev will have significant market power (owning over 50% market share) and possess the ability to restrict output in order to maximise profits. Due to output restriction, there is underproduction of the good leading to allocative inefficiency, which warrants government intervention.

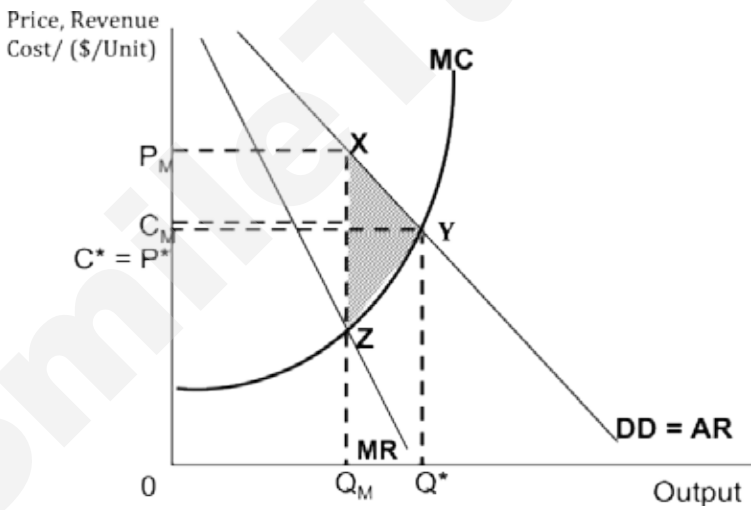


Fig 6: Market failure due to Market dominance

Explanation of Market failure due to Market dominance:

1. Downward sloping demand curve:
In the alcohol industry, firms such as AB-InBev possess very strong market power, as illustrated in Table 1 owning almost 50% market share in the US. Hence, a AB-InBev faces a downward sloping demand curve, shown by DD=AR in Fig 2. As it would most likely want to profit maximise, it would produce at output Q_M where marginal cost (MC) = marginal revenue (MR) and set at a high price at P_M.

2. **Allocative Inefficiency**
The problem is that at this output, price exceeds marginal cost (P > MC), this

resulting in allocative inefficiency as the value (price) that consumers place on the product is more than the cost of the resources used to produce that additional unit.

3. **Under-production of the good**
Thus, by restricting output to Q_M, there is an underproduction of this good by Q_mQ^* and there is a misallocation of resources as fewer resources are allocated to produce this good than is socially optimal at Q*, where P=MC, ie, where the marginal benefit to society of consuming that last unit of the good is equivalent to the marginal cost of producing it.

4. **Derivation of the deadweight loss triangle**
This creates a deadweight loss of XYZ to society since the potential benefits of consuming Q_MQ^*, given by area XYQ_MQ^*, exceeds the potential costs (area ZY Q_MQ^*), implying that the potential net benefits to society of consuming alcohol are not fully reaped.

<Link> The government hence needs to intervene in the market for alcohol to (i) correct the problem of underproduction in order to achieve allocative efficiency and (ii) help reduce to issue of productive inefficiency by getting firms increase output à reap more IEOS à produce nearer to MES.

The extent of its intervention depends on the extent of underproduction arising from all firms in the industry.

Antithesis Statement: **The US government may not choose to intervene in the market for alcohol despite the inefficiencies.**

Government may choose to intervene in the market in order to correct market failure arising from negative externalities through the use of pigovian taxes.

1. Taxation to correct negative externalities generated from alcohol consumption may not effective.

Evidence from Extract 4: "taxation does not effectively target those who abuse after alcohol consumption or who have risky drinking patterns."

Firstly, it is complex to impose tax on alcohol abusers. The external cost of alcohol consumption is associated mainly with abusers but both abusers and moderate drinkers pay the tax because it is impossible to differentiate between the two at the point of sale.

Secondly, taxation on alcohol consumption may actually impose a higher explicit cost to society. As research has shown that moderate alcohol consumption is associated with a decreased occurrence of coronary artery disease and increased longevity. Thus, moderate drinkers not only bears a higher private cost due to increased medical insurance premium but also a higher tax payments from alcohol consumption, even though they enjoy above average health conditions.

2. Taxation on alcohol consumption does not solve the root cause of the problem of societal cost associated with abusers.

Evidence from Extract 4: "Alcohol taxes raise revenue by transferring money from those who continue to buy the taxed items straight to the coffers of the

public treasury. This further lowers the validation of alcohol taxation as revenue generated from it is used for general spending and not education campaigns to reduce negative consequences of alcoholism."

3. Increased Market Concentration can reduce productive inefficiency, X-inefficiency and increase variety due to product differentiation.

Evident from Extract 2:

Firtly, the merger between AB-InBev, the world's biggest beer maker and Mexico's Grupo Modelo, will result in reduction in redundant cost and therefore, X-inefficiency. AB InBev's boss, Mr Carlos Brito promised, "$600m of annual cost savings and other "synergies" from the deal, such as increased dividend payments and higher share values." This will increase the welfare of the company's shareholders. Furthermore, "the new merger will focus on reduction of redundant employment, elimination of executive assistants and private secretaries for management", thus reducing cost of production without having to reduce output. This cost savings can be passed on to the consumers in the form of lower prices, thus increasing consumer welfare.

Secondly, the merger can also lead to cross-nation exchange of experience and product differentiation, i.e., a mix of local and globally advertised brands, thus increasing variety for consumers to enjoy.

<Link> Hence increased market concentration with merger has the potential to increase variety, productive efficiency and reduce X-inefficiency, justifying no government intervention due to increased market dominance.

4. Imperfect information resulting in government failure.

Government failure occurs when the government ***deepens market inefficiencies*** through its intervention.

Due to information imperfection, government intervention might fail because it might over-estimate the size of the negative externality and therefore impose a tax, which far exceeds the size of the MEC. In Fig 6 below, the overestimation of the MEC leads to an excessive tax which causes MPC to rise to MPC + tax, resulting in the consumption of Qt units of alcohol < socially optimal level of output Q_S. The associated deadweight loss is given by shaded area DGH> DEF à worsening of allocative inefficiency à government failure.

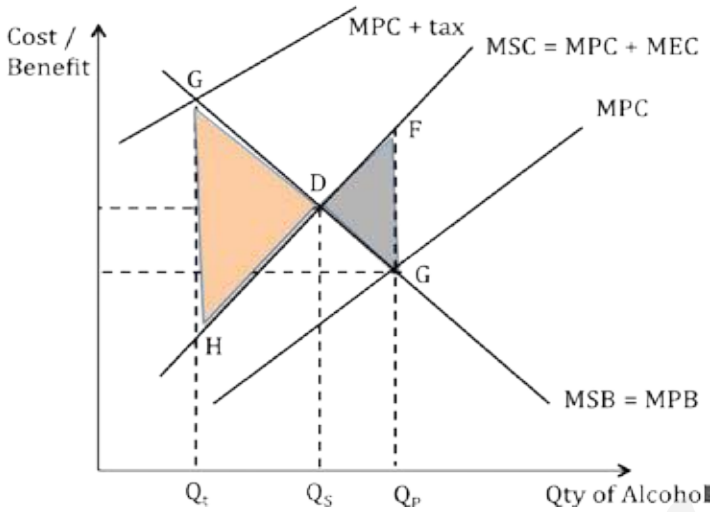


Fig 7: Government Failure due to over-taxation

Evaluation:

The extent of government intervention therefore depends on

- Relative size of the 2 inefficiencies à whether they are of comparable size and cancel each other out
- Availability and cost of government obtaining an accurate set of information for intervention
- Cost of government intervention: Whether cost of government intervention can be justified in terms of the potential gains from DWL removal

Mark Scheme

L3 (6-8)	For an answer that · demonstrates depth and scope, <u>i. Scope:</u> At least three factors affecting the extent of government intervention is identified. <u>ii. Depth:</u> Rigour in development § Relevant economic framework and **diagrams are used effectively.** § Points are **well-exemplifed** § Argument is balanced. § Contains **strong reference** to relevant case material.
L2 (4-5)	For an answer that · is lacking in either depth or scope · is largely theoretical, limited application to the case material · Minor conceptual error · Max 5 for unbalanced answer. · Max 5 for weak reference to case material.
L1	For an answer that

(1-3)	· is largely descriptive · does not attempt to answer the question
E (1-2)	2m for · Rationalising the extent of government intervention based on one or more criteria · Elaborated on the reasoning behind the given judgement 1m for · Stated judgement with weak substantiation

Case Study Question 2 - Answer and Mark Scheme:

(a) (i) Compare the growth rates of the BRIC countries between 2009 and 2011 shown in Table 2. [2]

	2009	2010	2011	2012
World	-2.2	4.0	2.8	2.2
Brazil	-0.3	7.5	2.7	0.9
Russia	-7.8	4.5	4.3	3.4
India	8.5	10.5	6.3	3.2
China	9.2	10.4	9.3	9.4

The growth rate peaked in 2010 for all the 4 countries.
Only the growth rate of India fell over the given period, the rest increased.
China consistently achieved the highest growth rate over the period

(Any two points of comparison for 2 m)

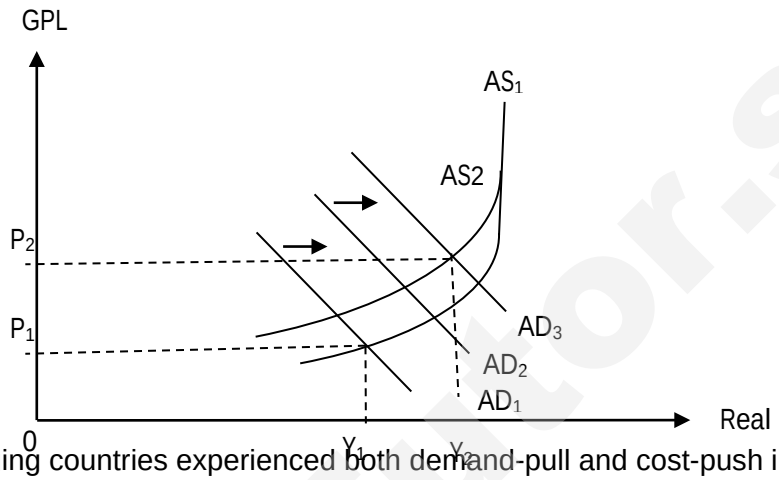
(ii) Explain how the growth rates in the BRIC countries have affected the pattern of trade. [2]

From Extract 5
Among them, the four BRIC countries — Brazil, Russia, India and China — are identified as the future economic powerhouses. These countries are propelling the global recovery as their economic growth rates exceed global averages. With the 42% of the global population that reside within them becoming more affluent and seeking higher living standards, the rise of the BRIC consumer will only become more marked over the next decade.

A new trend which has influenced the flow of goods and services is that of intra-BRIC trade. Previously, the BRIC countries were seen as the factories and commodity suppliers to the world, but now they are working together as consumers and producers and trading with one another. Should we see a slowdown in the developed world, the BRIC countries are well positioned to ride out the storm.

BRIC countries experienced growth rate higher than the global average-> HH Y increases relative to the rest of the world -> higher purchasing power -> greater ability to import goods and service. -> change in trade patterns – change in the trade direction (exporter to importer), change in trade volume (increasing export and import) and change in trading partners (increase intra-BRIC trade)

(Any two changes to trade pattern to achieve 2 m)

(b)	(i) Using a diagram, explain the causes of inflation faced by emerging economies. *Extract 6: Since early 2011, risks of overheating have increased as inflationary pressures are rising in many of the emerging economies. The rising inflationary pressures are fuelled by high food and energy prices, a credit boom and rising asset prices like equities and real estate.*  The emerging countries experienced both demand-pull and cost-push inflation · Emerging economies are overheating, i.e facing demand-pull inflation. The excessive increase in aggregate demand could be due to a credit boom leading and rising asset prices like equities and real estate. The increase in wealth leads to increase in aggregate demand (from AD1 to AD3) which persistently exceed aggregate supply causing shortages and hence an upward pressure on prices. · Emerging countries might also be experienced high food and energy prices leading to increase in unit cost of production from AS1 to AS2 -> cost-push inflation. Increase in AD and fall in AS -> exert inflationary pressure on the emerging economies (2 m for well-labeled diagram which should be referred to when explaining the causes 2 m for explaining the causes of demand-pull inflation. Cost-push inflation is not necessary to gain full marks)	[4]

(ii) Discuss whether the measures adopted in China and Brazil are effective in curbing their inflationary pressures. [8]

Extract 6
The emerging economies are taking mitigating policy actions like monetary tightening measures to cool down domestic economies. Since October 2010, China's central bank has raised its interest rate five times to 3.5% to curb food and property prices; Brazil, is also increasing taxes on foreign investors in order to slow down the flow of investments and curb inflationary pressures. However, the economic slowdown in the emerging economies could harm the global economy amid the uncertainties generated by the US and eurozone debt crisis. (Oct 2011)

Table 4: Inflation Rate (Annual %)

	2009	2010	2011	2012
Brazil	4.9	5.0	6.6	5.4
Russia	11.7	6.9	8.4	5.1
India	10.9	12.0	8.9	9.3
China	-0.7	3.3	5.4	2.6

Table 2: Real Economic Growth (Annual %)

	2009	2010	2011	2012
World	-2.2	4.0	2.8	2.2
Brazil	-0.3	7.5	2.7	0.9
Russia	-7.8	4.5	4.3	3.4
India	8.5	10.5	6.3	3.2
China	9.2	10.4	9.3	9.4

Extract 7: The devastating slowdown in the European economies has shown that 'decoupling' – the idea that emerging countries would go on growing despite problems in the west – is a myth. Plunging demand from the markets of Europe, many of which remain deep in recession, and collapsing global confidence in politicians' ability to stop the rot, has ruthlessly exposed the weaknesses of emerging markets.

China implemented contractionary MP: increase i/r -> increase cost of borrowing -> fall in demand for food and property prices -> fall in AD -> fall in inflationary pressure
Brazil adopted contractionary FP: increase tax for FDI -> fall In rate of return of FDI -> fall in I -> fall in AD -> fall in inflationary pressure

Highlight measurement of effectiveness – whether if there is a fall in inflation rate with the implementation of the policies (best if it can be done without compromising economic growth)

Need to look at evidence from data to assess effectiveness of policies

- China – Inflation rate fell from 5.4% to 2.6%
- India – Inflation rate increases from 8.9% to 9.3%

China's MP seems more effective than India's FP.

- China's real economic growth rate increases from 9.3% to 9.4%
- India's real economic growth rate fell from 6.3% to 3.2%

This is another indication that China's MP is more effective

Judgment

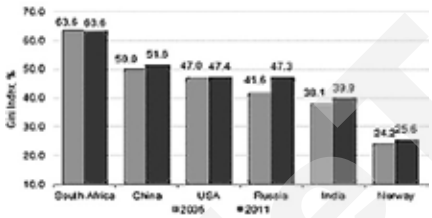
- Cannot conclude on effectiveness of policies since ceteris paribus assumption cannot hold true. However, conclusion on effectiveness of policies can be made only if we assume ceteris paribus. The fall in inflation rate in China could be due to plunging dd in Europe and not due to its contractionary MP. Economic downturn in US and Euro debts -> fall in dd for gds from China -> falling X from China -> fall in inflationary pressure
- Too short a time frame to conclude that India's contractionary FP does not work. There may be time-lag and the policy may be effective in the longer term

L1 (1 – 3 m)	Merely explain how the policies work to curb inflation without commenting on effectiveness or generic comments on effectiveness of demand-management policies were made without reference to data
L2 (4 – 6 m)	Explain how the policies work in the respective countries and comment on effectiveness of the policies using evidence from the data provided.
E (1 – 2 m)	Make a judgment on the effectiveness of the policies based on the given data.

(c) Explain whether governments in emerging economies should intervene to reduce income disparity. [4]

Extract 7:
Rising income inequality is a source of concern as it can lead to social discontent and higher crime rates, in turn undermining investor confidence and adversely affecting the business environment and a country's economic growth.

Figure 3: Income Disparity in Selected Economies



Rationale for government intervention to reduce income disparity. Rising income disparity -> social discontentment -> strikes -> disrupt production -> fall in productivity -> fall in rate of return of investment + fall in investors' confidence -> fall in I -> fall in AD and AS -> fall in actual and potential economic growth

But there are costs as well. Reducing income disparity means -> redistributing income from rich to poor through progressive taxation or subsidies -> may lead to disincentive to work and invest.

Judgment (good to have) - Based on Fig 3, severity of income disparity varies across the countries (based on Gini coefficient). May not be necessary for all emerging countries to reduce income disparity

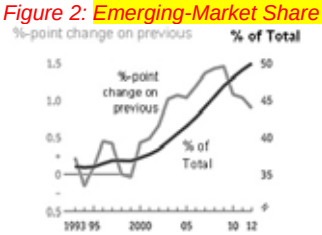
(2 marks for thesis and 2 marks for antithesis. No need for judgment)

(d) Assess whether emerging economies can really be the 'Engines of Growth in the Global Economy'. [10]

Extract 5:
Following the global economic slowdown in 2009, emerging economies are leading the recovery with high rates of economic growth and increasing consumer demand. It is predicted that emerging markets will account for more than half of world GDP on the basis of purchasing power, according to the International Monetary Fund (IMF).

Among them, the four BRIC countries — Brazil, Russia, India and China — are identified as the future economic powerhouses. With the 42% of the global population that reside within them becoming more affluent and seeking higher living standards, the rise of the BRIC consumer will only become more marked over the next decade.

Figure 2: Emerging-Market Share of world GDP



Source: IMF Website

Table 3: Selected Economic Statistics, 2011

	Annual real % growth in GDP	GDP per capita at 2005 market price in US$	Total trade as % of GDP	Exports as % GDP	Imports as % of GDP
USA	1.8	43,063	32	14	18
Brazil	2.7	5,721	25	12	13
India	6.3	1,107	54	24	30
China	9.3	3,348	68	31	37

Source: The World Bank Website

Extract 8: BRIC nations rocked by aftershocks of eurozone crisis
The devastating slowdown in the European economies has shown that 'decoupling' – the idea that emerging countries would go on growing despite problems in the west – is a myth. Plunging demand from the markets of Europe, many of which remain deep in recession, and collapsing global confidence in politicians' ability to stop the rot, has ruthlessly exposed the weaknesses of emerging markets.

Extract 9: New-wave economies going for growth
Economists say there are a number of key factors that will allow emerging countries to grow more quickly than the mature markets of the west. Firstly, they must have sound macro-economic policies, including control of inflation and budget deficits. Secondly, they must invest in human capital and improve their educational standards. Thirdly, they must be able to import new technologies from the west. Finally, they must have young and growing populations.

Source: The Guardian, 18 December 2012

Introduction
'Engines of growth in the global economy' means 'forces that drive economic growth in the global economy.
Thesis
Extract 5 seems to suggest that emerging countries can be the engines of growth in the global economy.

- Following the global economic slowdown in 2009, emerging economies are leading the recovery with high rates of economic growth -> increasing consumer demand -> drive global demand
- IMF predicted that emerging markets will account for more than half of world GDP on the basis of purchasing power. High purchasing power -> high demand for imports -> helps in X dd of trading partners -> spur economic growth of its trading partners -> drive global demand
- The four BRIC countries — Brazil, Russia, India and China made up 42% of the global population. Huge domestic market -> can generate X dd for its trading partners -> drive global demand

Figure 2 – shows that output of emerging countries increasing and accounting for more than 50% of world GDP by 2012

Anti-thesis

- Figure 2 also shows that rate of increase in emerging market's share of GDP has been falling since 2009. Table 2 also showed a fall in growth rate in 2012 (with the exception of China). Sustainability to drive economic growth is questionable.
- Extract 6 stated that the plunging demand of the European market would affect the emerging countries adversely -> emerging countries are still very much dependent on the European countries and not yet an engine of growth.
- Table 3 only showed the GDP per capita of the three economic power house (Brazil, China and India) but without the GDP figures, cannot determine the

size of the economy and whether they can really be engines of growth. In any case only three of the countries, not conclusive.

Based on Extract 9, Economists say there are a number of key factors that determine whether emerging countries can be the engines of economic growth - .

- Firstly, they must have sound macro-economic policies, including control of inflation and budget deficits -> control the increase in AD
- Secondly, they must invest in human capital and improve their educational standards -> increase AS.
- Thirdly, they must be able to import new technologies from the west -> increase productivity -> increase AS
- Finally, they must have young and growing populations -> increase AS

From above, we see that whether emerging countries can be engines of global economic growth depends on the ability of its govt to resolve its domestic problems (inflationary pressure due to structural rigidity and rising income disparity) and increase the quality and quantity of its resources to achieve non-inflationary economic growth.

Judgment
Perhaps only the BRICs have the potential to be the engines of economic growth at this point in time. However, given that the emerging countries are still developing and have available resources -> potential for economic growth.

L1 (1 – 3 m)	Do not understand the meaning of 'engine of economic growth'. Answer it as whether the emerging economies can continue to achieve economic growth.
L2 (4 – 6 m)	Understand the meaning of the term 'engine of economic growth' but answer is lop-sided.
L3 (7 – 8 m)	A balanced discussion on whether emerging countries can or cannot be the engine of growth using evidence from the data provided.
E (1 – 2 m)	Make a judgment based on economic reasoning

Name:		Index Number:		Class:	

DUNMAN HIGH SCHOOL
Preliminary Examination
Year 6

Economics
(Higher 2)
Paper 2 Essay Questions

9732/2

16 September 2013
2 hour 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. China experienced a slowdown in GDP growth in the aftermath of the Eurozone crisis. Under the European Union (EU)-China Free Trade Agreement (FTA), China is reducing tax rates on European goods, ranging from Louis Vuitton accessories to beverages and tobacco.

   (a) Explain how China's reduction in tax rates might affect expenditure by Chinese consumers on the different types of European goods. [8]

   (b) Assess the impact of the above changes on the sales volume of different types of goods both in EU and in China. [17]

2. Restaurants across Singapore are engaging in differential pricing strategy, whereby weekend dinners pay more than weekday customers and special discounts are offered to both students and senior citizens alike.

   (a) Explain how restaurants in Singapore discriminate buyers by charging different prices for the same meals. [8]

   (b) Discuss the extent to which barrier to entry is the most important factor influencing a firm's behaviour in your country. [17]

3. Governments across the world play an active role in intervention, whether to reduce the growing income inequality or to address market failure.

   (a) Explain the role of prices in resource allocation in a market economy. [10]

   (b) Assess whether government intervention in markets is always justified. [15]

Section B

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

4. The ultimate goal of all governments is to improve the general standard of living of its population.

   (a) Explain how a government can improve the current and future standard of living of its population. [12]

   (b) Discuss the extent to which a government can assess that its goal to improve the general standard of living of its population has been achieved. [13]

5. (a) Explain what would affect the effectiveness of fiscal policy as a measure to reduce a country's unemployment rate. [10]

   (b) Although the Singapore government remains cautious of deficit-spending, most governments see it as an acceptable method to reduce their unemployment rates.

   [15]

   Discuss whether a government should pursue full employment at all costs.

6. Globalisation has exacerbated global inequalities, creating prosperity in some parts of the world while claiming livelihoods in others. Overall, benefits have been unequally distributed and reforms to the global economic system are required.

   Adapted from Oxfam, BBC News, January 2013

   Globalisation may have its virtues but it favours the developed countries more than the developing countries. Discuss. [25]

Question 1:

China experienced a slowdown in GDP growth in the aftermath of the Eurozone crisis. Under the European Union (EU)-China Free Trade Agreement (FTA), China is reducing tax rates on European exports, ranging from Louis Vuitton accessories to beverages and tobacco.

(a) Explain how China's reduction in tax rates might affect expenditure by Chinese consumers on the different types of European goods. **[8]**

(b) Assess the impact of the above changes on the sales volume of different types of goods both in EU and in China. **[17]**

Suggested Answer:

Part (a)

Question Interpretation

- To explain the impact of fall in tax rates on expenditure by Chinese consumers (equivalent to total revenue earned by EU exporters) on different types of goods
- To identify that a fall in tax rates is expected to reduce the prices of goods, due to a fall in cost of production, resulting in an increase in supply
- To consider the 'different types of goods', PED can be used as a tool of analysis to determine the impact on expenditure

Introduction

Unpack key terms:

- Expenditure by Chinese households = Total revenue earned by EU exporters
- A fall in tax rates will affect expenditure by Chinese consumers on different types of goods, according to differences in price elasticity of demand (PED)
- **PED is a measure of the degree of responsiveness of quantity demanded to a change in price of a good, ceteris paribus.**
- As evident from the preamble. EU exports both luxury goods that are non-necessities, such as Louis Vuitton accessories and necessities with few substitutes, such as beverages and tobacco.

Development

I. Impact of a reduction in tax rates on European exports:

<Point> A fall in tax rates will result in an increase in supply

<Elaboration> A fall in tax rates will reduce MC of production à the same quantity of output can be supplied at a lower price à illustrated by a rightward shift of the supply curve from S_0 to S_1, in Fig 1. At the initial, equilibrium price, P_0, quantity supplied exceeds quantity demanded creating a surplus. To get rid of the excess stock, producers will be willing to lower the price. Consumers observing such behaviour of producers will be willing and able to increase quantity demanded, ceteris paribus. Furthermore, as prices fall, producers will also lower quantity supplied, represented by a movement along the new supply curve, S_1. This process will continue and stop when the demand and new supply of intersects at the lower equilibrium price (P_1) and higher equilibrium quantity transacted (Q_1).

<Link> The impact on total revenue and hence total consumer expenditure may rise or fall, depending on the PED values of the goods.

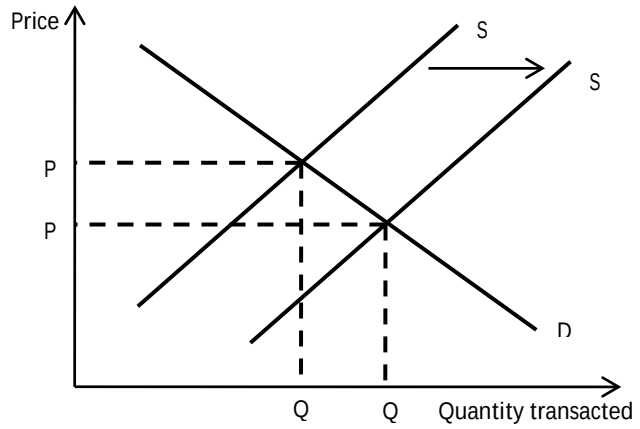


Fig 1: Impact of fall in tax rates on EU exports to China

II. **<u>Consider the impact on expenditure when goods have PED>1</u>**

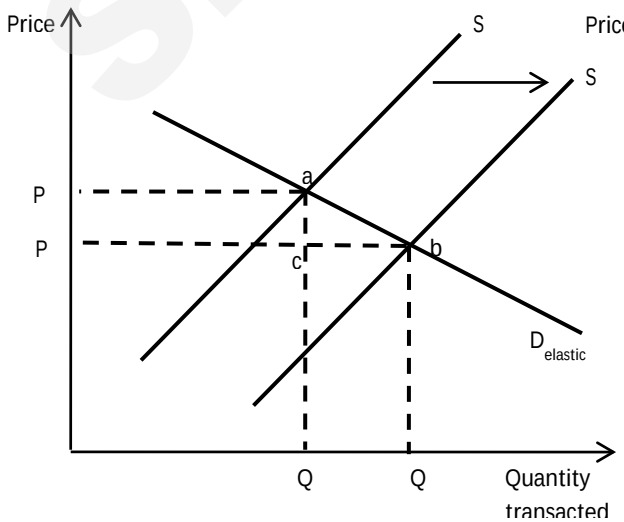
<Point> Consumer expenditure will increase for goods with price elastic demand i.e. PED >1.

<Exemplification> EU exports luxury goods, which are non-necessities such as Louis Vuitton accessories to China.

<u>Explain why (using one PED factor) demand for Louis Vuitton accessories is price elastic:</u>

<Elaboration> These goods take up a <u>(i) large proportion of income</u> OR <u>(ii) have many available close subsitutes</u>, such as other branded accessories from Gucci, Chanel, Burberry, Mulberry etc. Hence, the quantity demanded will be more responsive to changes in price since Louis Vuitton accessories are not necessary for an individual's survival. A fall in price will lead to a more than proportionate rise in the quantity demanded, ceteris paribus.

Diagrammatical Illustration: Relating to Figure 2, the increase in expenditure arising from the rise in the number of units bought (area Q_0cbQ_1) exceeds the decrease in expenditure arising from the fall in price paid on the number of units bought (area P_0acP_1).



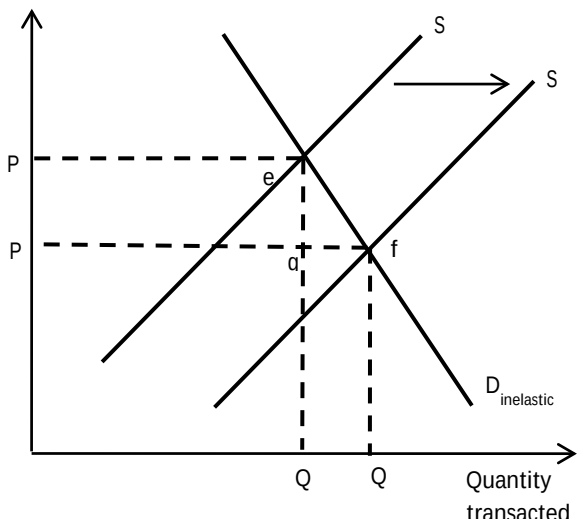


Fig 2: Impact on expenditure for PED >1 Fig 3: Impact on expenditure for 0<PED<1

<Link> For a good that has price elastic demand consumers' expenditure will rise with the decrease in tax rates.

III. **Consider the impact on expenditure when goods have 0<PED<1**

<Point> Consumer expenditure will decrease for goods with price inelastic demand i.e. 0<PED <1.

<Exemplification> EU exports goods with few substitutes such as beverages and tobacco to China.

Explain why (using one PED factor) demand for beverages and tobacco is price inelastic

<Elaboration> These goods take up a (i) small proportion of income OR (ii) have few close substitutes, given the broadness of definition of the commodities, such as beverages OR (iii) high degree of necessity due to addiction to cigars and cigarettes made from tobacco. Hence, the quantity demanded will be less responsive to changes in price since beverages and tobacco are necessities for an individual's survival. A fall in price will lead to a less than proportionate rise in the quantity demanded, ceteris paribus.

Diagrammatical Illustration: Relating to Figure 3, the decrease in expenditure arising from the fall in price paid on the number of units bought (area P_0egP_1) exceeds the increase in expenditure arising from the rise in the number of units bought (area Q_0gfQ_1)

<Link> For a good that has price inelastic demand consumers' expenditure will fall with the decrease in tax rates.

Conclusion

In summary, expenditure by Chinese consumers on on EU imported goods with PED>1 will be likely to rise while the expenditure on goods with PED<1 will likely to fall following the fall in the tax rates.

Mark Scheme

L3 (6-8)	For an answer that demonstrates scope and depth Scope § Clear and accurate definition of PED § Impact of fall in tax rates on consumer expenditure of both types of goods; 0<PED<1 and PED>1 Depth § Identifying and explaining the relevant factors to account for the difference in PED for the various types if imported goods from EU § Explanation of the impact of decrease in tax rates on consumer expenditure on both types of goods **along with necessary diagram(s)**
L2 (4-5)	For an answer that lacks either the scope of the depth of explanation **Scope:** · Considers only one type of good **Depth:** · Under developed explanation of how fall in tax rates impacts consumer expenditure on different types of goods using PED concepts. **Cap at 4m** § No diagrams

L1 (1-3)	For an answer that shows some knowledge of · how rising GST causes supply to fall but fails to explain the impact on consumer expenditure OR · the impact of rising GST on consumer expenditure but lacking in analysis · no diagrams and glaring conceptual errors

Part (b)

Question Interpretation

- To identify the 'above changes' in EU and China
- In EU, fall in income (Eurozone crisis) and hence fall in demand of the various types of goods produced in EU. There will be no change in supply.
- In China, income is increasing albeit at a slower rate (slowdown in GDP growth). To use YED as a tool of analysis to determine the impact on sales volume of different types of good.
- To use XED as a tool and analyse the impact of the EU-China FTA on sales volume of domestically produced substitutes in China.

Introduction

Unpack key terms:

- Sales volume à analysis is on quantities (Q) and not expenditure (P.Q)
- To assume that the rise in income is in real terms

Development

A) Impact on sales volume for different types of good in EU

Note: There will not be any change in supply of the various types of goods in the EU nations, as the reduction in tax rates is only applicable for EU exports to China

I. Explain the impact of the Eurozone crisis on normal necessities goods

<Point> Due to the Eurozone crisis à there is a fall in GDP à resulting in less than proportionate fall in demand for goods with 0<YED<1

<Exemplication> Normal necessities, such as beverages and tobacco have very little dependence on the level of income. Hence, a fall in GDP may induce people to reduce the demand for beverages, but not significantly as it is deemed as necessities by most households. Hence, the demand for these goods will fall at a lower rate from D_0 to D_1 in Fig 4(a) than income, ceteris paribus.

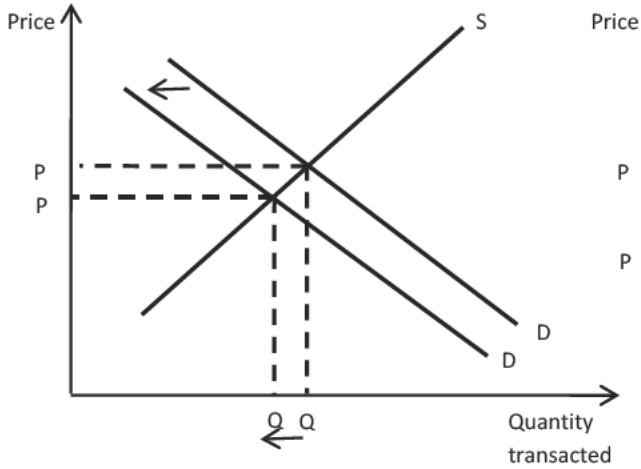


Fig 4 (a): Mkt for goods with 0<YED<1 in EU

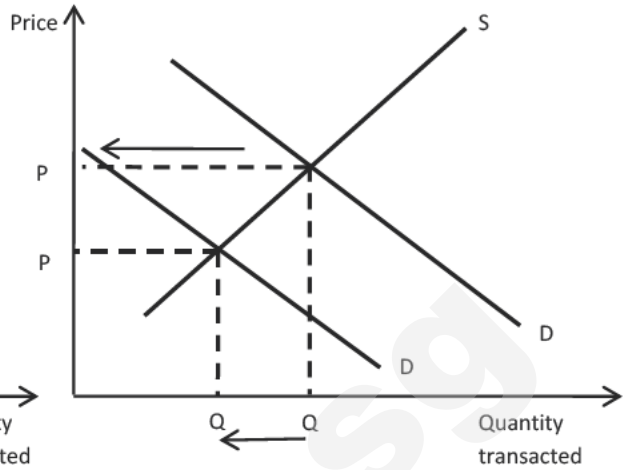


Fig 4(b): Mkt for goods with YED>1 in EU

II. Explain the impact of the Eurozone crisis on normal luxuries

<Point> The Eurozone crisis → fall in GDP → resulting in more than proportionate fall in demand for goods with YED>1

<Exemplication> Normal luxuries, such as Louis Vuitton accessories are only consumed after the expenditure on ncessities has been accounted for. The demand is income elastic and decreases at a higher rate than income, ceteris paribus.

Diagrammatical illustration: Hence, the demand for these goods will fall from D_0 to D_1 in Fig 4(b) at a higher rate than income, ceteris paribus.

<Link> The Eurozone crisis will result in fall in sales volume for both normal-luxuries and normal-necessities, but the extent of fall is more significant for luxuries than for necessities.

B) Impact on sales volume for different types of good <u>in China</u>

Note: China is experiencing a slowdown in GDP growth, which implies GDP is increasing but at a slower rate.

I. Explain the impact of slowdown in GDP growth on normal necessities:

<Point> Slowdown in GDP growth → rise in GDP at a slower rate → resulting in less than proportionate rise in demand for goods with 0<YED<1

<Elaboration> For normal necessities, rise in income will induce people to buy more of beverages and tobacco but there is a limit to how much more of beverages they can consume. As such demand for necessities in China will increase at a slower rate than income.

II. Explain the impact of slowdown in GDP growth on normal luxuries

<Point> GDP increasing at a slower rate → resulting in more than proportionate rise in demand for goods with YED>1

<Elaboration> For normal luxuries, rise in income will induce people to buy more of branded accessories. As these goods are only consumed after the expenditure on necessities has been accounted for, the demand for such goods is income elastic and increases at a higher rate than income.

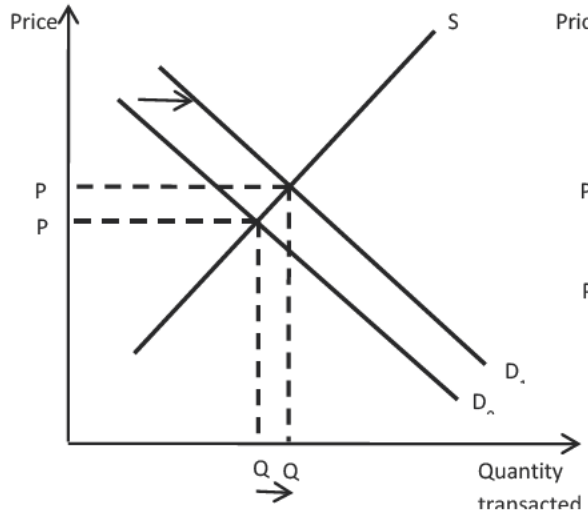


Fig 5 (a): Imported goods with 0<YED<1 in China

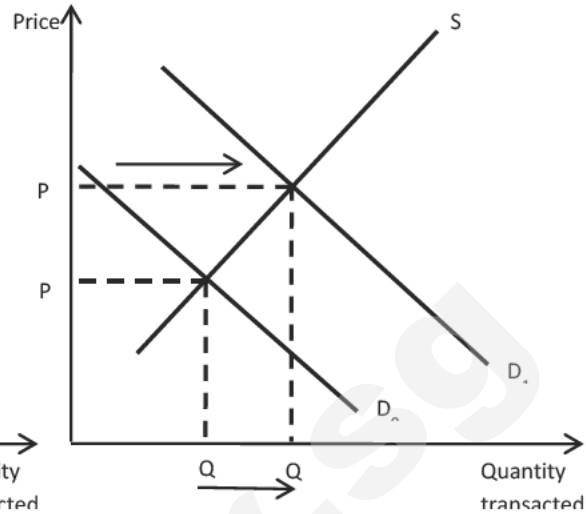


Fig 5(b): Imported goods with YED>1 in China

III. Explain the combined effect of the two events on equilibrium quantity

<Point> Sales volume will increase unambiguously for all types of goods in China due to the EU-China FTA and slowdown in GDP growth

However, sales volume for normal necessities will increase by a lesser extent as compared to the increase in sales volume for normal luxuries.

Diagrammatical Illustration:

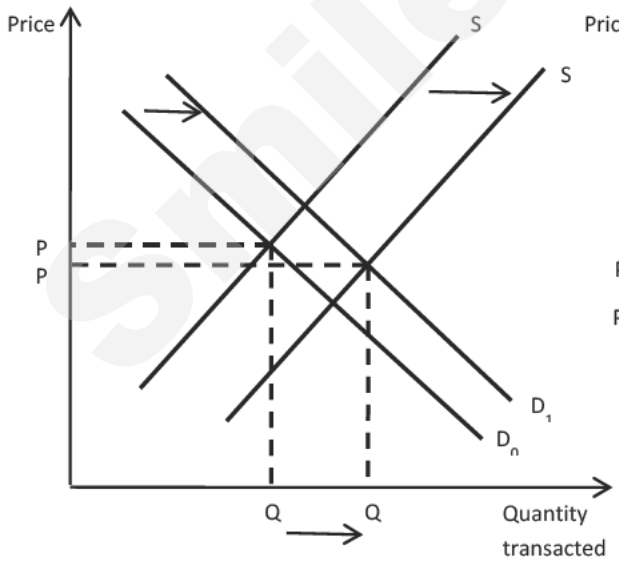


Fig 6 (a): Combined impact on imported goods with 0<YED<1 in China

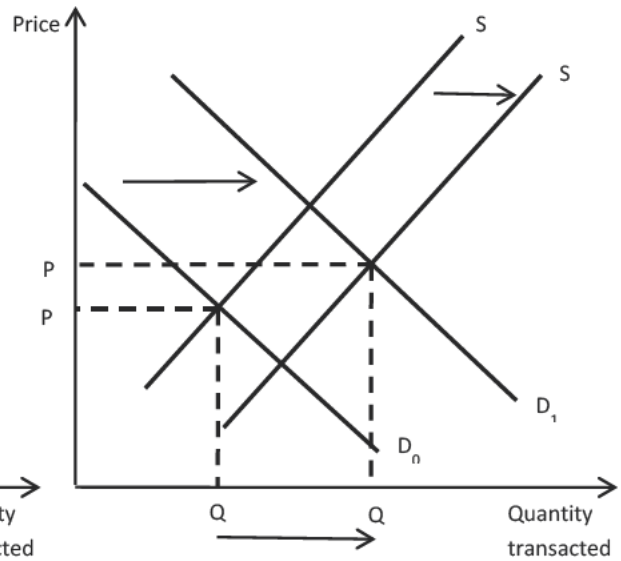


Fig 6 (b): Combined impact on imported goods with YED>1 in China

IV. Explain the likely impact of the EU-China FTA on sales volume of domestically produced substitutes in China

A reduction in tax rates will result in fall in price of all types of imported goods from the EU nations. Thus, if the imported and locally produced goods are close substitutes, i.e., XED>0, then a fall in price of imported goods will result in a fall in demand for locally produced goods, ceteris paribus à fall in sales volume for locally produced good, supply remaining constant.

Evaluation:

1. Restrictive assumptions, such as ceteris paribus does not hold in the real world
   The actual extent of changes in DD and SS does not just depend on the nature of the goods (YED values) but on the extent on the initial changes in (i) tax rates, (ii) income and (iii) changes in other demand or supply factors. For e.g a small increase in income and a significant increase in consumer awareness of the harmful effects of smoking, can actually lead to a fall in demand for tobacco and therefore, sales volume
2. Relevance of the elasticity concepts: Depends on the availability and accuracy of the data used to measure PED, YED or XED.
3. Market forces of both demand and supply are dynamic. It would be difficult to pre-empt accurately the economic outcomes at any point of time.

Conclusion:

- Sales volume unambiguously decreases for all types of goods in EU, whereas it increases in China.
- The extent of increase in sales volume depends on (i) YED values, (ii) extent of fall in tax rates on EU exports and (iii) extent of change of GDP, both in EU and in China

Mark Scheme

L3 (10-13)	For an answer that · Depicts good understanding of question requirements with a very clear attempt to discuss both aspects of the question (including diagrams), using information from the preamble · Provides sufficient rigour to explain how the triggers mentioned in the preamble can cause a change in sales volume of different types of goods both in EU and in China · Should be using YED concepts
L2 (7-9)	For an answer that · Provides lacks in either scope or depth in coverage · Undeveloped arguments (lack of clarity and coherence), insufficient use of YED concepts · Minor conceptual error Cap at 8m, if answer only addresses the impact on sales volume in China
L1 (1-6)	For an answer that · only considers the impact of slowdown in GDP growth and not falling in tax rates inn China

	· limited or no use of YED concepts · has severe conceptual errors Cap at 4m, is answer only addresses the impact on sales volume in EU
E2 (3-4)	· Judgement based on sound economic analysis · Comparison between EU and China · Comparison across the different types of goods
E1 (1-2)	· For an unexplained judgment, or one that is not supported by analysis. · Lack of comparison between EU and China

Question 2:

Restaurants across Singapore are engaging in differential pricing strategy, whereby weekend dinners pay more than weekday customers and special discounts are offered to both students and senior citizens alike.

(a) Explain how restaurants in Singapore discriminate buyers by charging different prices for the same meals. **[8]**

(b) Discuss the extent to which barrier to entry is the most important factor influencing a firm's behavior in your country. **[17]**

Suggested Answer

Part (a)

Question Interpretation

- To define price discrimination
- To identify and explain the prerequisites for price discrimination, **exemplified in the given context of restaurants in Singapore**
- To explain how restaurants in Singapore can engage in 2nd degree price discrimination OR 3rd degree price discrimination

Introduction

Unpack key terms:

- Identify 'differential pricing strategy' implies price discrimination
- Define price discrimination

  Restaurants in Singapore can engage in **price discrimination** – *which refers to a pricing strategy whereby a firm charges different prices for the same product for reasons not associated with differences in cost of production.*

Development

I. To identify and explain the prerequisites for restaurants to engage in price discrimination

1. price-setting ability;
2. segregation of markets, whereby resale of the good is impossible berween markets;
3. price-elasticity of demand (PED) for the good in each market must differ.

These conditions must to be met because:

· Restaurants should be able to set different prices without losing market share completely, with their market power derived from product differentiation à

restaurants have price setting ability given that their products are often differentiated, i.e, the meals offered by different restaurants are not perfect substitutes of each other, hence a restaurant can increase the price without losing all it's sales

- Restaurants should be able to identify different market groups and segregate consumers into the respective groups, while at the same time preventing resale and arbitrage à restaurants are able to identify different market groups by the degree of preference for the meals, as mentioned in the preamble between students, senior citizens and young adults. Furthermore resale and/or arbitrage is impossible as the meals provided is easily perishable and due to hygiene reasons unlikely to have second-hand buyers;
- Restaurants can maximise profits by charging consumers with higher PED a lower price to increase total revenue (TR) and charging consumers with lower PED a higher price to increase TR.

II. To explain how restaurants can discriminate buyers by engaging in

- **<Point> Second-degree price discrimination, whereby weekend dinners pay more than weekday customers**

  <Elaboration> Restaurants can engage in 2nd degree price discrimination which refers to charging consumers different per unit prices based on the amount of quantity they consume *or* the provision of different price options for what is essentially the same product but allowing consumers to reveal their willingness and ability to pay, and hence consumers end up paying different prices for the same product through this self-selection process; **need to emphasise that cost differences are zero or negligible,** between meals produced during weekdays and weekends.

  <Exemplification>

  - As mentioned in the preamble, 'weekend dinners pay more than weekday customers'. On weekends, consumers view restaurants dining as a form of recreational activity or spending leisure time with family and friends, thus increasing the degree of necessity for restaurant meals. Hence, they are less reponsive to price changes, ceteris paribus. An increase in price for weekend dinners will result in less than proportionate fall in quantity demanded for retaurant meals, thus increasing the TR.
  - On the other hand, during weekdays due to busier work schedule, consumers view restaurant meals to be more of a luxury than a necessity, thus they are more repsonsive to prices of the meals. By charging lower prices for the same meals for the weekday customers, restaurants can increase TR and hence increasing profits.

OR,

- **<Point> Third-degree price discrimination, whereby special discounts are offered to both students and senior citizens alike**

  <Elaboration> In addition, restaurants can also engage in 3rd degree price discrimination by dividing consumers into different groups based on observed characteristics regarding differences in price-elasticity of demand, and charging these different groups varying prices, but the same price for all consumers within the same group *or* where the firms have more complete information regarding consumers and are able to clearly segregate them into different consumer groups and charge them different prices based on these observed characteristics regarding

differences in price-elasticity of demand; **need to emphasise that cost differences are zero or negligible**.

<Exemplification> Restaurants are able to segregate the market into two distinct groups – (i) students & senior citizens and (ii) working adults. Given that students and senior citizens are not monthly income earners, a restaurant meal will take up a large proportion of their monthly expenditure, making demand for restaurant meals to be relatively more price elastic. Furthermore, for this group of people restaurant meals have many close substitutes, such as hawkers centre or home-cooked meals. Thus, this group of people is more responsive to price changes, as represented in Fig 1(b).

However, for working adults, restaurants meals will only take a small proportion of their income, making demand for restaurant meals to be price inelastic. Furthermore, for this group of people hawkers centre or home-cooked meals may be an inferior substitute to restaurant meals, making them less responsive to price changes, as represented in Fig 1(a).

Restaurants are able to practice price discrimination in these 2 separate markets: sub-market A and B with the demand and MR curves shown in Fig 1(a) and Fig 1(b). Fig 1(c) shows the MC and MR curves for the firm as a whole. The market demand curve here is the summation of the demand curves in Fig. 1a and Fig. 1b horizontally at each and every price level. The MR curve in Fig. 1c is also derived in similar manner as the demand curve. Total profit is maximised where MC = MR.

This output must then be divided between the two sub markets so that MC is equal to MR in each market: i.e. MC = MR 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. Once the output in the individual markets have been determined, the price to set is simply read off the demand curve for each market – the highest price that consumers in each market is willing and able to pay for the allocated output.

<Link> As is evident from Fig 1, restaurants charge a higher price for working adults, as represented by price P_A and charges a lower price for students and senior citizens as represented by price P_B.

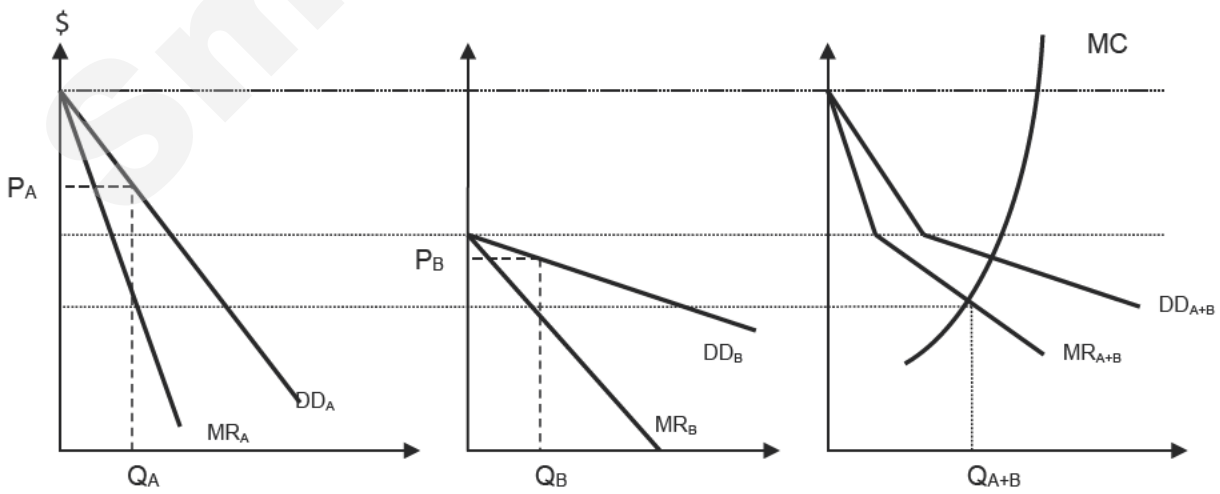


Fig 1(a) Fig 1(b) Fig 1(c)

-

Mark scheme

L3 (6-8)	For an answer that demonstrates scope and depth Scope § Clear and accurate definition of price discrimination including explanation of the prerequisites to price discrimination; it should also include well-explained and well-exemplified 2nd or 3rd degree price discrimination Depth § Explanation for why the prerequisites to price discrimination are necessary with exemplification to restaurants in Singapore § Explanation and exemplification of 2nd or 3rd degree price discrimination; **along with necessary diagram(s)**
L2 (4-5)	For an answer that lacks either the scope of the depth of explanation Cap at 5m § No diagrams Cap at 4m § Well-explained and well-exemplified prerequisites to price discrimination, but no mention of the type(s) of price discrimination that can be engaged Cap at 4m § Well-explained and well-exemplified type(s) of price discrimination that can be engaged, but no mention of the prerequisites to price discrimination
L1 (1-3)	For an answer that contains explanations with no application to restaurants context; again with more credit given to explanation of prerequisites to price discrimination as compared to type(s) of price discrimination that can be engaged Depth of explanation: § Answer contains unexplained diagrams § Answer contains unexplained statements § Answer contains limited or poor exemplification § Answer contains major misconceptions

Part (b)

Question Interpretation

- Define barrier to entry
- Understand that firm's behaviour will encapsulate both pricing behaviour and non-pricing competitive behaviour
- Identify and explain two other factors influencing firm's behavior in Singapore and then to evaluate the most important factor influeincing firm's behavior

Introduction

Unpack key terms:

- Define barrier to entry (BTEs)
  Barriers to entry are obstacles that prevent new rival firms from entering the industry and eroding the incumbent's profits.

- Explain briefly the different types of BTEs
  They may be either natural or artificial.
  - Natural BTE à Ownership/Control of Key Resources à single firm's ownership or control over some non-reproducible resource that is crucial to production. It can deny access to these inputs to potential rivals.
  - Artificial BTE à Legal barriers e.g. Govt. Regulations, Financial Barriers, High fixed capital outlay

- BTEs form the basis of monopoly power.

Development

Thesis Statement: Barriers to entry is an important criterion in determining a firm's behaviour

BTEs determine the type of market structure and hence influences a firm's pricing and non-pricing behaviour

Firms in monopolistically competitve (MpC) market structure faces lower BTEs, whearas firms in oligopolistic market faces a higher BTEs

<Exemplification>
Restaurants in Singapore has low BTEs due to low start-up cost such as rental, cost of raw materials (ingredients and tools for cooking), labour cost, etc.

Petrol retailers in Singapore has high BTEs due to high start-up costs involved in terms of development of infrastructure (underground pumps, conforming to safety regulations, maintenance); exclusive contractual agreements with suppliers of crude oil forms another significant barrier to entry.

A) Explain how the nature of BTEs affect pricing and output decisions of firms in the various market structures

Simple Case: setting price/output so as to maximize short run profits

- Firms' in both MpC and oligopolistic markets have some ability to set price / output
- Downward sloping dd curve
- AR / DD curve tends to be relatively price elastic for MpC firms due to the availability of many restaurants in Singapore while relatively price inelastic for oligopolistic firms

due to limited amount of petrol retailers, constrained to only four major suppliers – Shell, Exxo-Mobile, Caltex and Singapore Petroleum Company (SPC)

- Pricing and output decisions assuming both restaurants and petrol retailers are profit maximisers is at the level of output where à MC=MR condition and MC must cut MR from below, as illustrated in Fig 2.
- The profit-maximising output where MC = MR_e = MR_i is at Q_0. When BTE is weak, the firm faces a more elastic demand curve (DDe) and charges price P_e. When BTE is strong, the firm faces a more inelastic demand curve (DDi) and charges a higher price P_i.

Fig 2: Pricing behaviour with differing BTEs

Strategic Behaviour: The Kinked Demand Curve Model

High BTEs can result in significant market power in the hands of few firms and this can result in mutually interdependent behaviour of firms, explaining price rigidity.

Firms looking to protect and maintain their market share, are unlikely to match another's price increase but may match a price fall. For example, if one firm lowers its price, other firms will lower their price in order to remain competitive. This will cancel out any potential benefits of a price reduction as the firm initiating the price cut will not be able to lure many customers away from his rivals. But if the firm increases its price, rivals firms are unlikely to react because they will gain as customers turn to their products which are now relatively cheaper. Thus, an oligopolist's demand curve will be kinked at the prevailing price – more elastic above the prevailing price but less elastic below the prevailing price. Associated with each demand curve (AR) is its MR. This explains why at the kink of the demand curve, the MR is discontinuous.

Thus, high BTEs can result in price rigidity by firms over the discontinuous range of the MR curve.

B) Explain how the nature of BTEs affect non-pricing behavior of firms in the various market structures

Dominant mode of competition

1. Due to low BTEs and resultant normal profits in the LR, MpC firms, such as restaurants engages in predominantly non-price competition such as

- Small-scale advertisement to promote brand loyalty
- Slight product differentiation

2. Due to high BTEs and strategic interdependence explaining price rigidity, oligopolistic firms also engage in non – price competition, but at a larger scale as compared to MpC firms.

- Large-scale product diiferentiation: Shell offers 3 superior grades of petrol products as well as diesel (Shell Formula 98, Shell Formula 95, Shell V-Power and Shell Diesel).
- Large-scale advertisement: Exemplification using real world examples e.g. all petrol retailers have tie-ups with credit card companies to provide price discounts and accumulation of reward points; petrol retailers also aggressively engage in advertising campaigns on newspapers and radio stations.

Note: Stress that as opposed to MpC that also relies on non-price strategies, oligopolies employ such strategies more aggressively. Relate to their LR supernormal profits due to high BTEs that provide the funds to finance marketing campaigns on a much larger scale e.g. mass media.

Antihesis Statement: Barriers to entry is not the only criterion in determining a firm's behaviour

Any **two** points from the following:

A) Alternative Objectives of firms

Principal-Agent Problem: Managers of firms pursue other goals, such as managerial utility, sales/growth maximization.

In Figure 3 below, if the firm aims to maximise short-run profits, it will produce Q1, where MC = MR and charge P1. If the manager instead aims to maximise revenue, he will produce Q2 where MR=0 and charge P2. Since P2 > AC, supernormal profits are still earned so the shareholders will likely be satisfied. If the manager instead aims to maximise output, then the highest possible output and lowest possible price will be Q3 and P3 where AC = AR. Here the firm earns only normal profits, so it is just sufficient to keep shareholders invested in the firm. If the shareholders requires more than normal profit to be satisfied, then output will have to be correspondingly lower than Q3 and price higher than P3.

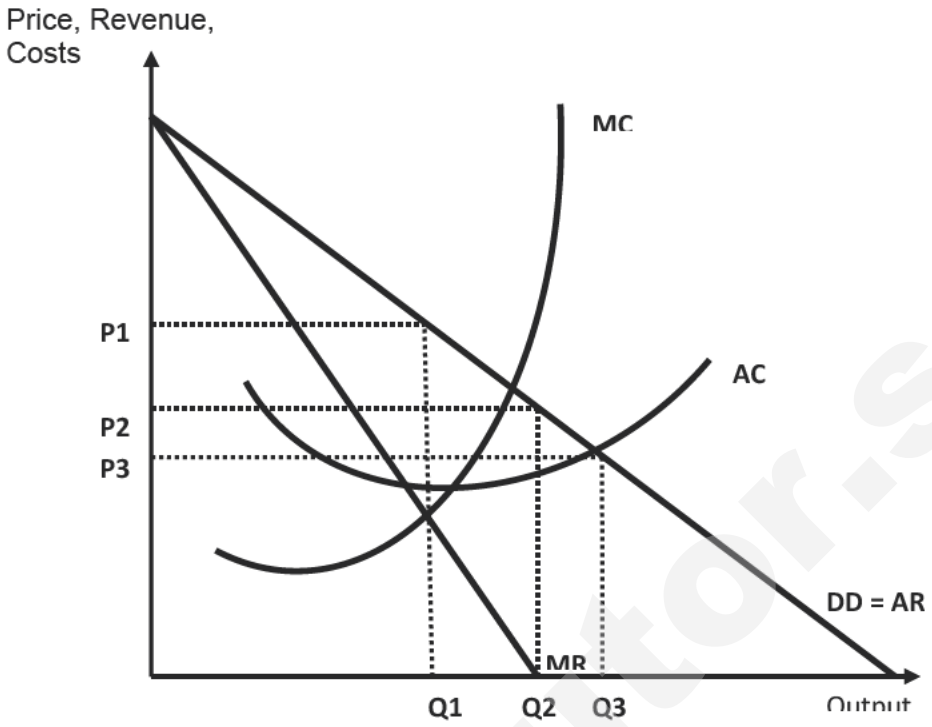


Fig 3: Profit Satisficing with Revenue and Output Maximisation

B) Government policies such as price controls and regulations

The government can introduce price controls to regulate the price charged by firms with high market power and hence profits earned, thus achieving the government goals of efficiency and equity. There are two types of price controls:

i) average cost (AC) pricing and
ii) marginal cost (MC) pricing.

The government can make it mandatory for firms to charge a price equals to their average cost (AC pricing) or set prices equals to marginal cost (MC pricing), to improve efficiency.

i) Setting P = AC ensures that the firm earns only normal profits, thus improving equity.
ii) On the other hand, setting P = MC ensures that allocative efficiency is achieved but results in monopolies earning subnormal profits.

Either way, compared to an unregulated market with high concentration ratio, prices will be lower and quantity higher.

C) The theory of Contestable Markets

The theory argues that price and output (and underlying behaviour) in an industry is not determined by level of BTEs but the potential threat of competition. Threat of competition will force firms with high market power to be more efficient to be able to charge lower price and prevent success of new entrants.

Evaluation

There are different factors that influence a firm's behaviour, of which barriers to entry is only one of them.

In Singapore BTEs may not be the most important factor influencing the behaviour of firms due to

1. Small domestic market and lack of natural resources makes Singapore an open economy, encouraging foreign competition
2. Competition Commission of Singapore is established and tasked to enforce regulation so as to prevent any unfair or anti-competitive means. This is necessary in order to create a conducive environment for investment and innovation to take place as both aspects are crucial to sustain LTEG and GDP growth in Singapore.

Marking scheme:

L3 (10-13)	For an answer that · Depicts good understanding of question requirements with a very clear attempt to discuss both aspects of the question (including diagrams), using local examples · Provides sufficient rigour to explain the role of barriers to entry in influencing firm's behaviour and is well-supported by rigorous economic analysis · Considers both pricing and non-pricing behaviour of firms
L2 (7-9)	For an answer that · Provides lacks in either scope or depth in coverage · Undeveloped arguments (lack of clarity and coherence) with some attempt to provide local examples · Minor conceptual error Lower L2 mark range · For lop-sided analysis · For considering either pricing behaviour or non-pricing behaviour
L1 (1-6)	For an answer that · does not link BTEs to firm's behaviour · is largely descriptive · has severe conceptual errors
E2 (3-4)	· For an evaluative judgement based on economic analysis · Emphasis on Singapore economy
E1 (1-2)	· For an unexplained judgment, or one that is not supported by analysis.

3. Governments across the world play an active role in intervention, whether to reduce the growing income inequality or to address market failure.
(a) Explain the role of prices in resource allocation in a market economy. [10]
(b) Assess whether government intervention in markets is always justified. [15]

(a) Explain the role of prices in resource allocation in a market economy. [10]

Suggested Approach:
Students are to

1. explain the central economic problem of scarcity which leads to the need for resource allocation (i.e, with its limited resources, society needs to decide on ' What and how much to produce', 'how to produce', 'for whom to produce')
2. explain that the role of prices is central in resource allocation in a market economy as resources are allocated via the price mechanism, be it in the factor or product markets

- In deciding what, how much and how to produce, prices act as signals that coordinate the actions of consumers and producers through the market forces of DD and SS. DD and SS interaction leads to equilibrium price and output (stating the assumptions). Changes in DD and/or SS result in shortage/surplus which in turn lead to changes in prices and hence reallocation of resources.
- In deciding 'for whom to produce', prices act as rationing mechanism that allocate goods among consumers based on their willingness and ability to pay for the good.

Levels	Descriptors
L3 (7m – 10m)	- Clear explanation of both the signalling and rationing roles of prices in addressing all 3 basic questions of allocation with demand-supply analysis - Sufficient depth/ scope - Max of 8 m if 'rationing' role of prices is not mentioned
L2 (5m – 6m)	- Insufficient depth/scope in addressing the basic questions of allocation. - Does not explicitly explain the signalling and the rationing role - Explain at most 2 of the 3 basic questions - Some attempt in using the demand-supply analysis - Some errors in explanation. - Max of 5 if no mention of the dd-ss analysis
L1 (1m - 4m)	- Poor and erroneous explanation with little understanding the roles of prices in allocating resources.

Suggested Answer Outline

(a) Explain the role of prices in resource allocation in a market economy. [10]

Introduction

As resources are scarce relative to the insatiable demands of human wants, economies are concerned with basic questions of allocation:

i. What and how much to produce?
ii. How to produce?
iii. For whom to produce?

Define a market economy as one in which resources are allocated based on the price mechanism in which prices plays an signalling function as it allocates resources to the production of different types of goods. It also acts as a rationing mechanism by synchronizing decisions by buyers and sellers.

Development:

i. What and how much to produce?

Resources are limited and cannot produce enough goods and services to satisfy human wants which are unlimited

- ➔ economy must make a choice on the types of goods and services that it wants to make available to the country.
- ➔ For example, an economy has to decide on the different quantities of consumer goods and capital goods.
  - determined jointly by producers and consumers through the **signaling role of prices** and their self-interest.
    - price of a good reflects the value placed on it by consumers.
    - Consumers indicate their tastes and preferences to firms by the price they are willing and able to pay for the goods (effective demand).
    - Producers would only produce goods which consumers demand because they want to maximize profits.
    - The higher the price that the consumers are willing and able to pay, the more the producers will supply that good

- ➔ In this way, the ***price acts as a signal*** telling the producers what to produce and how much of the good to produce
  - Thus determines the allocation of resources among various goods.

- ➔ **Explanation of demand and supply analysis with the help of a diagram**

- If market is in disequilibrium → market will adjust until equilibrium price and quantity achieved → satisfaction of both buyers and sellers maximized
- For example, when Qd < Qs for rice, ceteris paribus, a shortage results. There will be upward pressure on the price and the price increase will signal an increase in profit which leads to a reallocation of resources into the production of that good.

→

iii. For whom to produce?

How are the final goods/services allocated to the society?

- ➔ Resources are scarce, no society can satisfy all the wants of its people.
- ➔ finished goods/services have to be distributed to households, firms and the government.
  - How the limited supply of final goods/services produced is allocated among the members of society?
  - price acts as a rationing mechanism in a market economy and distributes the output only to people who are able and willing to pay for the good.
    - This in turn depends on the purchasing power and the value that people place on the good.
    - Using the DD/SS diagram above, the equilibrium output at Qe will be allocated to consumers who are willing and able to pay at least the equilibrium price which is set at Pe.

ii. How to produce?

What method of production should the scarce resources be used to produce the desired combination of goods/services as efficiently as possible.

- è In the factor market the producers demand for resources (fops) and the consumers are the factor owners that supply the resources (fops). The allocation of resources among the competing uses is based on the prices of the resources (fops)
- è For example, a manufactured good can either be produced by capital intensive methods (where there is little use of labour and greater use of machines) or labour intensive methods (where greater use is made of labour).
    - o involves the organization of production.
- è Main aim: to achieve the least cost combination guided by relative factor prices.

(b) Assess whether government intervention in markets is always justified. [15]

Suggested Approach:

- Requirement: 2-sided balanced arguments considering whether government intervention in the markets is always justified or not.
- Thesis: Explain why government intervention is justified. Answers must span across the problem of efficiency in resource allocation and equity in income and wealth distribution.
- Anti-Thesis: Explain why government intervention in the market may not be justified. Discuss limitations and consequences of government intervention -> costs exceed benefits -> government failure
- Judgment based on cost and benefit analysis

L3 (9-11)	For an answer that · considers both inefficiency and inequity issues when justifying government intervention in the market · discuss both the justifications for and against government intervention (including diagrams), using relevant examples · Addresses the issue of government failure
L2 (6-8)	For an answer that · lacks in either scope or depth in coverage - considers only inefficiency or inequity issues · Unbalanced / undeveloped arguments (lack of clarity and coherence) · some attempt to provide examples · discuss limitations and consequences of government intervention without considering the concept of government failure · Minor conceptual error
L1 (1-5)	For an answer that · is largely descriptive · has severe conceptual errors
E2 (3-4)	· For an evaluative judgment based on economic analysis focusing on costs and benefits in given context
E1 (1-2)	· For an unexplained judgment, or one that is not supported by analysis.

<u>Introduction:</u>

- In a market economy, resources are privately owned and markets are the main mechanism for allocating resources. However, government will intervene in the markets when they fail to allocate resources efficiently to maximise economic welfare of the people, i.e. Market failure necessitate government intervention to regulate markets. In addition, government may intervene in the market to redistribute income to promote equity.

- Government intervention in the markets is justified based on 2 main reasons: Inefficiency and Inequity.
  Market Failure -> Inefficiency
  Sources of market failure include
  - Market Imperfections (Market dominance, Imperfect information, Immobility of factors of production)
  - Externalities (Positive & Negative)
  - Existence of Public, Merit and Demerit Goods

  Inequity due to
  - Unfair distribution of income and wealth

Development:

Thesis 1: To explain how government intervention can resolve inefficiency in the markets

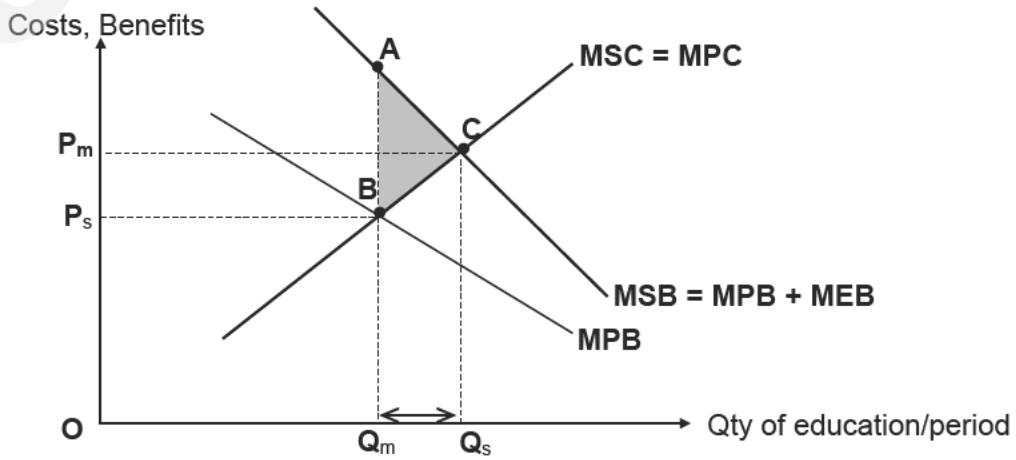
i) Using externalities as a source of market failure, justify government intervention in the markets

With reference to examples of education and healthcare, and the the aid of a diagram, explain how positive externalities result in an inefficient allocation of resources and how government intervention in the education market can help achieve greater allocative efficiency.

Education

- Positive externalities or external benefits occur when third parties who are not directly involved in the consumption or production of the goods are indirectly affected favourably.
- In the absence of government intervention, being rational individuals, both consumers and producers only take into account private costs and private benefits, ignoring the positive benefits enjoyed by third parties.
- There are however, external benefits of education on third parties. With an educated workforce who possesses higher productivity and higher skills, a country will be able to attract more foreign direct investments -> creates employment opportunities not only for the educated and skilled workforce but also for the less educated workforce via the multiplier effect.

Diagram 1: Market Failure due to Positive Externalities



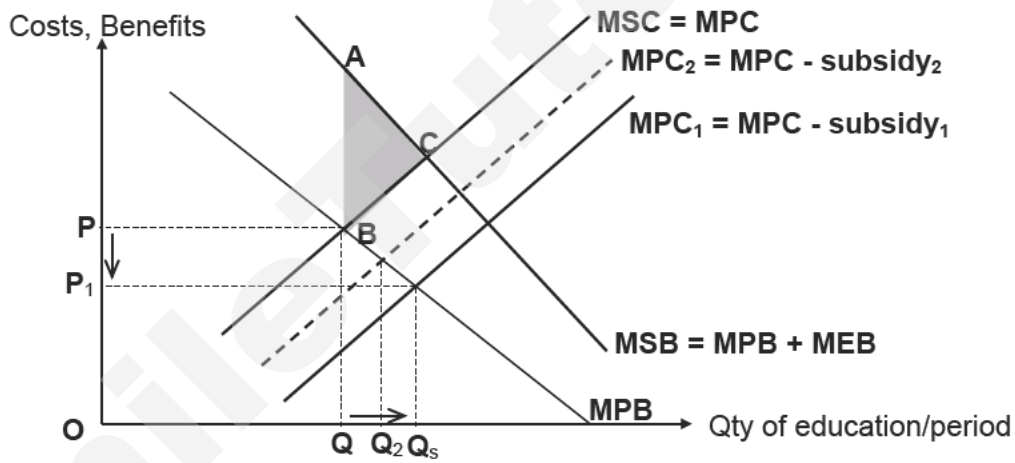
- With reference to Diagram 1, since rational individuals only consider MPB against marginal private costs (MPC) and ignore external benefits, they only consume

education up to the quantity Q_m, where MPB = MPC. However, if all possible benefits and costs were accounted for, and the optimal quantity of education that should have been consumed occurs at quantity Q_s, where MSB = MSC. Hence there is an under-consumption of education by Q_mQ_s amount, where there is an under-allocation of resources to the market of education and over-allocation of resources for other markets. This leads to a deadweight loss of area ABC, since the additional benefits of consuming Q_mQ_s (area ACQ_sQ_m) which are however not consumed under free market forces, exceed the additional costs (area BCQ_sQ_m).

Pigouvian subsidies to correct under-production of goods that generate positive externalities

For goods with positive externalities e.g. education, healthcare, most governments intervene in the market by heavily subsidising on these goods to increase consumption to the socially optimal level.

Diagram 2: Subsidy on goods with positive externalities



Anti-Thesis: To explain how government intervention can worsen inefficiency in the markets

- Even with the best intent, government intervention in the market may not be justified if there is government failure, i.e. if government intervention worsens the problem of resource allocation instead of improving it. This is often due to imperfect information
- A lack of information about the true value of an externality be it positive or negative, would lead to government failure. It is often very difficult to price the value of an externality in monetary terms.
- In general, the government could either underestimate or overestimate the quantity of the good that is required by society. This could lead to under-production or over-production and thus lead to the problem of inefficiency.

In addition, government intervention may not be justified because of

1. High Resource Cost

- Government intervention in the market may not be justified if the gain from government intervention is weighed out against the costs of government intervention. Such costs may include administration or operational costs incurred by the government. Allocative and productive efficiency could be reduced after government intervention to correct market failures because of the waste of scarce resources –

leading to a reduction in consumer and producer welfare. Hence, in this case, government intervention in the market will not be justified.

2. Unintended side-effects
   Government intervention in the market may not be justified if it leads to consequences that impact the economy. For example, anti-pollution measures may increase the unit cost of production which deter FDI -> affecting potential growth

Evaluation

- Even if over-subsidisation still causes resource misallocation to persist, as long as the relative deadweight loss incurred after government intervention is still smaller than without intervention by the government, government's intervention in markets can still be justified.

- The costs of government intervention can be reduced by using measures that rely more on market forces rather than overriding the entire workings of the market mechanism.

Thesis 2: To explain how government intervention can resolve inequity in the markets

- Income and wealth are unevenly distributed in a market economy, and people with the most incomes and wealth are the ones who determine what goods and services should be produced. The demand and supply of goods produced reflect only the wants of the rich people. At times when the prices of necessities such as housing and food and energy surge, the poor will be priced out of the market too.

- As such, market may also fail to the extent that they fail to achieve other social objectives such as greater equality in the distribution of income.

- The cost of market failure caused by inequalities in the distribution of income and wealth is that the market mechanism will allocate nothing to those who cannot pay such as the unemployed and under-privileged.

- To overcome this market failure, government can use fiscal policy tools to redistribute income through subsidies to the lower income households. E.g. increasing the subsidies for conservancy charges for lower income households; providing GST vouchers to help lower income and giving workfare income supplements.

- Alternatively the government can subsidise training and skills upgrading of workers so as to prevent rising structural unemployment and reduce income inequality.

Antithesis 2: To explain why government intervention to promote equity in the markets may not be justified.

Redistribution of income and wealth through taxes / subsidies may lead to disincentive to work and invest. May lead to outflow of talent and investment -> adverse impact on economy growth

Evaluation: Whether government intervention is justified or not depends on the degree and causes of income inequality.

Judgement:
Intervention is justified only if

- there is market failure in that industry (govt should not intervene in all markets)
- method of intervention is effective -> consequences
- intervention does not lead to further inefficiency or other consequence (government failure arises)

4. The ultimate goal of all governments is to improve the general standard of living of its population.
(a) Explain how a government can improve the current and future standard of living of its population [12]
(b) Discuss the extent to which a government can assess that its goal to improve the general standard of living of its population has been achieved. [13]

(a) Explain how a government can improve the current and future standard of living of its population [12]

Approach

Students are to
- explain what is meant by standard of living (SOL) making clear that it consists of both material and non-material aspects.
- explain how a government can improve both the current and future SOL of its population through its demand-management and supply-side policies as well as measures to redistribute income.

Levels	Descriptors
L3 (9m – 12m)	- Clear explanation of the policy measures that the government can undertake to improve the current and future SOL of its population - Using AD/AD analysis - Focus should be on both current and future SOL and on both material and non-material SOL. - Both demand-management and supply-side policies should be explained (3 policies each focusing on one aspect - current and future material SOL and non-material SOL) - Sufficient depth/ scope
L2 (6m – 8m)	- Insufficient depth / scope - Only focus on current or future SOL; material or no-material SOL; demand-management or supply-side policies -
L1 (1m - 5m)	For an answer that - Focuses on NY instead of material SOL - is largely descriptive - has severe conceptual errors

Introduction

Standard of living refers to the level of economic welfare and social well-being of an individual or household. It includes the quantitative (material) and qualitative (non-material) aspects of living. The material standard of living is affected by the amount of goods and services that individuals within the country have available for consumption. Non-material

aspects of living standards will involve indicators like the amount of leisure people consume, life expectancy, standard of education, absence of pollution and other social factors.

A country that experiences actual economic growth (i.e. an increase in real per capita GDP) over a period of time implies an improvement in the current standard of living of its population since quantity of goods and services produced in an economy has increased over time. A country that projects potential growth on the other hand indicates future improvement standard of living.

Development

Explain how the government can improve the current SOL of its population through its expansionary demand-management policy measures -> increase AD -> actual growth

- Expansionary monetary policy - Fall in interest rate increases incentive to borrow; firms are more likely to invest and households are more likely to borrow to purchase big-ticket consumer durables, resulting in an increase in C and I.
- Expansionary exchange rate policy - Fall in domestic currency will reduce the price of exports in foreign currency and increase price of imports in domestic currency (switch over to consuming domestic goods and services -> increase in Cd) -> an increase in X and Cd
- Expansionary fiscal policy - Fall in direct tax increases disposable income of households; more induced C occurs, resulting in an increase in C.
- Expansionary fiscal policy - Increase in government spending on final goods and services to increase G component of AD.

Explain how a sound and efficient government can also increase consumer and investor confidence -> indirectly increase AD -> actual growth

- If households expect their future income to increase, they may be more willing to spend now even when current income is constant, causing an increase in C.
- It firms expect good future economic performance; the strong business confidence will incentivise them to invest more, resulting in an increase in I.

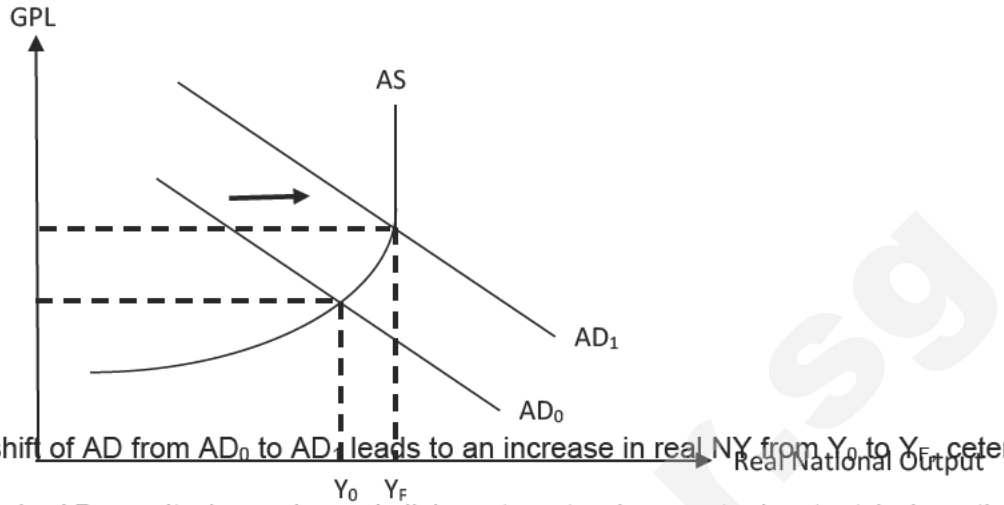
Explain how the government can improve the current SOL of its population through it short-term supply-side measure (i.e. cost-cutting measures) -> increase AS -> actual growth

Explain how the government can change of the composition of o/p though its policy measures to promote current standard of living, example promoting consumption for investment; domestic consumption for exports

Explain how government intervention in the markets will lead to greater efficiency in resource allocation when market failure arise (e.g. subsidies to ensure optimal quantity of merit goods, decrease negative externality)

Using AD/AS analysis, illustrate how the government can improve current standard of living through promoting actual economic growth

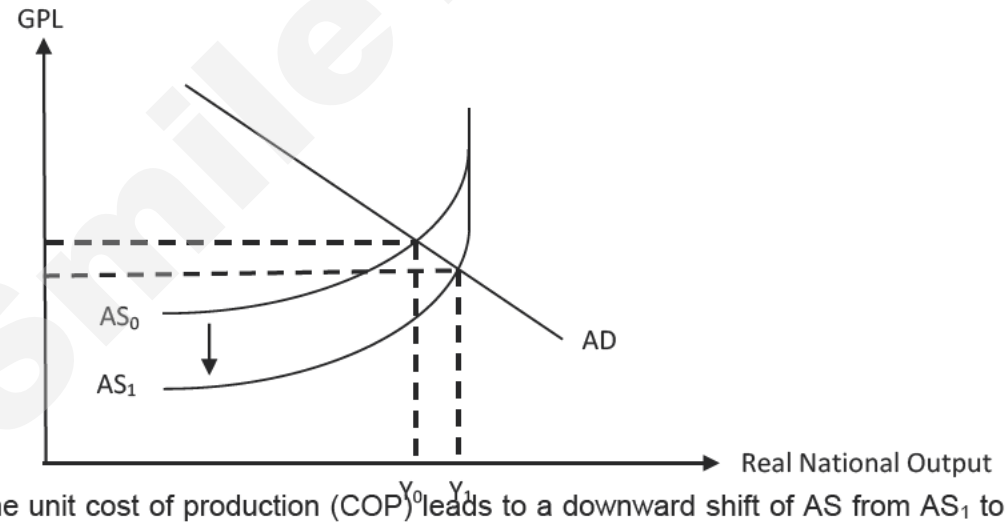
(i) Increase in AD



A rightward shift of AD from AD_0 to AD_1 leads to an increase in real NY from Y_0 to Y_F, ceteris paribus.

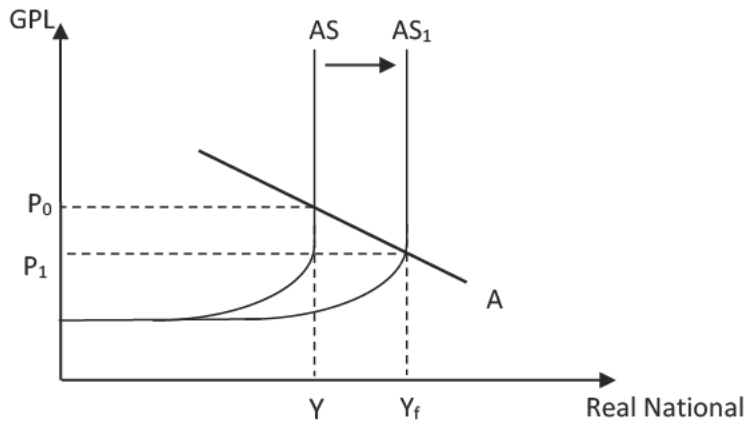
The increase in AD results in unplanned disinvestment, where actual output is less than planned demand. The excess aggregate quantity demanded signals to firms to increase output in the next production cycle. This will cause an increase in demand for factors of production (including labour). As factor income increases, there will be excess aggregate quantity demanded, leading to further increase in production. This will continue until aggregate quantity demanded equals to aggregate quantity supplied. The equilibrium real national income would have increased from Y_0 to the full employment level at Y_F. This is actual growth where national income has risen.

(ii) Increase in AS



A fall in the unit cost of production (COP) leads to a downward shift of AS from AS_1 to AS_0. This is because with lower unit COP, firms are able to produce and supply the same quantity of goods and services at a lower price (illustrated by a shift from AS_0 to AS_1). Note that there is no change in the productive capacity of the economy, hence, the Classical range of the AS curve remains fixed → As unit cost of production decreases, firms will increase output → As firms increase production, they will also increase demand for factors of production, including labour which is a derived demand → Real NY will rise from Y_1 to Y_0 which signals positive economic growth → unemployment falls → Firms will also pass on some of the decrease in unit cost of production to consumers which causes the GPL to fall from P_1 to P_0.

Explain how the government can increase the future SOL of its population through long-term supply side policies to promote potential economic growth (i.e. increase the full-employment national income of its economy)



With an increase in the quantity and quality of factor inputs (e.g. improved technology and skills), the productive capacity of the economy expands. This may be shown by a rightward shift of the AS towards a higher level of potential output Yf'', from AS0 to AS1. The rightward shift of the AS allows for an increase in national income in real terms (Yf' to Yf'') while helping to relieve the inflationary pressure as the general price level is brought downwards to P1.

The vertical portion of the AS changes when the productive capacity / potential output of the economy changes. This can be summed up in the 2Qs – Quantity and Quality of factors of production.

(b) Discuss the extent to which a government can assess that its goal to improve the general standard of living of its population has been achieved. [13]

Approach:

- Requirement: 2-sided balanced arguments considering whether a government can assess its goal to improve the general SOL of its population has been achieved.
- Thesis 1: Explain how a govt can assess the improvement in material SOL using national income data (i.e. real GDP per capita) as an indicator.
- Anti-Thesis 1: Explain why a government is not able to assess improvement in the material aspect of SOL accurately
- Evaluate the extent to which a government can assess that material SOL has increased
- Anti-thesis 2: Explain why a government cannot use national income data to assess the non-material aspect of SOL.
- Thesis 2: Explain how a govt can use alternative indicators to complement national income data in assessing improvement in general SOL of its population to improve on its accuracy as an indicator of both material and non-material SOL.
- Evaluate the extent to which a government is able to assess non-material SOL has increased
- Judgment using economic reasoning Criteria – Degree of accuracy in assessment varies across countries – depend on stage of development, level of admin efficiency of government

L3 (7 - 9)	For an answer that · discuss how a government can assess its goal to improve both material and non-material SOL of its population has been achieved using both national income data (real GDP per capita) and alternative indicators · discuss the limitations of using both national income data and alternative indicators in assessing both material and non-material SOL
L2 (5 - 6)	For an answer that · lacks in either scope or depth in coverage – only consider government's ability to measure improvement in material or non-material SOL; using national income data or alternative indicators · Unbalanced arguments – only consider whether the government can or cannot assess its goals to improve SOL · some attempt to provide examples
L1 (1-4)	For an answer that · is largely descriptive · has severe conceptual errors
E2 (3-4)	· For an evaluative judgment based on economic analysis focusing on costs and benefits in given context
E1 (1-2)	· For an unexplained judgment, or one that is not supported by analysis.

Introduction

An increase in real per capita GDP within a country over a period of time is taken as an indication of an improvement in the standard of living of its population.

Thesis 1: Explain how a government can assess the improvement in material SOL using national income data (i.e. real GDP per capita) as an indicator.

Increase in real GDP per capita -> increase in average household income -> increase in purchasing power -> increase in quantity of goods and services consume -> increase in material SOL.

Anti-Thesis 1: Explain why a government is not able to accurately assess improvement in material SOL

Limitations

1. Changes in the income distribution are not considered

Real per capita GDP does not reflect income distribution. For example, the rich minority in a country could be receiving a larger proportion of the increase in GDP while the poor majority could be receiving an even smaller share of GDP. In this case, it is difficult to say in general that the standard of living has improved though real per capita GDP may have increased.

Evaluation: Although there is currently no way to incorporate information on income distribution into a single measure of standard of living of a country, economists complement national income data with other statistics that reveal something about the income distribution such as the **Gini Coefficient**

2. GDP statistics do not distinguish between the type of output

Production is not equal to consumption. If the growth in real per capita GDP is due to increase in the production of capital goods (as opposed to consumer goods), current living standards may not increase. A rise in real per capita GDP due to increase in government military expenditure also does not imply a rise in living standards. Similarly, a rise in real per capita GDP that stems from increase in exports will not contribute to a rise in living standards if the income generated from exports is not spent on consumer imports.

Evaluation: However, the increase in productive investment should help raise future consumption and living standards.

3. Changes in the quality and type of goods and services are not reflected

Even if GDP remains the same from one year to the next, standard of living will increase if there are improvements in the quality of output or development of new products. We see that when the bundle of goods available and its quality differ substantially overtime, the meaningfulness of National Income comparison over time diminishes.

4. Inclusion of previously excluded productive activities

This is of significance when comparison is done over long periods of time, long enough for there to be major changes to the way people life and work or in countries with high levels of rural-urban migration. As an economy develops, previously non-marketed items may now be transacted through the market for example many household chores (cooking, laundry, child care, home maintenance, etc) previously done by the families themselves could, at a later time, be bought in the market place. The increase in GDP due to such monetisation of transactions will not increase standard of living since the increase is not due to the production of more goods and services.

5. Reliability of data improved overtime

Data collection will become more comprehensive and reliable over time. For example, the use of computers has allowed for more information input and more accurate analysis. Improvements in the reliability of data over time have thus made comparisons more difficult and less accurate.

Antithesis 2: Explain that the government cannot assess non-material SOL using National income data

- Externalities are ignored. Increase in output may generate negative externalities including polluted air and rivers, congestion, the ozone layer depletion and global warming. As these harmful side effects to third parties are not recorded in national income statistics, the improvement in standard of living may be overstated, i.e. the net benefits of such increased production will be much less.
- Leisure is not taken into account. If the growth in real per capita GDP is due to everyone working longer hours and the leisure time is reduced substantially, the improvement in standard of living may be overstated.

Evaluation
To overcome the limitations of National income accounts as a measure of both material and non-material SOL, governments are turning to alternative indicators to help assess non-material SOL more accurately.

Thesis 2: Explain that the government can assess non-material SOL using alternative indicators.

Alternative indicators
Recognising that National Income statistics offers at best only a measure of the material standard of living, the government has complemented the real GDP per capita with other indicators.

a. Education: literacy rate

With better education, the people in a country will be able to read and appreciate aesthetics or literacy work, enjoy the fine arts and engage in pursue of their own aspirations. This ability to pursue self-realisation is a non-material aspect of SOL.

b. Health: Infant mortality rate, life expectancy, quality adjusted life years, availability of medical infrastructure per 1000 person

Infant mortality measures the proportion of babies born who die before the age of one out of total births. A decrease in infant mortality rate & improvement in the ratio of the medical infrastructure signalsgreater quantity of resources and more availability to healthcare system or greater frequency to access healthcare infrastructure. This would improve both material and non-material SOL.

c. Composite indices

These combine two or more indicators to provide a more holistic measurement.

(i) Human Development Index (HDI)

The Human Development Index is an index developed by the United Nations Development Program. HDI is a composite index comprising of three indicators: real GDP per capita, knowledge (measured by literacy rate) and health (measured by life expectancy). Through HDI, UNDPaims to promote human values rather than mere monetary achievements.

5a) Explain what would affect the effectiveness of fiscal policy as a measure to reduce a country's unemployment rate. [10]

(b) Although the Singapore government remains cautious of deficit-spending, most governments see it as an acceptable method to reduce their unemployment rates. Discuss whether a government should pursue full employment at all costs. [15]

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a) Explain what would affect the effectiveness of fiscal policy as a measure to reduce a country's unemployment rate

Suggested Approach

Students are to

- Highlight the various types of unemployment (cyclical, structural etc)
- Explain rationale for reducing unemployment rate and
- Explain fiscal policy is a demand-management policy and how expansionary fiscal tools can be used to reduce cyclical unemployment rate via increase in AD -> increase in o/p -> increase in employment
- highlight how effectiveness of a policy can be gauged – extent of increase in employment to reach full employment
- explain the factors that affect the effectiveness of fiscal policy as demand-management policy to reduce cyclical unemployment
    - Size of the multiplier (the larger the MPC_d, the larger the multiplier, the more effective the FP)
    - Availability of reserves (the greater the amount of reserves, the greater the extent of intervention, the more effective the FP
    - Extent of crowding out effects
    - Cause of unemployment (FP as a demand-management policy is not effective in reducing structural and frictional unemployment)

Levels	Descriptors
L3 **(7m – 10m)**	- Recognise that there are several types of unemployment - Clear explanation of how expansionary FP (as a demand-management policy) can reduce cyclical unemployment. - Clear explanation of three factors that may affect effectiveness of fiscal policy in reducing cyclical unemployment. - Recognise that FP as a demand-management policy will not be effective in reducing these other types of unemployment. - Sufficient depth/ scope Cap 8 m if student only discuss cyclical unemployment Note: Students should have a clear understanding that there are several types of unemployment. Even if student chooses to focus on FP as a demand-management and goes on to explain factors that affect FP's ability to reduce cyclical unemployment, students need to recognise that there are other types of unemployment (e.g. structural and frictional). Hence they should highlight that FP as a demand-management policy cannot reduce structural and frictional unemployment unless the FP focuses on ss-side effects.
L2 **(5m – 6m)**	- Insufficient depth / scope - Less than three factors - Focuses only on cyclical unemployment

	- Explain at most 2 factors
L1 (1m - 4m)	For an answer that - is largely descriptive - has severe conceptual errors

Introduction

- **Definition of Fiscal Policy:** Fiscal policy involves the Government affecting aggregate demand by changing the levels of Taxation ('T') and Government Expenditure ('G') in order to influence the level of economic activity. Fiscal policy may involves the Government affecting aggregate supply from its G too (cost-cutting measures, spending on trainings and R&D)
- Cyclical unemployment is caused by a deficiency in AD. Structural unemployment is caused by factor immobility and structural changes.

Development

For both cyclical and structural unemployment, Governments use **expansionary fiscal policy** to stimulate the economy, with either an increase in injections and/or a decrease in withdrawals. This includes:

a) An increase in government spending (G) on final goods and services such as infrastructural projects. ↑ G has a direct impact on AD.
b) An increase in government transfer payments (e.g. unemployment benefits), resulting in an indirect impact on AD by raising households' disposable income, and ↑C. A cut in personal tax will impact AD in a similar way.
c) A cut in corporate taxes raises the expected net rate of returns on investments, increasing firms' profits as well as their willingness and ability to invest. ↑ I has a direct impact on ↑ AD.

Factors affecting the effectiveness of FP as a measure to reduce unemployment

1. Cause of unemployment which determines the appropriateness of Fiscal tool
   The use of expansionary fiscal policy (with dd-side effects) is generally useful in dealing with cyclical unemployment, where the economy could possibly be in recession or operating below full employment. The increase in G for example could help to generate an increase in production of goods and services in the economy, i.e. triggering the multiplier effect to create more employment. However, such policies will not be effective in resolving structural unemployment. However, if G is spent such that it results in an increase in labour productivity or enable workers to learn new and relevant skills (i.e. if fP focuses on ss-side effects), it could also help to resolve structural unemployment.

2. The size of k
   Demand-management policies work their way through the multiplier process. This means that the effectiveness of such policies is dependent on the size of the multiplier. The larger the multiplier, the larger the amount of national income generated from the G; hence more jobs created to reduce cyclical unemployment.

3. Time lag
   There exist three types of time lag:
   - Recognition lag - It takes time to recognise that there exists a macroeconomic problem. It takes months to collect and analyse economic data.
   - Implementation lag[1] - It takes time to change the course of the fiscal / monetary policy.
   - Impact lag - Once the policy change has been implemented, it takes time to work through all the steps of the multiplier process before the full effect of the policy is felt.

   Implications:
   1. Because of the time lag involved, the problem persists and may even deepen as the policy works its way through the economy. By the time the full effect of the policy kicks it, it might not be sufficient to correct the problem entirely.
   2. Alternatively, during the time the policy works its way through the economy, the problem could have been self-corrected and the policies could end up destabilising the economy, i.e. exacerbating the business cycle trends.

4. Crowding out effect

   When the government increases its levels of spending to boost the economy, it may have to borrow money to finance the increased expenditure. This puts the government (public sector) in direct competition with the private sector for the limited pool of funds available in the economy. The increase in demand for loanable funds, holding the supply of loanable funds constant, drives up interest rate. This raises the cost of borrowing relative to the expected rate of returns from investment. Many previously viable investments are now expected to yield negative net returns.

b) Discuss whether a government should pursue full employment at all costs.

Suggested Approach:
- Requirement: 2-sided balanced arguments considering whether government should pursue full employment at all costs
- Thesis: Explain why government should pursue full employment, highlighting the benefits of full employment or the adversities of a high unemployment rate
- Anti-thesis: Explain the possible costs resulting from government's intervention, including (i) fiscal deficit as stated in the preamble, (ii) consequences og policy measures due to conflicts with other macroeconomic objectives (stable inflation, healthy BOP) , other important objectives forgone in pursue of full employment
- Judgment: Recognise the need to weigh the costs and benefits in making a rational decision. Basis for judgment depends on economic condition (severity of unemployment issue relative to other macroeconomic issues), economic priorities,

L3 (9-11)	For an answer that · consider both the benefits and costs of government's intervention to pursue full employment
L2 (6-8)	For an answer that · lacks in either scope or depth in coverage - · Unbalanced arguments – only consider whether the government should or should not pursue full employment at all costs.

	· some attempt to provide examples
L1 (1-5)	For an answer that · is largely descriptive · has severe conceptual errors
E2 (3-4)	· For an evaluative judgment based on economic analysis focusing on costs and benefits in given context
E1 (1-2)	· For an unexplained judgment, or one that is not supported by analysis.

Thesis: Explain why government should pursue full employment

- Highlight the benefits of full employment or the adversities of a high unemployment rate
- Achieve Productive efficiency if full employment
- Helps in achieving other macroeconomic goals (actual economic growth)

Anti-thesis: Explain the possible costs resulting from government's intervention

- Effect on government's fiscal position and possible adverse consequences of fiscal deficits - With the government increasing its expenditure and decreasing taxes, an expansionary fiscal policy will lead to a worsening of the government's budget position. In severe cases, the government's budget balance could go into a deficit which in turn gives rise to other problems.

- Inflexibility of government expenditure - Government expenditure cannot be easily reversed as a large proportion of its spending reflects longer term economic and social commitments, e.g. schools, hospitals, roads and defence. Continued large injection of government spending at a time when the other AD components are picking up pace may cause the economy to over-heat, stoking demand-pull inflation. The inflexibility of G could therefore have a **destabilising effect on the economy.**

- Trade-off with other macroeconomic goals - Expansionary monetary and fiscal policies, by raising AD, lead to greater competition for resources (holding the supply of factors of production constant). This bids up factor prices and adds to firms' unit cost of production, part of which will be passed on to consumers in the form of higher prices of final goods and services. The inflationary pressure raises the prices of the country's exports relative to its trading partners. Assuming the demand for the country's exports to be price elastic, an increase in export prices will bring about a greater than proportionate fall in quantity demanded, reducing export revenue. Simultaneously, assuming a high degree of substitutability, domestic consumers to turn to imports as inflationary pressure at home mounts. Together, the fall in export revenue and increase in import expenditure brings about a deterioration in the current account balance. In other words, the higher growth rate and reduced unemployment are achieved at the expense of price stability and healthy BOP position.

Judgment: Recognise the need to weigh the costs and benefits in making a rational decision. Basis for judgment depends on severity of unemployment issues relative to macroeconomic issues and consequences

6. Globalisation has exacerbated global inequalities, creating prosperity in some parts of the world while claiming livelihoods in others. Overall, benefits have been unequally distributed and reforms to the global economic system are required.

Adapted from Oxfam, BBC News, January 2013.

Globalisation may have its virtues but it favours the developed countries more than the developing countries. Discuss. [25]

Introduction

Globalisation refers to the increasing integration of national economies in terms of trade, financial flows, ideas, information and technology. It has fused individual national markets, increased the ratio of trade to GDP for many countries and caused a sustained increase in capital and labour flows between counties.

Explain the virtues of Globalisation (i.e. gains from globalisation)

Globalisation can lead to improvements in efficiency and gains in economic welfare:

- Gains from free trade as countries specialise in their areas of **comparative advantage** *[elaborate on the theory of CA and the gains e.g. consumption beyond PPC]*

- Domestic firms can export to a wider market. This enables producers and consumers to reap the benefits of **economies of scale.** Globalisation enables increased specialisation of production according to theory of CA which enables firms to reap iEOS leading to a fall in average costs. This enhances productive efficiency which can be translated in the form of lower prices for final goods and services.

- Globalisation increases competition between firms across countries. This puts pressure on firms to be increasingly efficient and offer better products for consumers. Competitive markets reduce monopoly profits and incentivize businesses to seek **cost-reducing innovations** and improvements in what they sell. There are also gains from a rapid pace of innovation due to greater dynamic efficiency.

- Export led growth leads to higher **economic growth rates** and higher per capita incomes thus increasing material SOL
    - *The OECD Growth Project found that a 10 percentage-point increase in trade exposure for a country was associated with a 4% rise in income per capita*

- Consumers have a wider **choice/variety** of goods and prices are likely to be lower due to the influx of cheaper imports.

Thesis: Globalisation has its virtues but the benefits accrue more to DCs than LDCs.

1. Free Labour Movement → Brain Drain

- Highly-skilled segments of the population in LDCs may find opportunities and wages limited in LDCs and choose to work in DCs instead. This increases the skilled labour supply of DCs and DCs enjoy an increase in quantity and quality of labour at the expense of LDCs. This not only boosts the potential growth of DCs but enables DCs to strengthen their comparative advantage in high value-added goods and services enabling them to keep one step ahead of the competition even as LDCs play catch-up and move up the value chain. Moreover with the increase in supply of foreign labour, wages are depressed. Unit cost of production falls. Furthermore, low or semi-skilled

foreign workers are mostly required in industries such as construction which workers in DCs tend to avoid. With the inflow of foreign labour, important infrastructure such as roads and public transportation system can be built or upgraded and this contributes to greater productivity. Aggregate supply rises.

- Conversely, the outflow of skilled labour from LDCs leads to a fall in the quantity and quality of resources within LDCs, resulting in a loss of productive capacity. A loss in talents in particular, would lead to a fall in potential growth, along with a fall in AS. This loss of talented skilled labour might impede their ability to progress to higher-value-added production in future. Moreover, over time, the lack of skilled workforce in LDCs may lose their comparative advantage in low-end labour intensive production, driving investors to relocate their production to other low cost countries. If the country has a skilled / educated labour workforce, some foreign investors may still choose to stay in the country and tap on this pool of skilled workers to explore new niche areas that could potentially develop into comparative advantage of the country in future. In contrast, if the LDC has a severe lack in skilled workforce, a significant amount of FDI is likely to flow out of the economy, which would reduce actual growth and impede potential growth of the economy as well as lead to a rise in unemployment rates.

2. Firms in LDCs May Struggle to Compete i.e. Infant Industry Argument → globalisation may permanently stiffen the growth of certain industries in the LR

- If a LDC wishes to develop a new manufacturing industry, it may find it difficult to compete against DCs as it faces higher costs than advanced industries in the DCs, who will benefit from years of experience and economies of scale. With globalisation, infant industries which could become competitive in global markets and (1) generate economic growth, (2) reduce unemployment through job creation and (3) earn foreign exchange and improve C/A balance may be driven out of competition.

- Some infant industries have potential CA that requires time to become developed. E.g. In South Korea, the government protected its fledgling electronics industry in the past as it had <u>latent comparative advantage</u> that could be reaped. However foreign competition from MNCs in DCs may prevent these infant industries in LDCs from realising their potential CA in a few ways:
  - Divert consumption to foreign produced electronic goods à prevents domestic firms from expanding their scale of production to reap iEOS (explain one significant source of iEOS in the electronics industry) + eEOS (explain one significant source of eEOS in the electronics industry) à rise in unit COP
  - foreign competition à firms do not have the capacity to engage in R&D and innovation endeavours à unable to improve quality of exports over time

- Influx of MNCs into LDCs might result in crowding out of their domestic firms. With the entrance of MNCs into a LDC, it is also possible that they might undercut domestic firms' prices, due to their much larger size and greater ability to reap IEOS. Eventually the (smaller) domestic firms in LDCs cannot compete and will exit the industry. When local retailers in LDCs are forced out by MNCs in DCs, this leads to less variety and choice for consumers.

3. Problems with over-reliance on MNCs

- Globalisation means LDC's are exposed to external economic forces over which they have little control. This makes macroeconomic management by domestic governments difficult. Globalisation may strengthen the position of the DCs that are better able to take advantage of free trade.
  - E.g. LDCs ability to raise corporation taxation is declining as Transnational Companies (TNCs) from DCs may relocate if corporate taxes are raised.

- If the economic structure of developing economies becomes one that is dominated by MNCs, this would be undesirable to LDCs as this would make them more vulnerable to the footloose nature of MNCs. E.g. MNCs might pull out of LDCs in the event of global recessions or when other countries offer better investment conditions.

- Greater unpredictability of long-term capital flows, greater inability of developing countries to control BOP financial a/c. Without strong support of domestic industries, developing countries also face greater difficulty in cushioning the ↓NY with outflow of FDI.

- Minimal technological transfer from FDI as most FDI outsource only the low-skilled and low value-added part of their production processes (e.g. assembly line production) in order to leverage on the abundance of low-skilled labour in LDCs. R&D, marketing etc. are headquartered back in the economies of the DCs. This makes it difficult for LDCs to move up the value-added chain which will impede potential growth.

4. Difficult for LDCs to Develop Other Higher Value-added Areas of CA

- With greater emergence of low-cost rivals, LDCs might devote a large proportion of its labour resources to maintain their CA in labour-intensive industries thus most resources are locked in low valued-added production. Thus, the ability of LDCs to move up the value chain and to develop other higher value-added areas of CA might be severely impacted.

5. Protectionist measures adopted by DCs against agricultural imports from LDCs.

- EU's Common Agricultural Programme sees the EU levying high tariffs on agricultural imports from Africa. The EU is often accused of following very protectionist trade policies in agriculture, where developing countries have most of their comparative advantage. Commodity imports, such as sugar, dairy products or beef, face a very high level of protection. LDCs will seldom be able to export these products to the EU.

- Moreover LDCs are mostly commodity-dependent countries which are vulnerable to commodity price fluctuations due to the volatile nature of these goods.

6. Increased global integration means greater macroeconomic instability for LDCs

- The 2008 financial crises generated in DCs and the contagion that spread across the world showed that LDCs are not immune to the 'contagion effect'. LDCs have suffered a fall in external demand and lower prices for their exports, higher volatility in capital flows and lower remittances.
    - With globalization, the share of industrial production as a proportion of GDP in LDCs (e.g. China) has been rising - indeed more and more industrial production takes place in emerging markets. When demand for new cars, iPods and other electronic goods falls from the DCs who are undergoing recessions, LDCs experience a fall in export revenue. LDCs reliant on exporting commodities to DCs will also suffer a fall in demand for their output.
    - However, in the wake of the recent global financial crisis and consequent recession, international demand for Eastern exports has declined. In India, weakening global demand, especially in the EU and US led to a 14.8% decline in exports in July 2012.

- LDCs are vulnerable to volatile capital movements. The inflow and outflow of hot money can lead to macroeconomic instability.

7. Environmental Costs

- LDCs utilise lax environmental standards to court MNCs, especially with the emergence of more low-cost rivals. Hence, LDCs are more likely to face environmental degradation (e.g. "Cancer Villages" in China) as compared to DCs which impose stringent environmental regulations (e.g. Carbon taxes) leading to a fall in non-material standard of living. Environmental pollution is a form of negative externalities which results in deadweight loss to society and a lack of allocative efficiency (overproduction).

Anti-Thesis: The virtues of globalisation can be exploited by LDCs and in fact LDCs can be better placed than DCs to exploit the gains from globalisation

1. Greater free trade has created more export markets for LDCs and helped reduce absolute poverty levels in LDCs

- Globalisation has helped many of the world's poorest countries to achieve higher rates of growth by enabling their primary products to be sold around the globe. Given that many LDCs are agrarian societies, globalisation has increased the scope for export earnings from agriculture. This reduces the number of people living in extreme poverty. Moreover, this has increased the foreign currency earnings of LDCs, allowing them to import capital which can boost potential growth.

- In contrast, DCs face rising structural unemployment arising from economic restructuring brought about by free trade. Free trade subjects DCs to global competition. Some industries with higher opportunity cost of production, given by higher unit cost of production, will find demand for their products falling as consumers will switch to consuming cheaper imported substitute goods and services from LDCs. This loss of CA will cause the industry to decline.

    - E.g. The EU textile industry has, lost its CA and is declining as European consumers are switching to consuming imported shoes and clothes from India and China who now possess CA in producing such land and labour intensive goods and services.

  As demand for goods and services decline, firms cut down on production. Demand for fops including L as derived demand falls. The workers who lose their jobs in these declining industries (also known as sunset industries) may not possess the right qualifications and skills to take on jobs in expanding sectors where CA is present and growing, and hence become structurally unemployed due to their occupational immobility.

    - E.g. In Europe, many textile workers are unable to transit into banking, finance and service sector jobs where CA is present and hence remain unemployed, despite them willing and able to work at existing wage rates.

2. Free movement of long-term capital inflows i.e. FDI have paved the way for sustainable development for LDCs.

- Globalisation has encouraged firms to relocate their production to other countries particularly where wage costs and hence unit labour costs are lower. Developing economies may gain through foreign direct investment from MNCs and technology transfer. This creates employment opportunities and boosts economic growth in LDCs.

- In contrast, as investment and jobs in DCs drain away to LDCs, DCs face higher levels of structural unemployment, putting huge pressures on government budgets due to the distribution of unemployment benefits.

3. Free labour movement plays a vital role in the development of LDCs

- Cross-border migration generates hard-currency remittances that raise living standards and capital investment in LDCs, promotes greater trade and investment ties between destination and origin countries, and raises a country's stock of human and physical capital when migrants return with new skills and investment funds.

- Moreover, as more low-skilled jobs are outsourced from DCs to LDCs, demand for lower-income workers would increase in LDCs, as would their wages. In contrast, the wages of lower-skilled workers in LDCs will fall due to a fall in demand for low-skilled workers in DCs. This can widen income inequality in DCs as migrants compete for low-end jobs with native workers.

- Conversely, the migration of labour from LDCs into DCs tend to depress the wages of workers in DCs. This reduces their purchasing power and hence ability to consume goods and services. Material SOL falls..

Knowledge, Application, Understanding, Analysis		
L1	- *Lacks use of economics framework/concepts in analysis* - *Lacks scope and depth of coverage* - *Irrelevant answer* - *Superficial answer* - *Glaring conceptual errors*	***1 – 9***
L2	- *Use of appropriate framework/concepts in analysis* - *Sufficient scope of coverage* - *Sufficient depth of analysis* - *Some errors in analysis*	***10 - 14***
L3	- *Good use of appropriate framework/concepts in analysis* - *Sufficient scope of coverage* - *Good depth of analysis* - *No / minor errors in analysis*	***15 - 21***
Evaluation		
E1	- *An unexplained judgement, one that is not supported by analysis.*	***1 - 2***
E2	- *Evaluative assessment supported by economic analysis*	***3 - 4***

HWA CHONG INSTITUTION
JC2 Preliminary Examinations
Higher 1

CANDIDATE NAME		**CT GROUP**	**12A/S**
CENTRE NUMBER		**INDEX NUMBER**	

ECONOMICS **8819/01**
Paper 1 **20 September 2013**
3 hours

Additional Materials: Answer Paper

INSTRUCTIONS TO CANDIDATES
Write your **name** and **CT class** 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** out of 2 questions.

Begin your answer to each question on a fresh sheet of writing paper.

At the end of the examination, fasten the answer scripts to Section A: Questions 1, 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 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 Japan and The Future of Energy

Extract 1 World energy outlook

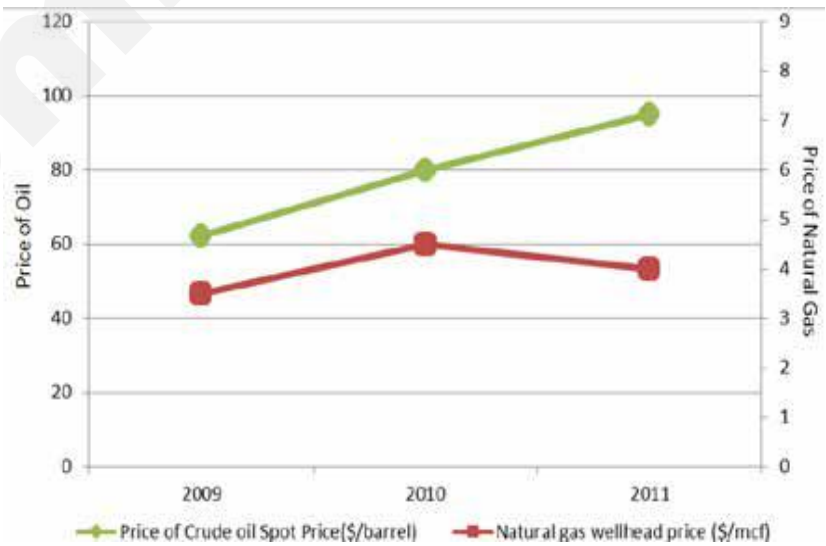
Without a bold change of policy direction, the world will lock itself into an insecure, inefficient and high-carbon energy system. Prosperity and rising population will inevitably push up energy needs and energy prices over the coming decades despite much effort to meet the need. Governments urgently need to introduce stronger measures to drive investment in efficient and low-carbon technologies to accelerate the increase in the production of energy.

The Fukushima nuclear accident leading to a sharp rebound in the demand of conventional oil-based energy and turmoil in parts of the Middle East and North Africa in 2010 had pushed carbon emissions to a record high. The Fukushima accident has also raised questions about the future role of nuclear power, it seems like oil is the necessary evil. Although the accident provided a boost to other renewables, the heighten energy security concerns is making it harder to combat climate change.

Out of the many greener forms of energy sources, the future for natural gas seems to be more certain despite the strong inertia to change. Natural gas is abundant and relatively inexpensive. With technological enhancement, natural gas prices have been presenting itself as a more favorable alternative.

Source: *International Energy Agency*, 2011

Figure 1 Crude Oil prices to Natural Gas Prices (2009-2011)



Source: Energy Information Administration, 18 October 2012.

Extract 2 Golden age of gas

Exploiting the world's vast resources of unconventional natural gas holds the key to a golden age of gas. With the help of technological advancements, natural gas is projected to overtake coal as the second most consumed fuel, after oil by 2025.

Liquefied natural gas (LNG) is envisioned as the fuel of choice for many drivers today. A decade ago, there were few examples of the rise of LNG as vehicle fuel. But that is changing quickly, driven largely by the efforts of many in the oil and gas industry committed to making it work and by the increasing realisation of drivers that converting from petrol to gas makes economic sense. Driving cars that run on alternative fuels like LNG can cut emissions and reduce dependence on foreign fuels.

Rising diesel costs last year forced Waste Management, largest trash hauler in the United States, to charge customers an extra $169 million, just to keep its garbage trucks fueled. This year, it is buying trucks that will run on cheaper natural gas. In fact, the company says 80% of the trucks it purchases during the next five years will be fueled by natural gas. Though the vehicles cost about $30,000 more than conventional diesel models, each will save $27,000-a-year or more in fuel. By 2017, the company expects to burn more natural gas than diesel.

Sources: *ExxonMobil Outlook for Energy* and *The Wall Street Journal*, 2012

Extract 3 Future of nuclear power

Prior to the Fukushima Daiichi nuclear power plant accident in 2011, Japan was the world's third largest consumer as well as producer of nuclear power. In 2010, nuclear energy consumption and production accounted for 13 percent and 26 percent of total energy respectively. According to the Federation of Electric Power Companies in Japan, nuclear power has made a great contribution to Japan's energy security by reducing its energy imports requirements. Furthermore, since nuclear energy emits no carbon dioxide, generating electricity via nuclear power reduces Japan's carbon emissions by about 14 percent per year.

Besides generating power via nuclear energy, there are alternative energy sources such as hydropower, which is however a relatively small share of generation. The Japanese government has been promoting small hydropower projects to serve local communities through subsidies.

In contrast, the American government has proposed a bill to help ensure that cohesive and compatible environmental and energy policies are created and executed. One of the policies includes the imposition of taxes on nuclear plants, a policy which has been criticized as 'bad' public policy. Taxes will put upward pressure on electric rates, stunt economic development and job growth. Moreover, like all businesses, electric generators incorporate all costs – including taxes – into the price of their product.

Sources: *US Energy Information Administration* and *The Telegraph*, 18 March 2011

Extract 4 Effects of the Fukushima disaster

The March 11, 2011, earthquake and tsunami that occurred in Japan followed by the nuclear crisis has caused Japan to lose considerable physical and human capital. In excess of 27,000 persons in Japan are killed or missing, and more than 202,000 homes and other buildings have been totally or partially damaged. The quake and tsunami also damaged key ports, and some airports shut briefly. This disrupted the global supply chain of semiconductor equipment and materials. Automakers Toyota, Nissan, Honda, Mitsubishi and Suzuki temporarily suspended production.

Six months after the multiple meltdowns at the Fukushima Daiichi nuclear plant, the streets have been cleared but the psychological damage remains. Millions of people have to re-adjust to levels of radiation that were – until March – considered abnormal. Low-level radiation is an invisible threat with results that do not become apparent for years. Though the vast majority of people remain completely unaffected throughout their lives, others develop cancer.

As Japan considers closing the last of its 54 reactors, which marks a dramatic shift in its energy policy, there's a concern that a nationwide nuclear blackout comes with significant economic and environmental risks attached. Utilities companies would have to turn to coal, oil and gas-fired power plants to keep industry and households supplied with more expensive electricity. The International Energy Agency estimates the closure of all nuclear plants will increase Japanese demand for oil to 4.5 million barrels a day, at an additional cost of about US$100 million a day. All these imports had contributed to Japan's first trade deficit for more than 30 years last year. In a recent survey, 71% of manufacturers said power shortages could force them to cut production, while 96% said that the additional spectre of higher electricity bills would hit earnings.

Sources: *The Guardian* and *ABC News*, September 2011

Extract 5 Future of Japan economy

Prime Minister Yoshihiko Noda has pledged more than 20tn yen ($249bn) on reconstruction. Rebuilding will lift the economy a bit, but it will be outweighed by the probable increase to the national debt. Japan's economic growth is powered by its successful export sector. Analysts say that growth will suffer until infrastructure issues are solved and factories start running at full capacity again. After the 1995 Kobe quake, Japan's economy was able to rebound relatively quickly because the government hiked public spending by more than 15 per cent in the following 12 months. This time around, the government cannot afford to spend so freely because it is already straining under a debt load which is double the size of the economy, said the Moody's analysts. Any stimulus package will probably be paid for in later years by austerity measures, they said.

Source: *The Institution of Engineering and Technology*, 16 March 2011

Questions

(a) **(i)** Compare the change in price of crude oil and natural gas between 2009 and 2011. [2]

(ii) Using supply and demand analysis, account for the difference above. [3]

(b) With reference to Extract 2, explain two demand factors that have led to the booming alternative fuel vehicle market. [4]

(c) Using a diagram, explain how the production of conventional oil-based energy leads to market failure. [5]

(d) If you were the advisor to the Japanese Ministry of Environment, would you recommend that the government adopt the policy of taxation on nuclear plants? [8]

(e) Discuss the extent of the adverse impact of the Fukushima disaster on Japan's macroeconomic performance in view of the government's effort in rebuilding the economy. [8]

[Total: 30 marks]

Question 2 The Uncertain Future of Globalisation

Extract 6 Globalisation at the crossroads

In the aftermath of the financial crisis, the US championed for free trade – at a grave cost to itself. According to a recent joint report by the International Monetary Fund and the International Labour Organisation, 25 per cent of the rise in unemployment since 2007, totaling 30 million people worldwide, occurred in the US. If this situation persists, it will lay the foundations for huge global trade frictions.

It is an established fact that the US imports low-cost consumer goods and inputs for production from emerging economies, especially China. So any protectionist measures to reduce unemployment, perhaps in the form of a stiff US tariff on foreign imports, would be profoundly self-destructive, even in the absence of inevitable retaliatory measures.

On the other hand, emerging economies have a great deal of scope for action. India, Brazil and China, for example, continue to exploit World Trade Organisation rules that allow long phase-in periods for fully opening up their domestic markets to developed-country imports, even as their own exporters enjoy full access to rich-country markets. Lacklustre enforcement of intellectual property rights exacerbates the problem considerably, hampering US exports of software and entertainment.

The current rut in which the US finds itself could prove to be a problem for the rest of the world. US unemployment is high. When fiscal and monetary policies have been stretched to their limits, exports are the best way out. But that depends on others opening their markets. Otherwise, simmering trade frictions could suddenly throw globalisation sharply into reverse gear.

Source: Adapted from Kenneth Rogoff, *Project Syndicate*, 7 November 2010

Extract 7 Costs of globalisation

The costs of globalisation have also become apparent in developed countries. The Organisation for Economic Co-operation and Development (OECD) reported in 2010, youth unemployment is rising across the developed world. There are currently 15 million unemployed young people – aged 15 to 24 – across the OECD countries (which includes the US), some four million more than in 2007. This is largely a result of globalisation and technological improvement. Over the past 40 years, the global population has more than doubled in size, from around 3 billion to 7 billion now. Simultaneously, countries that were never part of the global market have joined it – not least India and China from the mid-1990s – while technology has become less labour-intensive. As a result, the wages of the low-skilled workers have fallen, while the wages of the high-skilled have risen extraordinarily.

With the opening up of China and India over the past 20 years, globalisation has lifted millions of people out of poverty. But inequality in developed countries and in other developing countries remains shameful, and should not be left unchallenged. At the same time, average workers in most of the major affluent economies, including the US, have seen the real value of their wages whittled away, as they have found themselves in competition not just with their neighbours, but with workers many thousands of miles away. So as the plight of workers in faraway places reveals the true cost of cut-price consumer gadgets, it is also clear that workers everywhere have been losing out.

However, China's workers are clamouring for higher wages and better conditions and this might push up the price of an iPod in London or New York. It would certainly help the Chinese economy move towards Beijing's aim of establishing a rising middle class with a stronger consumer demand at home, instead of economic growth that depends too heavily on cheap exports. Strong, sustainable Chinese growth, and

rising labour standards, would be good for the West too: they should help to narrow Beijing's yawning trade surplus by opening up vast new markets.

Therefore, it would be wrong to think that the answer is to retreat inwards, and return to a closed-border economy. But it must no longer be a taboo to question whether globalisation brings in its wake the benefits that were promised. On an international scale, it should no longer be taboo to propose limits to foreign takeovers, or to the nonstop, unquestioned flow of capital around the world. A backlash against rising inequality risks derailing the advance of globalisation and represents a key threat to economies worldwide.

Source: Adapted from *The Observer*, 29 January 2012 & *The Telegraph*, 6 February 2012

Extract 8 The United States in the Trans-Pacific Partnership

In the face of growing problems of globalisation, President Obama announced in November 2009 the United States' intention to participate in the Trans-Pacific Partnership (TPP) negotiations. The TPP is a proposed Free Trade Agreement initiative involving eleven countries, Australia, Brunei, Canada, Chile, Malaysia, Mexico, New Zealand, Peru, Singapore, United States and Vietnam. Through this agreement, the US is seeking to boost US economic growth and support the creation and retention of high-quality jobs at home by increasing American exports to a region that includes some of the world's most robust economies and that represents more than 40 per cent of global trade. In fact the huge and growing markets of the Asia-Pacific are already key destinations for US manufactured goods, agricultural products and services suppliers. The Obama Administration has been working to ensure the TPP addresses the issues that American businesses and workers are facing today, and may confront in the future.

Source: The White House. Office of the Press Secretary
www.whitehouse.gov accessed 12 August 2013

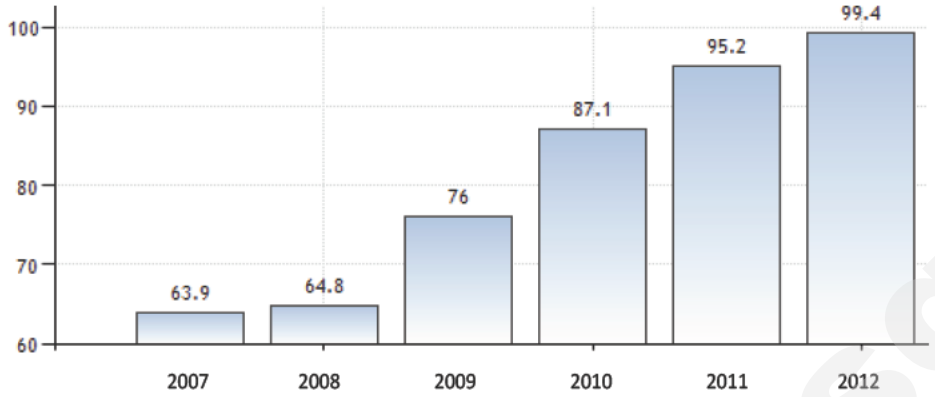
Table 1 Annual percentage change of world merchandise trade and GDP, 2008-2013[a]

	2008	2009	2010	2011	2012[a]	2013[a]
Volume of world merchandise trade[b]	2.3	– 12.5	13.9	5	2.5	4.5
Real GDP at market exchange rates						
Developed economies	1.3	– 2.4	3.8	2.4	2.1	2.4
Developing countries and CIS[c]	5.6	2.2	7.3	5.3	4.9	5.2

[a] Figures for 2012 and 2013 are projections
[b] Average of exports and imports
[c] CIS: Commonwealth Independent States

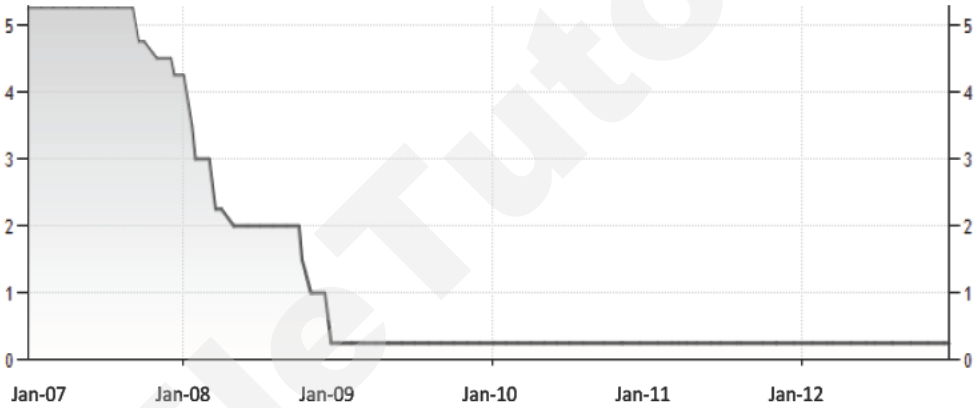
Source: World Trade Organisation

Figure 2 United States government debt to GDP (percentage of GDP)



Source: US Bureau of Public Debt

Figure 3 United States interest rates



Source: US Federal Reserve

Questions

(a) **(i)** Describe the trend in volume of world merchandise trade between 2008 and 2013 as shown in Table 1. [2]

(ii) With reference to Table 1, explain an economic factor that contributed to the above trend. [2]

(b) Consider whether the data in Table 1 and Extract 7 are sufficient to assess changes in living standards in the developing economies from 2008 to 2011. [4]

(c) Using Figures 2 and 3, explain why for the US, "when fiscal and monetary policies have been stretched to their limits, exports are the best way out." [4]

(d) Explain how the West may gain from a rising middle class in China. [2]

(e) Using the evidence from the case and your own relevant knowledge, discuss the view that globalisation may not bring about the benefits it promises. [8]

(f) Discuss whether US membership in the Trans-Pacific Partnership will solve the economic problems it currently faces. [8]

[Total: 30 marks]

Section B

Answer **one** question from this section.

3 **(a)** Explain why government intervention is advocated in the markets both for public goods and merit goods. [10]

(b) There is free wireless connectivity in public areas through Wireless@SG in Singapore. Discuss whether wireless connectivity should be provided free by the government. [15]

4 **(a)** Explain the main causes of unemployment in Singapore in the recent years. [10]

(b) Discuss the view that supply side policies are the best option for the government in reducing unemployment. [15]

Section A: Case Study Question 1 Japan and The Future of Energy

Suggested Mark Scheme

(a)	**(i)**	**Compare the change in price of crude oil and natural gas between 2009 and 2011.**	**[2]**
		Similarity: Both increased from 2009 to 2010. [1m] Difference: While price of crude oil continued to increase thereafter, price of natural gas fell. [1m]	
	(ii)	**Using supply and demand analysis, account for the difference above.**	**[3]**
		Use dd-ss analysis Ext 1: "Fukushima nuclear accident leading to a sharp rebound in the demand of conventional oil-based energy in 2010" → rise in demand [1m] Ext 1: "turmoils in Middle East" → fall in supply [1m] ➔ Rise in prices in crude oil Ext 1: "technological enhancement" for natural gas → rise in COP → rise in supply [1m] ➔ fall in prices of natural gas *1m for each factor identified and link to dd/ss & price.*	
(b)	With reference to Extract 2, explain two demand factors that have led to the booming alternative fuel vehicle market.		**[4]**
	<u>Change in price of related good</u> Ext 2: "Rising diesel costs last year… buying trucks that will run on cheaper natural gas..." → relatively cheap natural gas (substitute) → rise in qty dd for natural gas → rise in dd for AFVs that run on natural gas (complements) <u>Change in tastes & preferences</u> Ext 2: "Driving cars that run on alternative fuels like liquefied natural gas can cut emissions and reduce dependence on foreign fuels…" → changing tastes and prefs → rise in demand for AFVs		
(c)	Using a diagram, explain how the production of conventional oil-based energy leads to market failure. *Cost-benefit diagram to analyse inefficient resource allocation (neg ext) in the*		**[5]**

	production of energy (Refer to Ext 1: carbon emissions) Market failure is said to occur when free markets, operating without any government intervention, fail to allocate scarce resources efficiently, in a way that maximises society's welfare. **<SMB-SMC diagram showing negative externality and welfare loss>** An individual power plant which generates conventional oil-based energy will only take into account its private costs and benefits. In a free market, the equilibrium occurs at Qe where PMB=PMC Its private benefits include revenue from the sale of conventional oil-based energy. Its private costs would be labour costs and costs of running the power plant. However, this plant does not consider the negative externalities that would be generated – e.g. carbon emissions leading to global warming and pollutants resulting in air pollution. The costs of such effects e.g. healthcare costs to third parties (residents staying in the vicinity/ farmers experiencing poor harvests) not involved in the production and consumption are not taken into consideration by the individual plant (EMC). Hence, due to the presence of negative externalities, there exists an EMC in energy production. Social costs of energy production is higher than the private costs (SMC lies above PMC in diagram above) and social equilibrium occurs at Qse where SMB=SMC (assuming no positive externality, PMB=SMB). As the free market level of conventional oil-based energy production is higher than the socially efficient level (Qe>Qse), there is an **over-production** by the amount (Qse-Qe). This over-production results in an **increase in social cost of area ABQeQse** while an **increase in social benefit of only ACQeQse**, hence creating a **welfare loss of area ABC**. Thus market failure results as there is an **over-allocation of resources** to production of conventional oil-based energy.	
(d)	If you were the advisor to the Japanese Ministry of Environment, would you recommend that the government adopt the policy of taxation on nuclear plants? **Recommend taxation on nuclear plants:** ↓SS → ↑P, ↓Q → ↓risk of nuclear power plant accidents (in view of Fukushima disaster) Besides generating power via nuclear energy, there are alternative energy sources such as hydropower Japan can turn to instead.	**[8]**

Do not recommend taxation on nuclear plants:
Limitations of measure
electric generators incorporate all costs – including taxes – into the price of their product (esp. when electricity is price inelastic in demand) → put upward pressure on electric rates, stunt economic development and job growth

Alternative sources of energy are still undeveloped
Hydropower is however a relatively small share of generation
Promoting the use of hydropower via subsidies → trade-offs in spending on other areas (health, education, etc)

nuclear energy emits no carbon dioxide, generating electricity via nuclear power reduces Japan's carbon emissions by about 14 percent per year → helps in overcoming market failure from the over-production of conventional energy

Ext 3: Japan's world's third largest consumer and producer of nuclear power → made a great contribution to Japan's energy security by reducing its energy imports requirements. Ext. 4: With taxation on nuclear energy and a fall in production, Japan has to import other sources of energy (rise in import expd) + utilities companies turn to more expensive electricity.

Conclusion with justification
Should not impose taxation on nuclear plants due to the limitations and the costs it brings along. Further, tax does not solve the root cause of the problems → should be looking at regulations on precautions and safety measures to prevent site accidents.

L3	Thorough, balanced approach to analyzing the strengths and limitations of taxation, citing evidence from case materials to support the arguments, good consideration of context. Considered alternative energy sources. With justified conclusion.	7-8 m
L2	Correct, balanced approach but limited or underdeveloped explanation. Need to explain how the taxation works to reduce risk of disaster. Some attempt in making reference to the case materials. **No / little evaluative comments made**.	4-6 m
L1	Very superficial analysis. Mere listing of points. Inaccurate knowledge of concepts. One-sided answer.	1-3 m

(e)	Discuss the extent of the adverse impact of the Fukushima disaster on Japan's macroeconomic performance in view of the government's effort in rebuilding the economy.	[8]

Impact on the 4 macro goals:

Potential Growth (↓AS)

Japan to lose considerable physical and human capital → ↓pdv capacity

↓AS ↓Potential Growth

Actual Growth (↓AD)

↓C → loss of wealth (destruction of homes)
↓X → semiconductor equipment and materials; automobiles, etc
↑M → increase Japanese demand for oil to 4.5 million barrels a day, at an additional cost of about US$100 million a day.
↑G → on rebuilding (pledged more than 20tn yen ($249bn) on reconstruction)

↓AD → ↓Actual Growth

Impact on employment

Fall in employment resulting from the fall in AD

The *extent of fall in AD, hence actual growth and employment, depends on whether government can stimulate the economy* considering the huge amount of debt she is in ("government cannot afford to spend so freely because it is already straining under a debt load which is double the size of the economy…")

Impact on GPL

Higher electricity bills → ↑COP → ↓SRAS
"Utilities companies would have to turn to coal, oil and gas-fired power plants to keep industry and households supplied with more expensive electricity"
"power shortages could force them to cut production"
"additional spectre of higher electricity bills would hit earnings"

BUT

Downward dd-pull inflationary pressures due to fall in AD

Cost-push inflationary pressures may be cushioned by the deficiency in AD.

Impact on BOP

↓BOT (imports had contributed to Japan's first trade deficit for more than 30 years last year)

Possible ↓FA (↓FDI) due to a loss of FDIs

Conclusion:

The Fukushima disaster is most likely to affect the macroeconomic performance of

Japan adversely due to the destruction of resources which limits production and growth. With government's rebuilding effort, economy may recover more quickly and the extent of the impact could be reduced. However, as government is already under a debt loan, she may not afford to spend much on reconstruction and therefore may not be able to lift the economy.

L3	For an answer that analyses the impact of the disaster on most macro goals clearly using the AD/AS model, with good consideration of the context given. Answer considered the government's effort in rebuilding the economy, hence lessening the negative impact on the economy. With justified conclusion/ evaluation on the extent of the impact – e.g. how government face constraint due to debt	7-8 m
L2	For an answer that uses AD/AS analysis but with missing details or contains some errors. Answer is mainly theoretical and reference to extract is absent or minimal.	4-6 m
L1	Sketchy answer that just lists or briefly explains the effects of disaster with weak attempt to link to macro goals.	1-3 m

Section A: Case Study Question 2 The Uncertain Future of Globalisation

Suggested Mark Scheme

(a)	**(i)**	**Describe the trend in volume of world merchandise trade between 2008 and 2013 as shown in Table 1.**	**[2]**
		Volume of world merchandise trade increased over the period but fell sharply during 2009.	
	(ii)	**With reference to the Table 1, explain an economic factor that contributed to the above trend.**	**[2]**
		• Identify factor: Income • Explain factor: The growth in volume of merchandise trade is positively related to real GDP growth as shown in Table 1. As GDP increases, the demand for imports, which are usually normal goods, will increase. Hence, trade increases in the world.	
(b)	**Consider whether the data in Table 1 and Extract 7 are sufficient to assess changes in living standards in the developing economies from 2008 to 2011.**		**[4]**
	Table 1 – positive real GDP – material SOL (amount of goods & services available for consumption); positive growth in imports for most of the year except 2009 – importing more goods & services (for consumption?) [1m] Ext. 7: "global population more than doubled in size" → real GDP per capita may not have risen [1m] OR Ext. 7: "wages of the low-skilled workers fallen, while wages of the high-skilled risen extraordinarily…", "inequality in developed countries and in other developing countries remains shameful …" → rising income inequality [1m] (Note: Youth unemployment is for US) Missing data: need <u>concrete</u> data such as gini coefficient and population growth [1m] Non-material SOL not accounted for → need relevant stats [1m]		
(c)	**Using Figures 2 and 3, explain why for the US, "when fiscal and monetary policies have been stretched to their limits, exports are the best way out."**		**[4]**
	• *<u>Explain why fiscal policy is stretched to its limits</u>*: Figure 1 shows that the USA debt to GDP ratio has been increasing from 2009-2013. Any continuation of		

	expansionary fiscal policy will require more borrowing which will lead to crowding out effect and limit effectiveness of FP. • *Explain why monetary policy is stretched to its limits*: The US interest rates are very low since 2009, as shown in Figure 2. Hence, it is no longer possible to increase investment or interest-sensitive consumption by lowering interest rates. • *Explain why exports are best way out*: Given the limitations of FP and MP, then policies that will boost net exports will be most effective in solving the macroeconomic problems in the US	
(d)	**Explain how the West may gain from a rising middle class in China.**	**[2]**
	The higher affluence in China will allow them to buy imports from the West, assuming normal goods (YED > 0). This will reduce US widening trade deficit	

(e)	**Using the evidence from the case and your own relevant knowledge, discuss the view that globalisation may not bring about the benefits it promises.**	**8**
	Clarify benefits **Thesis: Benefits of globalisation based on theory and own relevant knowledge (link to 4 macro goals & SOL)** The promise of globalisation in the form of free trade, free movement of labour and capital is the increase in output as countries specialise on the basis of their comparative advantage. This can increase consumption and world output. Free movement of labour allows countries to complement their local labour with foreign labour. The foreign labour may fill the jobs that the local labour avoid or are does not have the required skills. This arrangement is beneficial to the economic growth of the nations. The openness of capital markets also allows investors and savers from all over the world to transfer funds from one country to another, ideally allocating funds to the most profitable investment projects. This will increase the productive capacity of the countries. All these will result in higher growth with lower inflation and more employment opportunities. **Draw AD-AS diagram to illustrate the benefits.** **Anti-thesis 1: Benefits of globalisation will not be realized due to barriers to trade** According to Extract 4, the US has been embracing free trade but it has not reciprocated by other economies. Emerging countries which trade with US are exploiting World Trade Organisation rules that allow long phase-in periods for fully opening up their domestic markets to developed-countries' imports. In addition, lacklustre enforcement of intellectual property rights exacerbates the problem considerably, hampering US exports of software and entertainment. This affects the US trade balance, leading to high unemployment rate and possibly slow economic growth rate. ***Evidence: Extract 4 suggests that trade barriers have contributed to the USA's high unemployment rate and possibly lower economic growth rate.***	

Anti-thesis 2: Globalisation may not bring about the benefits of higher consumption FOR ALL

However, as the case highlights the problems of the openness, the US also does not enjoy larger output and consumption. Instead, the US experiences higher levels of youth unemployment and income inequality.

Extract 5 mentions youth unemployment is due to the need to compete with workers in the rest of the world given the migration of jobs to other parts of the world as well as the changing production processes. Instead of workers finding jobs in their countries due to economic growth and free movement of labour, which globalisation promises, lacklustre economic growth and labour immobility have led to massive unemployment and lower consumption for all.

Extract 5 also highlights the issue of rising inequality which is due to "technology becoming less labour intensive" and hence increasing the difference between wages of the high skilled workers in capital intensive industries and the low skilled workers.

Evaluation and Judgement: Will globalisation bring about the benefits it promises?

Whether a country achieves a net cost or benefit from globalisation depends on whether the country can manage the costs of globalisation using supply side policies to deal with the unemployment as well as in the re-distribution policies to deal with growing income inequality.

Or

The issue of reduced benefits to USA cannot be attributed entirely to the dynamics globalisation. There are other factors like the outcomes of post financial crisis which could have compounded the reduction of benefits of globalisation.

Level	Descriptors
L3	• Able to provide evaluative judgment on the extent of benefits of globalization. • Candidates must also question the assumptions in the case study and not merely explain how globalization has reduced benefits it promises.
L2	• Able to analyse the arguments for and against the benefits of globalization with appropriate substantiation from the case study and their own knowledge.
L1	• Able to identify / state factors for and against benefits of globalization from the case study • Little use of economic framework • Many conceptual errors

(d)	**Discuss whether US membership in the Trans Pacific Partnership will solve the economic problems the US currently faces.**	**[10]**

Introduction:

The US currently faces massive unemployment (25% of 30 million people) and a growing income inequality amidst a slow economic growth rate. These economic problems are attributed to adverse impacts of globalisation in the case study. This answer will attempt to demonstrate to what extent such a partnership with USA could solve its economic problems.

Thesis 1: TPP will solve some economic problems	**Anti-thesis 1: TPP will not solve some of the economic problems**
Reduce unemployment/Balance of trade deficit The proposed Free Trade Agreement will lower tariff and non-tariff barriers. This will be beneficial to USA as the Asia-Pacific region is a huge and growing market which is already a key destination for US manufactured goods, agricultural products, and services suppliers This will make the US exports more competitive and hence increase US export revenue. An increase in net export revenue will increase AD, NY and reduce unemployment rate. AD-AS diagram **Reduce income inequality/Government debt** Moreover, if the US economy grows because of the trade stimulus, there will be an increase in income tax revenue which could enable the government to redistribute income to low skilled workers as well as to unemployed workers.	Can't solve unemployment if they do not have the relevant skills in industries in which US has comparative advantage or if US exports are not internationally competitive. Can't solve the income inequality problem too if the industries that benefit from export growth are capital intensive, as low skilled workers will be left out. ***Evidence:*** *Extract 5: "Simultaneously, countries that were never part of the global market have joined it – not least India and China from the mid-1990s – while technology has become less labour-intensive. As a result, the wages of the low-skilled workers have fallen, while the wages of the high-skilled have risen extraordinarily."* *"At the same time, average workers in most of the major affluent economies, including the US, have seen the real value of their wages whittled away, as they have found themselves in competition not just with their neighbours, but with workers many thousands of miles away. So as the plight of workers in faraway places reveals the true cost of cut-price consumer gadgets, it is also clear that workers everywhere have been losing out."*
	Anti-thesis 2: US will need to use other policies to solve the unemployment and income inequality problem.

	• Retraining of workers using supply side policies, rather than using trade policies

Evaluation and judgement:

The problem of trade deficit and, to a certain extent, cyclical unemployment could be solved using a trade policy like FTA. However, structural unemployment and growing income gap between skilled workers and low skilled workers have to be resolved using supply side policies in tandem with trade policy.

Level	Descriptor
L3	• Able to provide evaluative judgment to the extent of TPP could solve unemployment, growing income inequality and slow economic growth. • Discussion must include both arguments and counter arguments for TPP in solving US economic problems. Able to suggest alternative policies to address US economic problems.
L2	• Adequate discussions on the possible impact of TPP in addressing US economic problems. However, candidates unable to offer alternative policies or attempts to evaluate FTA.
L1	• Mere identification of the possible impact of TPP in solving US economic problems without substantiation from the data or theory. • Lop-sided arguments. Eg. Discussion limited to either TPP or Supply side policies.
E2	Judgment in the conclusion with substantiation
E1	Some judgment in the conclusion without substantiation

3 **(a)** Explain why government intervention is advocated in the markets both for public goods and merit goods. [10]

(b) There is free wireless connectivity in public areas through Wireless@SG in Singapore. Discuss whether wireless connectivity should be provided free by the government. [15]

Suggested Outline: part (a)

(i) Explain public goods resulting in complete market failure

A pure public good is a good or a service that has the characteristics of non-excludability and non-rivalry. As such, they will not be provided by the market.

Non-excludable (Free-rider problem)
It is impossible or prohibitively expensive to exclude non-payers from using it.
For instance, once street lighting is provided, there is no inexpensive or practical way to restrict the availability of the service to people who pay.

Non Rivalry (MC=0)
Consumption of the good by additional individuals will not prevent others from enjoying the same good, or reduce the quantity and quality consumed by existing consumers.
Marginal cost of providing the good to the additional user is zero.
For instance, the use of the street lighting by a pedestrian will not reduce the amount of light available to others.

Missing market/ Complete market failure
As a result of the characteristics of non-excludability, the provision of public goods suffers from the **"free-rider" problem**. Since it is not possible to exclude those who do not pay from consuming the good, no self-interest, rational consumer will reveal his effective demand and hence has no incentive to pay what the good really is worth to them.

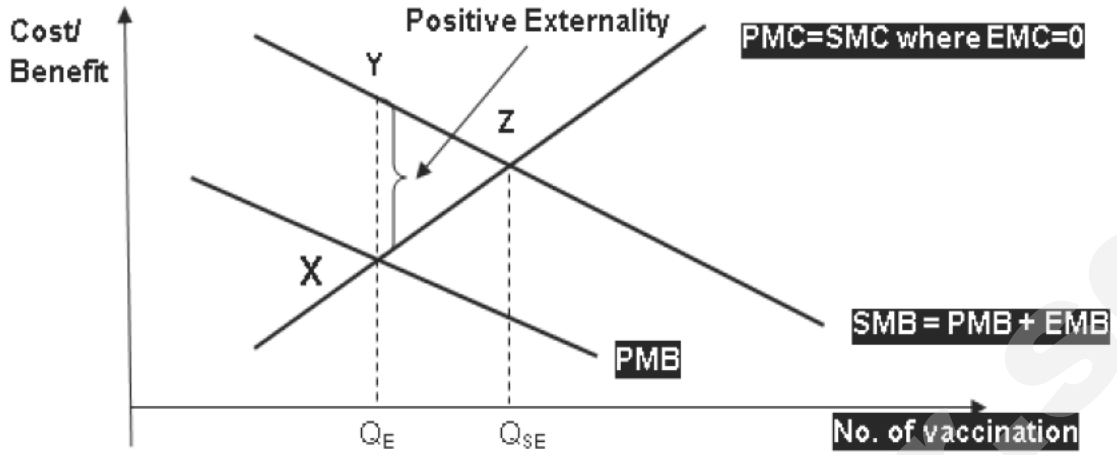
Since anyone can enjoy all the benefits of a pure public good once it is produced without paying for it, there will be an **absence of price signal** and producers will not supply this good. Hence, despite the fact that a pure public good yields valuable benefits to society, the "free rider" problem means that the **market will not provide such a good.**

As a result of the characteristics of non-rivalry, no self-interest, a rational firm will not be willing to produce the good or service.

Therefore government intervenes to provide what is socially optimal.

(ii) Explain merit goods resulting in under consumption/ production

MERIT GOODS are goods or services that have been deemed by the government as socially desirable and under-consumed/produced and their desirability is usually due to external benefits spilled over to the society.



- Assume that this activity only results in positive externality; and not negative externality i.e. EMC=0. Thus, PMC=SMC.
- In perfectly competitive market, the equilibrium outcome will be at point X of output Q_E where PMB= PMC.
- But due to the positive externality, the actual benefit to the society is represented by Social Marginal Benefit (SMB) which takes into account the full benefit to society of the influenza vaccination. SMB lies above PMB, as it includes both PMB and external marginal benefit (EMB). Hence, the allocatively efficient output should be Q_{SE} where SMC=SMB and not Q_E.
- Hence, there is underconsumption of Q_E-Q_{SE}.
- Area $YZQ_{SE}Q_E$ is the incremental social benefit for Q_E-Q_{SE}.
- Area $XZQ_{SE}Q_E$ is the incremental social cost for Q_E-Q_{SE}.
- Area XYZ represents the welfare loss from the underconsumption of Q_{SE}-Q_E because if left to the market i.e. without government intervention, the outcome will be Q_E.

Thus, government intervenes, for instance, by adjusting the price through subsidies, to ensure more resources are allocated to the production of this good, eliminating the deadweight loss.

Level	Mark	Descriptor
L3	7 – 10	Clear analysis/explanation to demonstrate inefficiency leading to market failure and the need for government intervention.
L2	5 – 6	Incomplete analysis to explain for market failure. Answer is lop-sided.
L1	1 – 4	Answer shows some knowledge of the sources of market failure but analysis is inaccurate.

(b) There is free wireless connectivity in public areas through Wireless@SG in Singapore. Discuss whether wireless connectivity should be provided free by the government. [15]

Thesis: Yes, it should be provided free

1. MC = 0

Established earlier in part (a) that public good should be provided by the government due to missing market.
Now, consider whether wireless connectivity is a public good and hence whether it should be provided by the government.

Wireless@SG can be made excludable to non-payers. Only registered users can enjoy the free access. If charges need to be imposed, non-payers can be easily excluded.

Wireless@SG seems to be non-rivlarous as access to the network by one user does not mean that an additional user will be excluded in the consumption, i.e. it can support multiple users. Since supply of wireless connectivity is not depleted by an additional user, the MC of serving an additional user is zero.

Therefore, the government should provide for it free and not charge a price so as to achieve allocative efficiency (P=MC=0).

***However**, as more additional users access the network it does slow down the speed of access which means the quality of service is not the same as before. Thus additional user can lead to rivalry in consumption in terms of speed access.*

2. Wireless connectivity is a merit good with huge positive externality

The **Private Marginal Cost (PMC)** - The private cost of providing an **additional** user the wireless service by service providers such as M1 and SingTel is the additional cost in providing the service such as wages for hiring more employees to explain to walk-in customers or those who call up and to process paperwork.

The **Private Marginal Benefit (PMB)** The private benefits of providing the service to an **additional** user is the additional revenue to the company.

Social Benefits (private and external benefits)
In the provision of wireless network, it creates positive externality or **External Marginal Benefits (EMB)** to society at large. This positive third party spillover effects include the benefits of increasing efficiency for people to access information and leading to higher productivity. A more technological advanced environment will benefit the employers and the economy.

The price mechanism fails to bring about a socially efficient allocation of resources in this case. This is because the benefit to other parties created is **unpriced** by the price mechanism and therefore is not included in the **private benefits** of providing wireless network. Hence we can say that there is a divergence between the **Social Marginal Benefit (SMB) and the PMB, and as a result SMB lies above that of PMB. I.e. SMB = PMB + EMB.**

Illustrate with the aid of a diagram

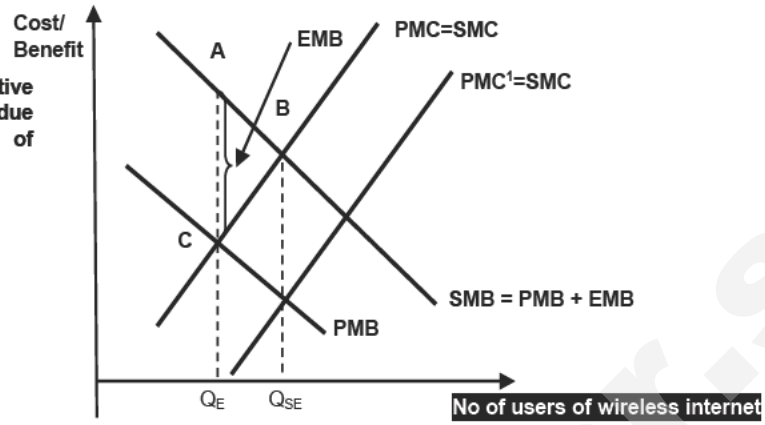


Figure 1: Positive external benefits due to provision of wireless network.

From Figure 1, the **market equilibrium** occurs at $\mathbf{Q_E}$ where **PMB=PMC since service providers only take into account their own benefits and costs**. However, due to the presence of positive externalities (EMB), the social benefit of providing the service is higher than the private benefit. The socially efficient allocation occurs when society takes into account of the positive externalities when **SMB=SMC at $\mathbf{Q_{SE}}$** (assuming no negative externalities present, PMC=SMC). This divergence between private and social benefits causes a misallocation in the form of under-provision of wireless network illustrated in the diagram by $\mathbf{Q_{SE}–Q_E}$. As a result of this under-provision, the potential gain in social benefit of consuming at the Q_{SE} represented by **$\mathbf{ABQ_{SE}Q_E}$ which is greater than the social cost of $\mathbf{CBQ_{SE}Q_E}$ is gone. There is a deadweight welfare loss of ABC.**

Due to the huge extent of external benefits deemed by the government, it bears the entire cost for the service (BQ_{SE}) to ensure the socially optimal output is achieved.

Anti-thesis: No, it should not be provided free

1. Possibility of Government Failure

LACK OF INFORMATION:

However, free provision can lead to over-allocation of resources for wireless network if the EMB is estimated wrongly. There may be many users who are using this free network for leisure and not related to work. So it is difficult to estimate the EMB.

BLUNT INSTRUMENT:

If government's aim is to ensure equity – everyone has access to the service. She can subsidise the service according to level of household income (means-test).

NEGATIVE IMPLICATION:

Such spending adds to the expenses by the government and imposes a strain on the government's budget. This can lead to unnecessary wastage of nation's reserves. Ultimately the subsidies are paid for from tax revenues and hence it is the taxpayers who have to bear the burden.

2. Consider alternative measures

Subsidizing private operators

Government can consider subsidizing the various operators for the cost of supplying the service, making the service cheaper to the consumers to encourage usage.

However, *subsidies, if given to producers, may breed inefficiency as it reduces the incentive for firms to stay efficient by finding the lowest cost of production. Over time, firms may become complacent and unable to cope with competition if the subsidies are removed.*

Educating the users
Government can promote the use of wireless internet through campaigns and spread the message of benefits of internet connectivity.

Complement with cheap computers, laptops and smartphones
Need to ensure that such devices used to access wireless network should be made more cheaply to encourage wider use of wireless internet to reap the full social benefits a more technological advanced and productive workforce.

Conclusion
Whether wireless connectivity should be provided free by the government depends on the extent of its positive externality viewed by the government. If the government views it as significant, then a full subsidy (free) may be justified. However, the extent of external benefit is unlikely to be high, given the fact that there are already many users who have already subscribed to wireless broadband/ data plan and can access wireless network as paid users without any subsidy from the government (infra-marginal externality), providing such services free may not be a well-targeted policy and may lead to a wastage of resources.

Level 3 (9-11)	• A well-developed answer that gives a reasoned discussion for free provision and considered other alternatives as better solutions.
Level 2 (6-8)	• Attempt to apply an analytical framework (positive externality diagram) to answer the question but analysis may not be accurate. • Answer may not be balanced
Level 1 (1-5)	• Show some knowledge on why government should intervene for wireless connectivity, largely descriptive
E2 (3-4)	• For an evaluative assessment based on sound economic analysis.
E1 (1-2)	• Evaluation without justification.

4 (a) Explain the main causes of unemployment in Singapore in the recent years. [10]

(b) Discuss the view that supply side policies are the best option for the government in reducing unemployment. [15]

Suggested Outline:

(a) Causes of Unemployment in Singapore in the RECENT YEARS

Cyclical Unemployment
Cyclical unemployment is caused by a lack of demand in the downswing of 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. Therefore, cyclical unemployment is sometimes referred to as ***demand-deficient unemployment.***

In the recent Global Financial Crisis (US sub-prime mortgage crisis) in 2008/09, the economy went into sharp contractions as a result of these external shocks. These shocks badly affected our export trade with the rest of the world, tourism and international banking as well as financial services sectors. In short, it hit our export revenue (X) and investment (I) components of AD causing domestic consumption to fall. And since exports from Singapore are dominated by high-end manufactured goods and services which tended to have a high income elasticity of demand, falling global income could have a pronounced adverse effect on export demand from Singapore. As AD falls, actual sales are lower than expected sales and firms experience an unplanned increase in stocks. This will cause them to cut back on production as actual stock levels exceed desired levels. In so doing, firms will hire fewer workers and hence cyclical unemployment rises.

Structural Unemployment
Structural unemployment arises when changes in technology or international competition change the skills needed to perform jobs or change the location of jobs. As a result of this changing structure of the economy, **there is a mismatch between the workers' skills and job requirements**. People are 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 labour respectively).

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 what they believe will be the best match available, frictional unemployment arises.

Marking Scheme

Level	Descriptor	Marks
L3	For a **competent** explanation of at least 2 possible causes of unemployment of which one must be cyclical unemployment due to an external crisis e.g. US Financial Crisis (recent years).	7 - 10
L2	For an answer that shows comprehension of concepts required but limited ability in giving a clear explanation of the causes of unemployment. OR Answer that explains causes of unemployment in general (theoretically), not meeting the requirement of the question which says in recent years in Singapore in specific.	5 – 6
L1	Merely listing the causes of unemployment without explaining. Able to state the basic knowledge but shows confusion in certain concepts. Points given are non-economic (descriptive). Making conceptual errors.	1 – 4

(b) Discuss the view that supply side policies are the best option for the government in reducing unemployment. [15]

Introduction:
Supply-side policies are mainly micro-economic policies designed to improve the supply-side potential of an economy, make markets and industries operate more efficiently and thereby contribute to a faster rate of growth of real national output.

Supply side economics is an approach which focuses directly on the Aggregate Supply (AS). If successful, AS curve will shift outwards, thus increasing output for any given level of prices or reducing prices for any given level of output.

This essay shall discuss whether SSPs are the best option in reducing the different causes of unemployment and whether there are other better options in doing so.

Body:
Supply side policies are the best option for the government in reducing unemployment.
1. SR SSP to reduce Cyclical Unemployment
Short-run supply side policies primarily target at reducing business costs. They are usually stop-gap measures that yield only temporary results. To fully solve the problems, other policies have to be in place.

Some of the examples will be price and income policies such as price controls, wage freeze/ flexible wage system, and temporary cut in CPF. For instance, employer's CPF contribution rate was reduced from 16% to 13% in 2003 during SARS period. This effectively lowered labour costs, thereby cushioning the effects of a falling aggregate demand on cyclical unemployment. Also, other cost cutting measures like corporate tax rebates, utilities rebates and rent rebates were adopted in 1999 to help firms stay in the black.

The outcome is illustrated by an increase in the short-run aggregate supply (SRAS) curve, increasing output and lowering general price level.

Figure 1: Short-run supply-side policies work to lower business costs (during RECESSION)

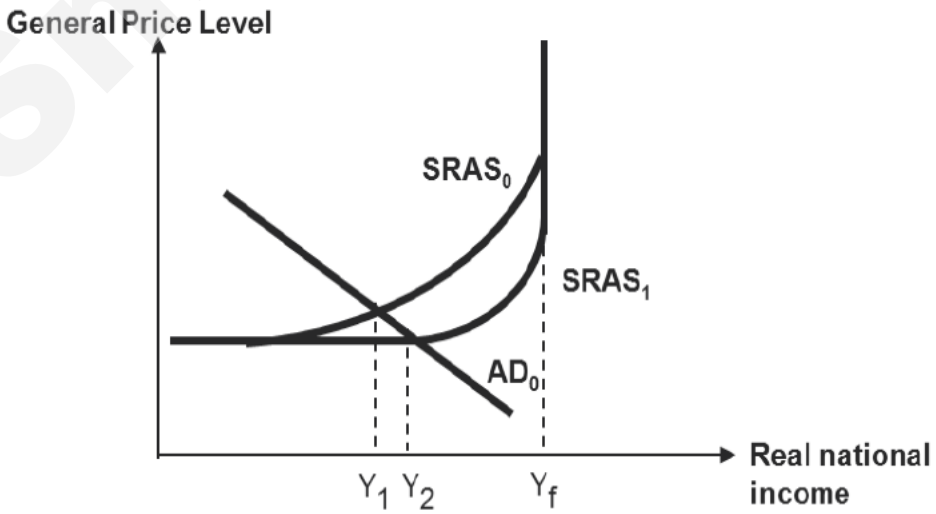


Figure 1 depicts a picture of slow growth due to deficiency in demand (weak AD-*can be illustrated by drawing AD cutting at / near Keynesian AS range*) as equilibrium output at Y_0 is much lower than that of full-employment level Y_f.

The use of short-run supply-side policies is able to shift the SRAS curve from $SRAS_0$ to $SRAS_1$. The actual growth of the economy is increased from Y_0 to Y_1. Though it is not very significant as AD is weak during

recession, it helps to keep some business from going bust and thus save some jobs, thereby reducing cyclical unemployment.

2. LR SSP to reduce Structural Unemployment

Education and Training

- As the problem with structural unemployment lies with occupational immobility, one of the most direct solutions would be to help workers who are displaced and whose skills have become irrelevant, find new employment by equipping them with new skills. Hence, the government could focus its spending on the retraining of workers displaced from these industries, helping them acquire new skills to enter the new industries which had arisen as a result of shifts in comparative advantage, thereby easing structural unemployment. For example, firms could tap on the Skills Development Fund (SDF), as well as the Skills Programme for Upgrading and Resilience (SPUR) which was implemented during the 2009 Budget. These initiatives provide subsidies to firms who sent their workers for re-training or upgrading courses so as to raise labour productivity and retain their employability.
- The government can design the education system to meet to the requirements of economic development. For example, more vocational schools and technical colleges should be set up to train more mechanics, foremen and technicians so as to overcome the problem of a shortage of skilled labour.

Evaluation

The main concern with such a policy lies in the **attitude, aptitude and age** of the workers who were sent for the courses. Without a good attitude towards learning, an aptitude and flair for learning new skills, and the ability to internalise the skills set learnt quickly, the level of productivity may not have increased as desired and hence render the policy less effective.

Moreover, the cost of providing or subsidising training can impose a burden on the government budget.

3. SSPs to reduce Frictional Unemployment

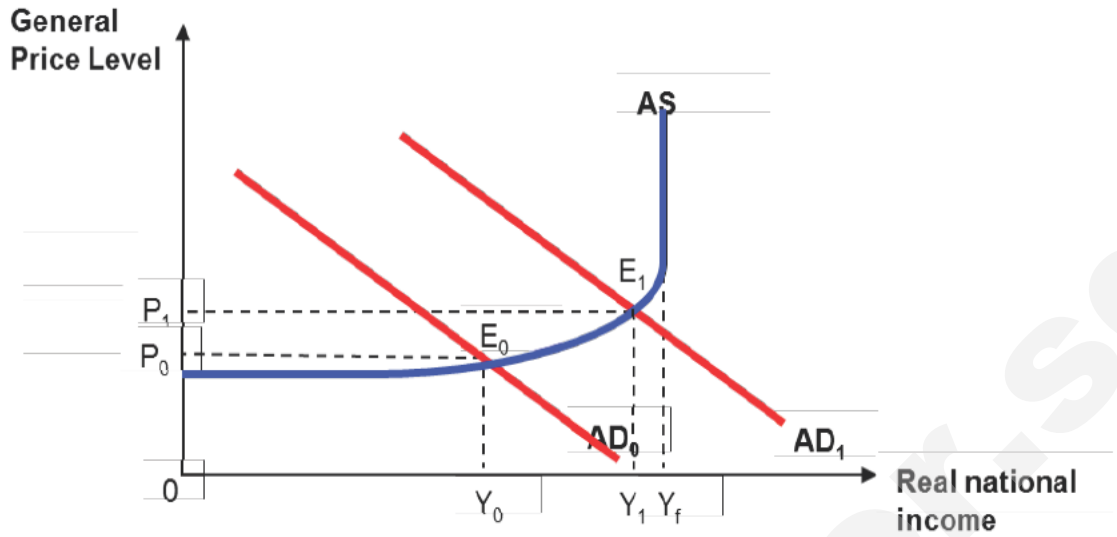
To deal with frictional unemployment, policies that focus on improving labour market information would help improve efficiency in the labour market. These can range from setting up of employment agencies (like those in the US) to job matching websites like JobStreet.com and JobsDB.com which helps collate potential employees details and match them to the needs of prospective employers. Other examples include job fairs that the Ministry of Manpower in Singapore organizes regularly to bring together employers of the same industries to hold a mass recruitment exercise where workers can seek out their most suitable jobs.

Other policies are better in reducing unemployment

Explain briefly how demand-management policies such as expansionary fiscal and monetary policies would be better in reducing cyclical unemployment

Expansionary Fiscal Policy

This policy works by increasing government spending as illustrated by the Singapore government's 2009 budget of S$20.5 billion. In addition, Singapore corporate tax rates were reduced from 18% to 17% in 2009. This raised the after-tax profit of the firms and increased their expected rate of returns, hence encouraged more investment.



This will then cause an increase of AD from AD_0 to AD_1 and lead to an unplanned decrease in stocks. As the firms increase production to increase their stock levels back to desired levels, they hire more workers (as well as other factors of production), employment levels rise. National income increases by a multiplier from Y_0 to Y_1 getting closer to the Y_f.

Evaluation
The extent of rise in income and employment would depend on the size of multiplier. For small, open economies such as Singapore, very high withdrawals from the circular flow in the form of savings and import expenditure would lead to the small size of the multiplier, limiting the effectiveness of the policy.

If the cause of the cyclical unemployment is due to a fall in external demand for goods (due to global financial crisis), given the relatively small size of government spending as a component of AD, a fall in export revenue would require a significant increase in G to make up the fall in AD.

Exchange Rate Policy - Depreciation
Hence, cyclical unemployment during poor external demand can be countered by exchange rate policy. For instance, by depreciating the currency, it makes Singapore's exports cheaper in terms of foreign currency and hence allow the exports to gain export price competitiveness. Assuming PEDx > 1, quantity demanded of Singapore's exports will rise more than proportionately and hence increase export revenue (X). Additionally, imports will become relatively more expensive in terms of S$ and assuming PEDm > 1, quantity demanded for imports will fall more than proportionately and hence import expenditure will fall (M). Overall net exports (X-M) will increase, leading to an increase in AD. Since there are unplanned fall in stocks, producers will hire more workers to meet this shortfall and hence cyclical unemployment will be solved.

Evaluation
A depreciation of S$ will raise the price of imports such as raw materials and contribute to import price push inflation for the Singapore economy. This will raise cost of production for firms and lead to a loss in export price competitiveness, which will lower X and AD and hence worsen unemployment.

Protectionism
In times of recession there is a tendency for economies to practice protectionism to minimise the level of (cyclical) unemployment in the economy. As an expenditure switching method, protectionism will raise the price of imports and hence consumers will switch to buying relatively cheaper local goods. This results in greater quantities supplied by domestic producers. These producers will need to hire more units of labour to produce the goods, hence increasing employment opportunities and saving jobs as a result.

Evaluation
Other countries are likely to retaliate with their own trade barriers, thereby sparking global trade wars. The net result is the rapid contraction in world output and income and employment.

Conclusion:
SSPs are the best option only if the main cause of unemployment is structural. However, if the cause of unemployment is cyclical or due to a dip in global demand for exports, other expansionary demand-management policies should be implemented together with cost-cutting measures (SR SSPs) to help boost external demand and tackle the root cause of the problem.

Marking Scheme

Level	Descriptor	Marks
L3	For an answer that shows the ability to apply arguments with good illustrative examples – ***at least 2 other dd-mgt policies*** are discussed. AND Well-developed analysis and evaluation of whether supply-side policies are the best option of reducing unemployment *Able to look into the fact that there exist different types of unemployment in the economy and ss-side policies are more effective in reducing structural unEm whereas dd-mgt policies are needed to reduce cyclical unEm, apart from ss-side policies.*	9 – 11
L2	Answer that shows some ability to describe the supply-side policies to reduce unemployment but in a largely generic context. ***At least 1 other dd-mgt policy*** is discussed. OR Shows ability to balance arguments but application is too generic.	6 – 8
L1	Answer is mostly irrelevant and contains only a few valid points made incidentally in an irrelevant context. Arguments presented are basically lop-sided i.e. without considering other demand-management policies. OR Answer shows some knowledge of the issue but overall there is no clear focus or direction	1 – 5
Evaluation Marks		
E2	For an evaluative judgment based on analysis and supported with a strong conclusion	3 – 4
E1	For an unexplained judgement, or one that is not supported by analysis	1 - 2

HWA CHONG INSTITUTION
C2 Preliminary Examinations
Higher 2

CANDIDATE NAME		**CT GROUP**	**12**
CENTRE NUMBER		**INDEX NUMBER**	

ECONOMICS **9732/01**
Paper 1 Case Study Questions **20 September 2013**
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.

This document consists of **8** printed pages.

[Turn over

Answer **all** questions

Question 1

The problem with snacking

Extract 1: Kraft plans to split into two companies

Kraft is the latest in a string of US companies to separate its business to cater to different niche markets. As companies increasingly look for ways to drive growth during a difficult economic environment, there has been a major shift from thinking bigger is always better to sharpening their strategy on smaller businesses that focus on a group of brands.

The company said that after several years of acquisitions, sales and other changes, it became clear that the company had built two strong but distinct portfolios. Hence, the next step is to recognize the separate priorities for each of these portfolios. After the split, Kraft intends to sell off its grocery business.

It will retain its snack food business, which will be twice the size of its grocery business and is expected to grow quickly. The company has already been building its snack food business for several years with high-profile acquisitions such as LU biscuits and well-known brand Cadbury in recent years. Going forward, it will focus on high-growth international business and the convenience stores, kiosks, and other places where the small treats are sold. It already derives about 75 per cent of its revenue from international markets and will put a heavy emphasis on emerging markets like China, India and Brazil that represent a major growth opportunity.

While investors reacted well to the company's switch to the less-is-more strategy, analysts were sceptic about the strategy. Some analysts question the split of what they see as overlapping businesses, which will inevitably create competition for one another. Additionally, although the companies will both each remain large businesses after the split, the economies of scale may not.

Source: *Associated Press*, 4 Aug 2011

Table 1: Market share of snack food manufacturers in the US (2011)

Company	Market share
PepsiCo	41%
ConAgra Foods	6%
Kraft	6%
The Proctor & Gamble Company	6%
General Mills	4%
Others	37%

Source: AccuVal Corporate Valuation & Advisory Services

Extract 2: Tax on unhealthy snacks, subsidise healthy foods

The snack food industry appears to be one that is incapable of promoting healthier foods and has often relied on large-scale marketing campaigns to attract consumers towards unhealthy snacks. But the mounting problem of consuming unhealthy snacks is found at two distinct levels. One, most consumers do not know how unhealthy these foods are and what health hazards they pose. Two, there is a class of 'aware' citizens who do know the risks involved but there is precious little they can do about it since munching on such unhealthy snacks brings about euphoric pleasures.

Nearly 7 million Americans are currently walking around without even realizing they have a life-threatening disease – undiagnosed diabetes. Another 80 million are pre-type 2 diabetic, the type associated with bad eating habits. New findings show that employees with an unhealthy diet were 66 per cent more likely to report having experienced a loss in productivity than those who regularly ate healthy foods.

A sane diet could save tens if not hundreds of billions of dollars in health care costs. Yet the snack food industry proclaimed that their mission is not public health but accountability to shareholders. Therefore, they will continue to sell health-damaging food, until the market or another force skews things otherwise.

Perhaps taxes could be imposed to reduce consumption of unhealthy snacks and generate billions of dollars annually. That money could be used to subsidise the purchase of healthy foods like fruit, seasonal greens, vegetables and whole grains.

This program would, of course, upset the snack food industry, especially firms with a major market share in the business. It would also bug those consumers who might resent paying more for snacks as they claim that their right to eat whatever they wanted was being breached. Perhaps the snack food industry could consider producing healthier snacks that are less health-damaging.

Source: various

Extract 3: One in ten obese in Singapore

The latest National Health Survey results released last November showed that more than 10 per cent are obese, up from the 6.9 per cent of a sample population surveyed six years earlier. The obese are at greater risk of ailments such as diabetes and heart disease.

The Health Promotion Board, citing a lack of exercise, a growing penchant for snacking and eating out as major factors in expanding waistlines here, has over the years targeted educational campaigns in schools to nip unhealthy eating habits in the bud. Among the new initiatives is engaging food companies on responsible public advertising.

Source: *The Straits Times*, 5 February 2011

Table 2: Obesity rates in Singapore – by gender

Gender	2004 (%)	2010 (%)
Male	6.4	12.1
Female	7.3	9.5

Table 3: Obesity rates in Singapore – by age group

Age group	2004 (%)	2010 (%)
18 – 29	6.8	10.6
30 – 39	6.8	12.2
40 – 49	6.9	10.7
50 – 59	6.5	11.5

Source: Health Promotion Board, Singapore

Questions:

(a) **(i)** Describe the type of market structure operating in the US snack food industry. [2]

(ii) Identify and explain a barrier to entry in the US snack food industry. [2]

(b) Explain the likely value of the cross-elasticity of demand between unhealthy snacks and healthy foods. [2]

(c) Using Tables 2 and 3, compare the obesity rates between 2004 and 2010 in Singapore. [2]

(d) Explain **two** reasons why there is inefficient allocation of resources in the snack food industry. [4]

(e) Given the challenges of rising obesity rates and the possibility of a tax on unhealthy snacks, discuss whether the switch to a "less-is-more strategy" will benefit Kraft's snack food business. [8]

(f) Assess whether a tax on unhealthy snacks is the key to reducing obesity in Singapore. [10]

[Total 30 marks]

Question 2

The uncertain future of globalisation

Extract 4: Globalisation at the crossroads

In the aftermath of the financial crisis, the US championed for free trade – at a grave cost to itself. According to a recent joint report by the International Monetary Fund and the International Labour Organisation, 25 per cent of the rise in unemployment since 2007, totaling 30 million people worldwide, occurred in the US. If this situation persists, it will lay the foundations for huge global trade frictions.

It is an established fact that the US imports low-cost consumer goods and inputs for production from emerging economies, especially China. So any protectionist measures to reduce unemployment, perhaps in the form of a stiff US tariff on foreign imports, would be profoundly self-destructive, even in the absence of inevitable retaliatory measures.

On the other hand, emerging economies have a great deal of scope for action. India, Brazil and China, for example, continue to exploit World Trade Organisation rules that allow long phase-in periods for fully opening up their domestic markets to developed-country imports, even as their own exporters enjoy full access to rich-country markets. Lacklustre enforcement of intellectual property rights exacerbates the problem considerably, hampering US exports of software and entertainment.

The current rut in which the US finds itself could prove to be a problem for the rest of the world. US unemployment is high. When fiscal and monetary policies have been stretched to their limits, exports are the best way out. But that depends on others opening their markets. Otherwise, simmering trade frictions could suddenly throw globalisation sharply into reverse gear.

Source: Adapted from Kenneth Rogoff, *Project Syndicate*, 7 November 2010

Extract 5: Costs of globalisation

The costs of globalisation have also become apparent in the developed countries. The Organisation for Economic Co-operation and Development (OECD) reported in 2010, youth unemployment is rising across the developed world. There are currently 15 million unemployed young people – aged 15 to 24 – across the OECD countries (which includes the US), some four million more than in 2007. This is largely a result of globalisation and technological improvement. Over the past 40 years, the global population has more than doubled in size, from around 3 billion to 7 billion now. Simultaneously, countries that were never part of the global market have joined it – not least India and China from the mid-1990s – while technology has become less labour-intensive. As a result, the wages of the low-skilled workers have fallen, while the wages of the high-skilled have risen extraordinarily.

With the opening up of China and India over the past 20 years, globalisation has lifted millions of people out of poverty. But inequality in developed countries and in other developing countries remains shameful, and should not be left unchallenged. At the same time, average workers in most of the major affluent economies, including the US, have seen the real value of their wages whittled away, as they have found themselves in competition not just with their neighbours, but with workers many thousands of miles away. So as the plight of workers in faraway places reveals the true cost of cut-price consumer gadgets, it is also clear that workers everywhere have been losing out.

However, China's workers are clamouring for higher wages and better conditions and this might push up the price of an iPod in London or New York. It would certainly help the Chinese economy move towards Beijing's aim of establishing a rising middle class with a stronger consumer demand at home, instead of economic growth that depends too heavily on cheap exports. Strong, sustainable Chinese growth, and rising labour standards, would be good for the West too: they should help to narrow Beijing's yawning trade surplus by opening up vast new markets.

Therefore, it would be wrong to think that the answer is to retreat inwards, and return to a closed-border economy. But it must no longer be a taboo to question whether globalisation brings in its wake the benefits that were promised. On an international scale, it should no longer be taboo to propose limits to foreign takeovers, or to the nonstop, unquestioned flow of capital around the world. A backlash against rising inequality risks derailing the advance of globalisation and represents a key threat to economies worldwide.

Source: Adapted from *The Observer*, 29 January 2012 & *The Telegraph*, 6 February 2012

Extract 6: The United States in the Trans-Pacific Partnership

In the face of the growing problems of globalisation, President Obama announced in November 2009 the United States' intention to participate in the Trans-Pacific Partnership (TPP) negotiations. The TPP is a proposed Free Trade Agreement initiative involving eleven countries, Australia, Brunei, Canada, Chile, Malaysia, Mexico, New Zealand, Peru, Singapore, United States and Vietnam. Through this agreement, the US is seeking to boost US economic growth and support the creation and retention of high-quality jobs at home by increasing American exports to a region that includes some of the world's most robust economies and that represents more than 40 per cent of global trade. In fact the huge and growing markets of the Asia-Pacific are already key destinations for US manufactured goods, agricultural products and services suppliers. The Obama Administration has been working to ensure the TPP addresses the issues that American businesses and workers are facing today, and may confront in the future.

Source: The White House. Office of the Press Secretary
www.whitehouse.gov assessed 12 August 2013

Table 4: Annual percentage change of world merchandise trade and GDP, 2008-2013[a]

	2008	2009	2010	2011	2012[a]	2013[a]
Volume of world merchandise trade[b]	2.3	– 12.5	13.9	5.0	2.5	4.5
Real GDP at market exchange rates						
Developed economies	1.3	– 2.4	3.8	2.4	2.1	2.4
Developing countries and CIS[c]	5.6	2.2	7.3	5.3	4.9	5.2

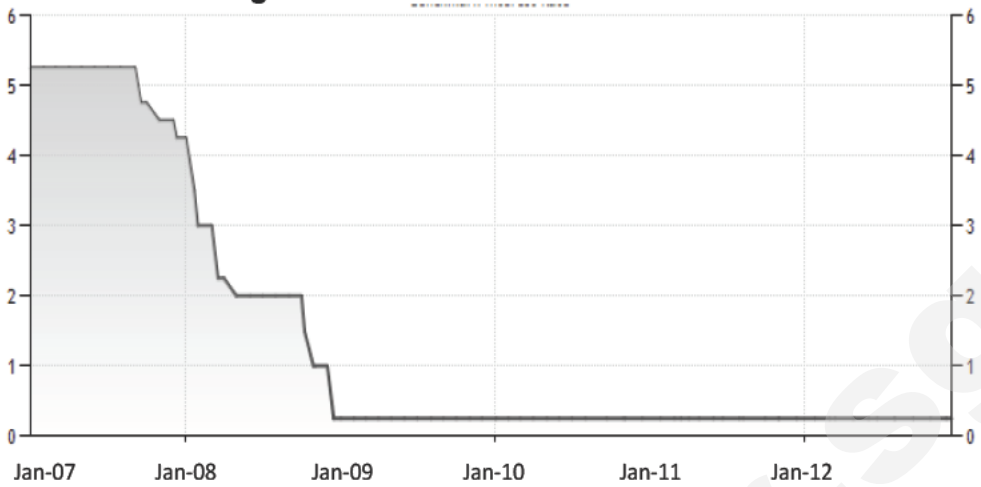
[a] Figures for 2012 and 2013 are projections
[b] Average of exports and imports
[c] CIS: Commonwealth Independent States

Source: World Trade Organisation

Figure 1: United States government debt to GDP (percentage of GDP)

Source: US Bureau of Public Debt

Figure 2: United States interest rates



Source: US Federal Reserve

Questions

(a) **(i)** Describe the trend in volume of world merchandise trade between 2008 and 2013 as shown in Table 4. [2]

(ii) With reference to Table 4, explain an economic factor that has contributed to the above trend. [2]

(b) Explain why according to Extract 4, protectionist measures adopted by the US would be "profoundly self-destructive, even in the absence of inevitable retaliatory measures". [2]

(c) Using Figures 1 and 2, explain why for the US, "when fiscal and monetary policies have been stretched to their limits, exports are the best way out." [4]

(d) Explain how the West may gain from a rising middle class in China. [2]

(e) With reference to the data and your own relevant knowledge, discuss the view that globalisation may not bring about the benefits it promises. [8]

(f) Discuss whether US membership in the Trans-Pacific Partnership will solve the economic problems it currently faces. [10]

[Total 30 marks]

Micro Question 1 – The problem with snacking

(a)	**(i)**	Describe the type of market structure operating in the US snack food sector.	[2]
		• Identify: Oligopoly • Evidence: Table 1, MCR_5 > 60% means a few dominant firms	

(a)	**(ii)**	Identify and explain a barrier to entry in the US snack food sector.	[2]
		• Identify – Internal EOS • Evidence: Ext 1 para 3 – 'Kraft will retain its snack food business, which by comparison, will be twice the size of its grocery business and is expected to grow quickly ' • Explain – With internal EOS to be reaped, Kraft is able to transfer the cost savings into lower prices for its products and hence can price its good so competitively that new firms may be deterred from entering the snack food sector OR • Identify – Branding • Evidence: Ext 1 para 3 – 'well-known brand Cadbury' • Explain – Potential new firms may be deterred from entering the market as the well-known brands under Kraft may have created a high degree of brand loyalty which makes it difficult for existing clients to switch to alternatives	

(b)	Explain the likely value of the cross-elasticity of demand between unhealthy snacks and healthy foods.	[2]
	• **Sign** – CED between unhealthy snacks and healthier foods is likely to be **positive** as they can be considered to be **substitutes**. This means that with a decrease in price of unhealthy snacks, consumers are likely to switch away from eating healthier foods as the former provides similar (if not even higher) level of satisfaction, hence demand for healthier foods will fall, ceteris paribus. • **Magnitude** – Ext 2, Para 1: "the snack food industry…incapable of promoting healthier food", suggests that the foods are **weak substitutes** for each other, so the value of CED is likely to be positive but very small	

(c)	Using Tables 2 and 3, compare the obesity rates between 2004 and 2010 in Singapore.	[2]
	• Similarity – Obesity rates has increased for both categories • Difference – Male obesity rates increase more than female between 2004 and 2010 **OR** – Obesity rates increased the most for 30-39 age group between 2004 and 2010	

(d)	Explain **two** reasons why there is inefficient allocation of resources in the snack food industry.	[4]
	• **Identify: Imperfect info** (ignorance due to oneself) • Evidence: Ext 2, para 1 – "The snack food industry appears to be one that is incapable of promoting healthier foods and have often relied on large-scale marketing campaigns to attract consumers towards unhealthy snacks." "most consumers do not know how unhealthy these food are and what health hazards they pose" • 1m: Explain: In the case of consuming unhealthy snacks, consumers do not have perfect information, especially since advertising has the effect of distorting consumer's information and hence their perceived PMB is higher than the actual PMB. As a result, this would lead to overconsumption of unhealthy snacks, which shows inefficient allocation of resources. • **Identify: Negative externality in consumption** • Evidence: Ext 2, para 1 & 2 – "there is a class of 'aware' citizens who do know the risks involved but there is precious little they can do about it since munching on such unhealthy snacks brings about euphoric pleasures" and "New findings show that employees with an unhealthy diet were 66 per cent more likely to report having experienced a loss in productivity than those who regularly ate healthy foods. A sane diet could save tens if not hundreds of billions of dollars in health care costs." • 1m: Explain: In deciding how much to consume, consumers only consider their PMC, which is their own medical bills and risks involved in consuming one extra portion of snacks. They also consider their PMB, which is the additional satisfaction derived from eating the extra portion of snacks. They would have ignored the EMC, which is the loss in productivity and how others are affected by them. As a result, this would lead to overconsumption of unhealthy snacks, which shows inefficient allocation of resources. • **Identify: Market dominance** • Evidence: Ext 2, para 3 – "snack food industry proclaimed that their mission is not public health but accountability to shareholders." OR Table 1 MCR_5 > 60% and few dominant firms. • 1m: Explain A dominant profit maximising firm will produce where MC=MR and charge a price that is more than MC. Since P > MC, this means the consumers place a higher value of additional units of the good produced than what it costs the firm to produce it. It is still possible to allocate resources in such a manner as to make someone (the consumer) better off without making someone else (the firm) worse off till the socially optimum output is achieved	

(e)	Given the challenges of rising obesity rates and the possibility of a tax on unhealthy snacks, discuss whether the switch to a 'less-is-more strategy' will benefit Kraft's snacks business.	[8]

Introduction

- Clarify 'less-is-more' strategy – trimming away less important functions of the firm to focus and concentrate on core businesses
- Clarify benefits for firms as ability to make more profit. Hence the framework to adopt is a ***revenue-cost framework***.

Explain how the current challenges of rising obesity and possible tax on junk food will affect Kraft's profit

- Rising obesity rates might lead to a fall in demand for snacks as consumers switch to healthier options (Ext 2 para 4) – fall in AR
- Tax on junk food will increase cost of production for Kraft – increase in AC
- Lower profit as a result of these challenges.

Explain why the 'less-is-more strategy' can benefit Kraft i.e. boost profit

- By being focused on its core business, with huge growth potential (Ext 1 para 4), it can generate more revenue.
- Use resources to produce healthier options via R&D - Kraft should consider producing healthier options for its snacks to gain more revenue and hence profit (Ext 2 para 5)
- Moreover, it can focus on selling in emerging markets and hence its demand would increase – increase in AR
- As it increases its scale (due to huge growth potential and emerging market opportunities), it can reap substantial internal EOS – fall in LRAC
- Overall, profit levels may increase

Explain why the 'less-is-more strategy' may not benefit Kraft

- Ext 1 para 5: overlapping businesses – possible competition? AR may not rise as much
- Ext 1 para 5: limited scale economies – possible less cost savings (movement up the LRAC)
- Less profit or increase in profit by a smaller extent

Evaluation:

- Overall profit levels may still increase as consumers are still likely to buy unhealthy snacks (Ext2 para1 – "euphoric pleasures") or fight for their right to eat (Ext2 para5)

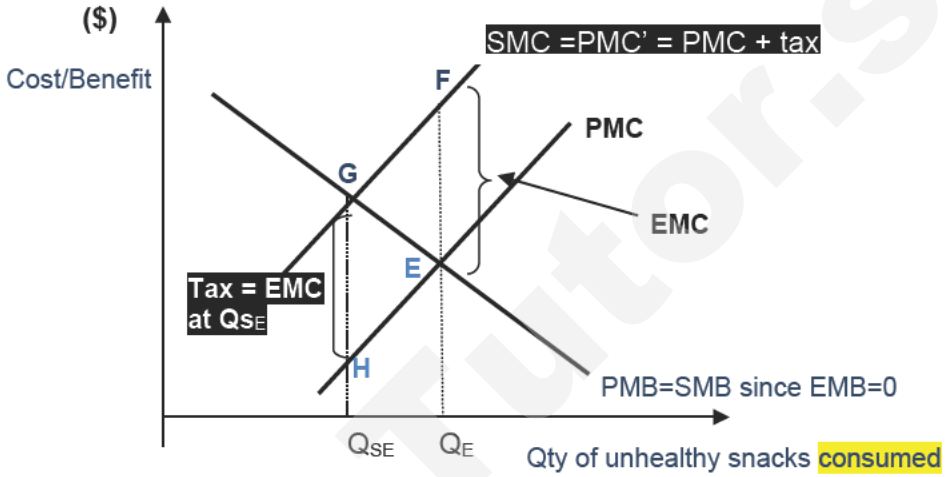
L3	• *Thorough explanation using relevant economic framework* • *Provided a justified stand*
L2	• *Some explanation of relevant concepts but not well-grounded in terms of economic framework.* • *Attempts at showing a balance* • *Some / little reference to case material*
L1	• *Answer did not discuss or totally* disregarded the given challenges • *Lop-sided analysis with little / no reference to data* • *Wrong use of framework* • *Answer did not address requirements of the question, i.e. does not know what question is about OR had no economic framework*

(f)	Assess whether a tax on unhealthy snacks is the key to reducing obesity in Singapore.	[10]

Intro: Clarify 'key'

Thesis: Tax on unhealthy snacks can reduce obesity rates [to solve negative externalities]

Figure A: Negative externality arising from consumption of unhealthy snacks



- Referring to Figure A, when the government imposes a tax, it will be able to eliminate the welfare loss. If the **amount of tax corresponds to the external marginal cost (ie third-party costs) of GH at Q_E**, this will increase consumer's private marginal cost. This shifts the PMC upwards so that the new private marginal cost, PMC' now coincides with SMC since PMC' = PMC + tax.

- With PMC', the new private equilibrium will occur at **PMC' = PMB** because individuals will still maximise their own self-interest. If the imposition of a tax equals to the EMC, individuals now end up consuming at Q_{SE}, which is also the social equilibrium where SMC = SMB. This result in a reduction in the number of unhealthy snacks consumed to the **socially efficient** level of output.

- The tax is seen as payment for the third-party costs designed to get consumers to **"internalize the externality"** by considering the external marginal costs and serves as disincentive to reduce the consumption of unhealthy snacks. The welfare loss of FGE is eliminated, thereby reducing obesity rates.

Anti-thesis 1: Limitations of tax on consumption of unhealthy snacks, hence it may not be able to reduce obesity rates

Government failure (lack of information): It is very difficult to accurately measure the exact amount of external cost incurred by third-parties, since different consumers have different reactions to unhealthy snacks, hence a uniform tax that is equivalent to the EMC may end up overtaxing some and undertaxing others. Underestimating the EMC will result insufficient tax imposed to correct the market failure, rendering the policy less effective. However, over-taxation may create more welfare loss if it leads to under-consumption with the total benefit foregone to be more than the total cost lost. All these will lead to government failure.

Also, it is difficult to monetize the external cost incurred since other's low labour productivity could be due to their own physicality and not entirely due to someone eating unhealthy snacks.

Anti-thesis 2: TWO other policy options can help to reduce obesity rates (and their limitations)

- **Ext 2 para 4: Subsidies on healthy food (learn from US)**
- This would encourage more consumption of healthy foods and reduce demand for unhealthy snacks. With less consumption of unhealthy snacks, PMC would decrease and hence optimal level of consumption may be reached.
- *Limitations*:
  - How much to subsidise? Case of government failure?
  - Depends on how close substitute healthy foods are to unhealthy snacks. If consumers deem the two goods to be weak substitutes or even unrelated, then the demand for unhealthy snacks may a little or may not even fall.

- **Ext 3 para 2: Education and campaigns**
- Perhaps a long term solution is to raise the awareness of the people on the harmful effects of being obese on others especially their loved ones to make them take into account the external cost.
- This can be done through education in schools, campaigns and advertisement. Educate students and adults (especially males and between 30-39 years old) on risks of higher consumption of unhealthy snacks leading to obesity- eg, campaigns, incorporating ideas into school syllabus. Better education and campaigns could ensure that perceived PMB = actual PMB, reducing welfare loss.
- *Limitations*:
  - Education is a long drawn process that involves changing habits and mindset. It is not merely the dissemination of information by the state. Its effectiveness depends on whether the information is treated as credible.
  - It is often difficult to change the mindset of people in adopting a healthier lifestyle.
  - There is a need for funding to undertake such campaigns or educational programmes. Think of opportunity cost of such programmes. How effective will the programmes be in reducing over consumption of sugared canned drinks?

- **Ext 3 para 2: Responsible public advertising**
- Prevents distortion of information and hence allows consumers to make informed decisions and hence perceived PMB is as close to actual PMB reducing welfare loss.
- *Limitations*: Firms may not be willing to engage in such forms of advertising as it might reduce their demand and earn less revenue and profit.

Evaluation / Judgment / Conclusion

Given the limitations of a tax on unhealthy food, by itself, it will not be the best policy to reduce obesity rates. In fact, to effectively reduce obesity rates, perhaps the best way is to adopt a multi-pronged approach (comprising taxes, subsidies on healthy foods and education) with emphasis on educating the people since young as prevention is better than cure. Also to target on males and 30-39 year olds.

	However, obesity cannot be attributed exclusively to over-consumption of unhealthy snacks. There other food causes of to obesity: lack of exercise, a growing penchant for eating out. Hence, apart from education emphasizing on balanced and nutritional diet, more effort should also be placed on physical exercises amongst children and adults to curb obesity.	

L3	• *Thorough explanation using relevant economic framework with good reference to case material to substantiate answer.*
L2	• *Some explanation of relevant concepts but not well-grounded in terms of economic framework.* • *Attempts at showing a balance* • *Some / little reference to case material*
L1	• *Answer did not address requirements of the question, i.e. does not know what question is about OR had no economic framework* • *Erroneous or poor economic analysis of the policies with little / no reference to case material*
E2	• Sound judgment with analysis
E1	• Judgment without analysis.

Question 2 – The uncertain future of globalisation

(a)	(i)	**Describe the trend in volume of world merchandise trade between 2008 and 2013 as shown in Table 4.**	**[2]**
		Volume of world merchandise trade increased over the period but fell sharply during 2009.	
	(ii)	**With reference to the Table 4, explain an economic factor that contributed to the above trend.**	**[2]**
		The growth in volume of merchandise trade is positively related to real GDP growth as shown in Table 1. As GDP increases, the demand for imports, which are usually normal goods (YED > 0), will increase. Hence, trade increases in the world.	
(b)		**Explain why according to Extract 4, protectionist measures adopted by the US would be "profoundly self-destructive, even in the absence of inevitable retaliatory measures".**	**[2]**
		Clarify 'self-destructive' – brings more harm to its own society or economy than others. Ext 1: US imports low-cost consumer goods and inputs for production from emerging economies. Explain: • Any form of protectionism will only increase the price of the imports for US consumers and will result in a loss of consumer surplus and hence consumer welfare. **OR** • US firms will also be negatively affected as they experience higher cost of production, adversely affecting their profit levels. **OR** • Possible cost-push inflation in the US due to higher unit cost of production	
(c)		**Using Figures 1 and 2, explain why for the US, "when fiscal and monetary policies have been stretched to their limits, exports are the best way out."**	**[4]**
		• *Explain why fiscal policy is stretched to its limits*: Figure 1 shows that the USA debt to GDP ratio has been increasing from 2009-2013. Any continuation of expansionary fiscal policy will require more borrowing which will lead to greater debt burden and costly to repay the loans in the future. *Explain why monetary policy is stretched to its limits*: The US interest rates are very low since 2009, as shown in Figure 2. Hence, it is no longer possible to increase investment or interest-sensitive consumption by lowering interest rates. • *Explain why exports are best way out*: Given the limitations of FP and MP, then policies that will boost net exports will be most effective in solving the macroeconomic problems in the US	

(d)	**Explain how the West may gain from a rising middle class in China.**	**[2]**
	The growing affluence in China will allow them to buy imports from the West, assuming they are normal goods (YED > 0). This will reduce US widening trade.	

(e)	**Using the evidence from the case and your own relevant knowledge, discuss the view that globalisation may not bring about the benefits it promises.**	

Clarify benefits

Thesis: Benefits of globalisation based on theory and own relevant knowledge (link to 4 macro goals & SOL)

The promise of globalisation in the form of free trade, free movement of labour and capital is the increase in output as countries specialise on the basis of their comparative advantage. This can increase consumption and world output. Free movement of labour allows countries to complement their local labour with foreign labour. The foreign labour may fill the jobs that the local labour avoid or are does not have the required skills. This arrangement is beneficial to the economic growth of the nations. The openness of capital markets also allows investors and savers from all over the world to transfer funds from one country to another, ideally allocating funds to the most profitable investment projects. This will increase the productive capacity of the countries. All these will result in higher growth with lower inflation and more employment opportunities. **Draw AD-AS diagram to illustrate the benefits.**

Anti-thesis 1: Benefits of globalisation will not be realized due to barriers to trade

According to Extract 4, the US has been embracing free trade but it has not reciprocated by other economies. Emerging countries which trade with US are exploiting World Trade Organisation rules that allow long phase-in periods for fully opening up their domestic markets to developed-countries' imports. In addition, lacklustre enforcement of intellectual property rights exacerbates the problem considerably, hampering US exports of software and entertainment. This affects the US trade balance, leading to high unemployment rate and possibly slow economic growth rate.

Evidence: Extract 4 suggests that trade barriers have contributed to the USA's high unemployment rate and possibly lower economic growth rate.

Anti-thesis 2: Globalisation may not bring about the benefits of higher consumption FOR ALL

However, as the case highlights the problems of the openness, the US also does not enjoy larger output and consumption. Instead, the US experiences higher levels of youth unemployment and income inequality.

Extract 5 mentions youth unemployment is due to the need to compete with workers in the rest of the world given the migration of jobs to other parts of the world as well as the changing production processes. Instead of workers finding jobs in their countries due to economic growth and free movement of labour, which globalisation promises, lacklustre economic growth and labour immobility have led to massive unemployment and lower consumption for all.

Extract 5 also highlights the issue of rising inequality which is due to "technology becoming less labour intensive" and hence increasing the difference between wages of the high skilled workers in capital intensive industries and the low skilled workers.

Evaluation and Judgement: Will globalisation bring about the benefits it promises?

Whether a country achieves a net cost or benefit from globalisation depends on whether the country can manage the costs of globalisation using supply side policies to deal with the unemployment as well as in the re-distribution policies to deal with growing income inequality.

Or

The issue of reduced benefits to USA cannot be attributed entirely to the dynamics globalisation. There are other factors like the outcomes of post financial crisis which could have compounded the reduction of benefits of globalisation.

Level	Descriptors
L3	• Able to provide evaluative judgment on the extent of benefits of globalization. • Candidates must also question the assumptions in the case study and not merely explain how globalization has reduced benefits it promises.
L2	• Able to analyse the arguments for and against the benefits of globalization with appropriate substantiation from the case study and their own knowledge.
L1	• Able to identify / state factors for and against benefits of globalization from the case study • Little use of economic framework • Many conceptual errors

(d)	**Discuss whether US membership in the Trans Pacific Partnership will solve the economic problems the US currently faces.**	**[10]**

Introduction:

The US currently faces massive unemployment (25% of 30 million people) and a growing income inequality amidst a slow economic growth rate. These economic problems are attributed to adverse impacts of globalisation in the case study. This answer will attempt to demonstrate to what extent such a partnership with USA could solve its economic problems.

Thesis 1: TPP will solve some economic problems	**Anti-thesis 1: TPP will not solve some of the economic problems**
Reduce unemployment/Balance of trade deficit The proposed Free Trade Agreement will lower tariff and non-tariff barriers. This will be beneficial to USA as the Asia-Pacific region is a huge and growing market which is already a key destination for US manufactured goods, agricultural products, and services suppliers This will make the US exports more competitive and hence increase US export revenue. An increase in net export revenue will increase AD, NY and reduce unemployment rate. AD-AS diagram **Reduce income inequality/Government debt** Moreover, if the US economy grows because of the trade stimulus, there will be an increase in income tax revenue which could enable the government to redistribute income to low skilled workers as well as to unemployed workers.	Can't solve unemployment if they do not have the relevant skills in industries in which US has comparative advantage or if US exports are not internationally competitive. Can't solve the income inequality problem too if the industries that benefit from export growth are capital intensive, as low skilled workers will be left out. ***Evidence:*** *Extract 5: "Simultaneously, countries that were never part of the global market have joined it – not least India and China from the mid-1990s – while technology has become less labour-intensive. As a result, the wages of the low-skilled workers have fallen, while the wages of the high-skilled have risen extraordinarily."* *"At the same time, average workers in most of the major affluent economies, including the US, have seen the real value of their wages whittled away, as they have found themselves in competition not just with their neighbours, but with workers many thousands of miles away. So as the plight of workers in faraway places reveals the true cost of cut-price consumer gadgets, it is also clear that workers everywhere have been losing out."*
	Anti-thesis 2: US will need to use other policies to solve the unemployment and income inequality problem. • Retraining of workers using supply side policies, rather than using trade policies

Evaluation and judgement:

The problem of trade deficit and, to a certain extent, cyclical unemployment could be solved using a trade policy like FTA. However, structural unemployment and growing income gap between skilled workers and low skilled workers have to be resolved using supply side policies in tandem with trade policy.

Level	Descriptor
L3	• Able to provide evaluative judgment to the extent of TPP could solve unemployment, growing income inequality and slow economic growth. • Discussion must include both arguments and counter arguments for TPP in solving US economic problems. Able to suggest alternative policies to address US economic problems.
L2	• Adequate discussions on the possible impact of TPP in addressing US economic problems. However, candidates unable to offer alternative policies or attempts to evaluate FTA.
L1	• Mere identification of the possible impact of TPP in solving US economic problems without substantiation from the data or theory. • Lop-sided arguments. Eg. Discussion limited to either TPP or Supply side policies.
E2	Judgment in the conclusion with substantiation
E1	Some judgment in the conclusion without substantiation

HWA CHONG INSTITUTION
C2 Preliminary Examinations
Higher 2

CANDIDATE NAME		**CT GROUP**	12
CENTRE NUMBER		**INDEX NUMBER**	

ECONOMICS
Paper 2 ESSAY

9732/02
16 September 2013
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 and submit when the answers to the respective essay question is called for.

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 and submit them when the respective essay question is called for.

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 Chocolate uses milk and cocoa beans as ingredients in its production. Dark chocolate, with its high cocoa content, is known for its health benefits and hence more consumers have chosen dark chocolate over white chocolate. Meanwhile, the price of milk has dropped whilst the price of cocoa beans has risen.

Assess how expenditure by consumers on dark chocolate and white chocolate will be affected by the above developments. [25]

2 In recent years, small local firms in the retail industries in Singapore are becoming bigger and at the same time many large foreign firms have entered these industries.

(a) Explain the possible reasons for the above changes in the retail industries in Singapore. [10]

(b) Discuss the extent to which such changes are in the interest of consumers. [15]

3 **(a)** Use examples to distinguish between
(i) a private good and a public good
(ii) a social benefit and a positive externality. [12]

(b) Assess the usefulness of the above concepts in explaining whether it is the government or the private sector that is responsible for the development and operation of key facilities such as airports and seaports. [13]

Section B

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

4 **(a)** Explain what is meant by actual and potential economic growth using the Production Possibility Curve (PPC). [8]

(b) Discuss the most appropriate economic policies to move the PPC outwards for different economies. [17]

5 Amidst the slow growth in the EU, the persistently high budget deficit and ballooning public debt have become major concerns for many governments in the EU. As a result, they have implemented 'austerity measures' to reduce their budget deficit by raising taxes and cutting back on public spending.

(a) Explain what would limit the effectiveness of the austerity measures in the EU. [10]

(b) Discuss the extent to which the austerity measures in the EU will have an adverse impact on the Singapore economy. [15]

6 External instability such as excessive trade imbalances and large exchange rate fluctuations generally has negative economic consequences.

Assess the extent to which an improvement in the living standards of an economy requires that external stability be the top economic priority. [25]

Prelim 2013 EQ1

Chocolate production involves the use of milk and cocoa beans. Dark chocolate, with its high cocoa content, is known for its health benefits and hence more consumers have chosen dark chocolate over white chocolate. Meanwhile, the price of milk has dropped whilst the price of cocoa beans has risen.

Assess how the expenditure by consumers on dark chocolate and white chocolate will be affected by the above developments. [25]

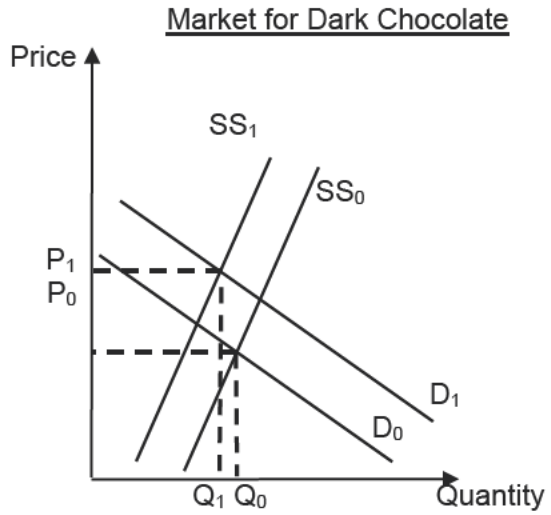
Introduction:

Chocolate consumption has been increasing for various reasons that affect demand and supply for chocolate. This in turn affects equilibrium price, quantity and hence expenditure of consumers, which is determined as the product of price and quantity. In this essay, I will utilize demand, supply and elasticity concepts to analyse the effect on expenditure by dark chocolate and milk chocolate consumers.

Body:

Dark Chocolate Market

Demand-side analysis: • Dark chocolate uses both cocoa beans and milk in its production process. • Increased awareness of the health properties of dark chocolate increases taste and preference for dark chocolate and hence its demand. • Ceteris paribus, equilibrium price and quantity increases. Therefore, total expenditure will increase • If PES< 1 (short run), quantity supplied may increase less than proportionately given a change in price, expenditure is likely to increase to a lesser extent.
Supply-side analysis: • Meanwhile, cocoa bean is used in the production of dark chocolate. Therefore, the increased cost of cocoa bean production increases the cost of production for dark chocolate. This reduces its supply. • A reduction in milk prices is likely to increase the supply of dark chocolate, ceteris paribus. • Given the opposing forces on the supply of dark chocolate, it is likely that the resultant effect on supply is it remains unchanged. However, given the assumption that dark chocolate uses more cocoa than milk, the resultant effect on supply would be a fall. Therefore, equilibrium price rises while quantity falls. • If PED > 1 as chocolate is not deemed as necessity, quantity demanded will increase more than proportionately given a change in price. Total expenditure is likely to fall.
Combined analysis: • Therefore a combination of an increase in demand and a fall supply results in an increase in equilibrium price and quantity. • Expenditure for dark chocolate is likely to increase unambiguously.



Evaluation
Under such circumstances, the change in total expenditure depends on the relative size of the changes in demand and supply. If the increase in demand is greater than the fall in supply, total expenditure is likely to rise even more.

White Chocolate Market

Demand-side analysis:
- White chocolate uses more milk than cocoa in its production.
- Demand for white chocolate falls due to consumers' changing taste and preferennce as they switch from white chocolate to dark chocolate. Equilibrium price and quantity for white chocolate falls. Therefore total expenditure falls.
- Assuming PES>1, the quantity supplied falls more than proportionatley due to an fall in price, leading to total expenditure falling by a larger extent.
- Applying CED, given dark and white chocolate are substitutes, a rise in price of dark chocolate will result in an rise in demand for white chocolate. It is likely that the fall in demand due to the change in taste and preference outweighs the rise in demand, leading to a fall in expenditure

Supply-side analysis:
- Supply for white chocolate increases due to the fall in milk price. However, it might also decrease due to the rise in the price of cocoa beans.
- Evaluation: Rise in supply may outweigh the fall in supply since limited cocoa is used in the production of white chocolate.
- PED>1 (many substitutes available, it is not a necessity) so a fall in price leads to a more than proportionate increase in quantity demanded. Hence total revenue increases.

Combined Analysis:
- Combination of a fall in demand with an increase in supply will lower equilibrium price. However, equilibrium quantity is indeterminate, depending on the relative size of the shifts of the curves.

Market for White Chocolate

Evaluation

- If decrease in demand is greater than the increase in supply, equilibrium quantity is likely to fall. Therefore, expenditure will fall. This is likely to occur in the long run when the change in taste and preference is established and eating dark chocolate has become habitual.
- If the decrease in demand is less than the increase in supply, equilibrium quantity is likely rise, but expenditure is still likely to fall. This scenario is most likely in the short run when the impact of the fall in milk price is felt the greatest.

Conclusion:

- Expenditure in the dark chocolate market will increase, with the extent of the increase depending on the strength of the taste and preference factor over the rise in price of cocoa.
- Expenditure in the white chocolate market depends on the relative size of the changes in demand and supply determinants.

Level	Descriptors
L3	For an answer that provides a clear analysis of both markets, supporting diagrams, and accurate application of PED and other elasticity concepts (PES and CED) to show an appreciation of the nuances in the answers provided.
	For an answer that provides a clear analysis of both markets, provides suitable diagrams and application. Clear use of PED to analyse expenditure and there is an attempt to apply other elasticity concepts.
L2	For an answer which examines both markets with analysis on the impact on expenditure. Accompanying diagrams support the analysis. However, the answer may lack depth. Limited attempt to utilise PED to analyse expenditure.

	For an answer which examines only one market in detail with attempted analysis on the second market, applying demand and supply concepts accurately with some reference to the effect on expenditure. Diagram(s) accurately depicted for a single market.
L1	For an answer which displays limited knowledge of using the demand supply framework to determine equilibrium price and quantity. There are distinct errors/ misconceptions present in the analysis. Limited attempt is made to analyse impact on expenditure. An attempt is made at drawing diagrams to support analysis.
	For an answer which displays hardly any knowledge of demand and supply concepts in answering the question with gross conceptual errors.
E1	For an unexplained judgement.
E2	For a judgement that is supported by economic analysis.

Prelim 2013 EQ2

2 In recent years, small local firms in the retail industries in Singapore are becoming bigger and at the same time many large foreign firms have entered these industries.

(a) Explain the possible reasons for the above changes in the retail industries in Singapore. [10]

(b) Discuss the extent to which such changes are in the interest of consumers. [15]

Part (a)

Introduction:
The above changes are due to cost and revenue reasons.

Body:

1. Explain why local retail firms are becoming bigger.

a. Cost advantages
- To reap int EOS
- Higher MES due to technological changes
- Bigger firms have greater ability to innovate to cut costs

b. Revenue advantages
- Larger mkt due to population/income increase
- Bigger firms have greater ability to innovate to increase revenue

2. Explain why many large foreign firms have entered the industry.

a. Cost advantages
- Lower compliance taxes in Singapore.
- More transparency
- Low corruption
- Government subsidies in Singapore [e.g. Productivity and Innovation Credit (PIC)]

b. Revenue advantages
- Strong growth vs weak growth back home
- Taste and preference towards foreign brands
- Untapped market.

c. Lowering of Barriers of Entry

Conclusion:
The above changes are necessary for firms to become more profitable or better survive the competition.

Level	Descriptors
3	Covers both the trend of bigger local firms and foreign firm participation. Uses a good economics framework such as the cost revenue framework. Points raised are well-elaborated & based on economics concepts. Points raised are applied to the Singapore retail firm context.
2	Student only attempt to address one of the 2 trends. Answer lacks either cost or revenue consideration. Points raised lack elaboration. The Singapore retail firm context is largely ignored.
1	Attempted analysis is limited, conceptual misunderstandings are evident and there is lack of understanding of the question requirements.

b) Discuss the extent to which such changes are in the interest of consumers. Discuss the extent to which such changes are in the interest of consumers.

Intro

Consumer interest: price and non-price (quality, variety) aspects

Body

Thesis 1: Large foreign + Larger Local firm is likely to be in consumer interest when it comes to pricing

Few dominant sellers → each producing a significant share of the total market output → more scope for internal economies of scale (e.g. marketing EOS enjoyed by the supermarkets) → lower marginal cost curve → lower price & higher output → higher consumer surplus

More oligopolistic → High BTE → ability to keep supernormal profits even in the long run → incentive & ability to innovate → R&D to come up with ways to cut costs → lower MC → lower price & higher output → higher consumer surplus

More foreign competition → force them to price more competitively → pricing might be close to MC to deter entrance of new firms

Anti-Thesis 1: Large foreign + Larger Local firm is not likely to be in consumer interest when it comes to pricing

Larger firms → more oligopolistic market → mutually interdependent → price rigidity or even price leadership.

Larger firms → less competition → more market power → higher prices

Thesis 2: Large foreign + Larger Local firm is likely to be in consumer interest when it comes to quality & variety

More oligopolistic → High BTE → ability to keep supernormal profits even in the long run → incentive & ability to innovate → more responsive in coming up with new products that are more in line with changes in consumer's taste and preferences or improve upon current products such that consumers are more willing to pay a better price for them

More foreign competition → incentive to innovate to keep market share / profitability

Foreign companies can bring in non-local variety of goods & services.

Anti-Thesis 2: Large foreign + Larger Local firm is not likely to be in consumer interest when it comes to quality & variety

Larger firms → less competition → more market power + higher BTE → less incentive to innovate if complacent

Larger firms → crowd out smaller firms → less variety

Synthesis
The extent to which the trend of larger and more foreign firms will be in consumer's interest depends on the nature of the industry, the type of product sold, degree of openness to foreign competition, degree of government regulation/clamp down on abuse of market power, etc.

Level	Descriptors
3	Good discussion on the extent consumers may be worse off or better off Good discussion on both price and non-price aspects of consumer welfare Points raised are well-elaborated & based on economics concepts.
2	Good discussion on how consumers may be worse off or better off Discussion on consumer welfare may be biased towards price or non-price aspect Points raised were insufficiently elaborated or lack economic analysis.
1	Attempted analysis is limited, conceptual misunderstandings are evident and there is lack of understanding of the question requirements.
E1	For well-supported judgments
E2	For unexplained judgments without supporting analysis

Prelim 2013 EQ3

3 (a) Use examples to distinguish between
(i) a private good and public good
(ii) a social benefit and a positive externality. [12]

(b) Assess the usefulness of the above concepts in explaining whether it is the government or the private companies that is responsible for the development and operation of key facilities such as airports and seaports. [13]

Part (a)

i) A private good and public good are distinguished by the features of **excludability and rivalry**.

A public good has to be non-excludable in consumption, meaning that it is impossible or prohibitively expensive to exclude non-payers from consuming the good. An example would be national defence. The sense of security brought about by a robust national defence system is shared by everyone in the nation, regardless of nationality or whether they pay taxes. A tourist would feel the same sense of security as a citizen who has paid 20 years' worth of taxes. As such, national defence is non-excludable. Contrast that with a private good like movie screenings. The movie screen is enclosed in a room of which there are limited entrances and it is not exorbitantly expensive to hire staff members to be at the entrances to check if someone has a ticket which has already been paid for. Anyone without a purchased ticket would be excluded from enjoying the movie screening.

The problem of non-excludability as mentioned above would lead to the "free-rider" problem. A "free rider" is anyone who receives the benefits from a good or service without having to pay for it. This is exemplified by the tourists who enjoy the sense of security from national defence without paying regular income tax. Since anyone can enjoy the benefits of a pure public good without paying for it, there will be an absence of a price signal and thus producers will not supply this good. A producer of a private good like movie screenings on the other hand has no such problems because only those willing and able pay the ticket price will purchase a ticket to enjoy the movie.

A public good also has to be non-rival in consumption. This means that the consumption of a good by additional individuals will not prevent others from enjoying the good. It also does not reduce the quantity or quality consumed by existing consumers. For example, the sense of security an individual enjoys from national defence does not make another individual feel less secure for any period of time. Private goods on the other hand are rival in consumption. When an individual consumes a hamburger, that unit of hamburger is gone and not available for consumption by the next individual.

As a result of non-rivalry, no additional unit of a public good needs to be produced for additional consumption since no units have been diminished. This results in the marginal cost for an additional unit of consumption to be zero. The cost expended on national defence to make 3 million people feel safe is the same as the cost needed to make 3.5 million people feel safe, ceteris paribus. In the traditional theory of the firm, a firm's profit maximising output is achieved when MR=MC. Since MC = 0 in the case of non-rivalry, the condition would result in MC=0=MR and no self-interested, rational

firm would price its good at zero price (assuming PC firms who are price takers and P=MR), thereby resulting in a missing market. In contrast, producers of a private good like hamburgers will simply price their goods at marginal cost (assuming PC) and be able to make normal profits, ensuring the survival of the firms and thus the market.

ii) A positive externality is also known as an external benefit. Social benefits include both external benefits and private benefits.

An external benefit refers to the benefit from production or consumption experienced by third parties but not by the producers or consumers themselves and thus not accounted for by the price mechanism. In the context of education, A well-educated labour force can increase efficiency for the employer. It may also produce other important external benefits, such as lower unemployment and improve international competitiveness for the country.

A social benefit on the other hand includes both external benefits and private benefits. In the context of education again, the private benefit to an individual includes the thinking skills and knowledge gained which leads to his/her personal growth, and the potential higher income that he may have in the future.

Level	Descriptors
L1	**L1 Knowledge/ Recognise (Description)**
	• Answers are descriptive and largely irrelevant • Concepts are descriptive or explained with many errors • Poor use of examples • No attempt at distinguishing the concepts made
L2	**L2 Consolidate (Add some detail – application)**
	• At least 2 concepts were explained adequately • Weak examples given • Weak attempt at distinguishing the concepts. • At least 3 concepts were adequately explained • Adequate attempt at exemplification • Weak attempt at distinguishing the concepts
L3	**L3 Elaborate (Extend to include analysis)**
	• Clear economic explanation of all 4 concepts • Clear attempt at distinguishing the concepts. • Good use of examples to explain the free-rider problem, missing market problem (MC=0) and how social benefits = private + external benefits. • Clear economic explanation of all 4 concepts • Excellent use of examples to explain the free-rider and missing market problem (MC=0) and how private goods do not have these problems • Excellent use of examples to illustrate that social benefits = private + external benefits.

Part (b)

Thesis – The concepts are useful

Key facilities are private good

- Key facilities are private good that are rivalrous and excludable. (The theoretical explanation is done in part (a))
- Excludability: The air travellers need to pay airport tax or fee in order to use the facilities provided inside the transit area, for example the aerobridge and other amenities. On the other hand, ships would require paying docking fees to the port authorities in order to have their cargo unloaded.
- Rivalry: The use of an airline of a particular berth at the terminal diminished the amount that other airlines could use. Likewise, for the ships.
- Hence the private sector is able to develop and provide the services, e.g. smaller airports in United States are that privately owned and run. The profit is provided by charging the users of facilities. Also the developers and operators can to lease certain parts of the property such as docks could be leased out to ship repairers or airports could rent out shops to retailers.

Key facilities are merit good with positive externalities.

- Positive externalities (The theoretical explanation is done in part (a))
- Airports bring in tourists and foreign investments that do not benefit the facility directly, but rather the larger economy, such as higher occupancy in hotels and patronage in F&B outlets.

  Ships are able to transport goods from all over the world. A port facilitates the movement of the good from the ships to households and firms. An efficient port is able to lower both cost and time of the logistics transfer, which benefit the end-users.

- Government development and operation could be seen in this light are essential to provide social benefit to the society and economy and not merely

Anti-thesis – Concepts are not useful and there are other considerations

The facilities are not public good as they do not fulfil the conditions of non-rivalrous and non-exclubility

Impossible to give examples as it is non-existent.

Possible other reasons (not mentioned in part (a))

High start-up costs:

To develop an airport requires high capital outlay that may not be a barrier to entry to a private firm. Hence government would be the natural choice to cough up the initial investment.

For example, Changi Airport Terminal 5 would cost at least S$2 billion. This is not a small amount most private firms would be able to come up with and profits that could only be recouped years later.

Productive Efficiencies

Civil servants in a bureaucratic setting may be X-inefficient when it comes to running of these facilities. There may not be sufficient incentives for them to be pro-market and be as productive efficient compared to the running of the facilities by the private sector.

Examples: (candidates need not go into detail but are aware that of the business opportunities that the private sector may offer when they manage these facilities and expand the operations into a larger one overseas)

The Port of Singapore Authority was formed on April 1, 1964 to take over the functions, assets and liabilities of the Singapore Harbour Board. On August 25, 1997, a parliamentary bill was passed to corporatise the Port of Singapore Authority, and PSA Corporation Ltd was corporatised on October 1, 1997. As of 2011, beside its flagship operations in PSA Singapore Terminals and PSA Antwerp, PSA participates in 29 port projects in 17 countries across Asia, Europe and the Americas.

Changi Airport Group (CAG) was officially launched on 1 July 2009 at a formal launching ceremony by Minister Mentor Lee Kuan Yew. CAG was set up so that it could focus on the management and revenue collecting aspects of the airport, while the governmental organisation, CAAS, would be freed up to oversee the regulatory aspects of the Airport and of Aviation in Singapore. The main thrust of CAG is to manage and undertake airport operations and operational functions respectively at Singapore Changi Airport. This encompasses Airport Operations and Management, commercial activities and Airport Emergency Services. Changi Airport Group also has, as one of its directives, **the goal of investing in foreign airports,** besides Singapore Changi Airport

Government partnership with the public sector (candidates need not go into detail but can analyse the cooperation between both parties)

A **public–private partnership** (**PPP**) is a government service or private business venture which is funded and operated through a partnership of government and one or more private sector firms.
PPP involves a contract between a public sector authority and a private party, in which the private party provides a public service or project and assumes substantial financial, technical and operational risk in the project. In some types of PPP, the cost of using the service is borne exclusively by the users of the service and not by the taxpayer. In other types (notably the private finance initiative), capital investment is made by the private sector on the basis of a contract with government to provide agreed services and the cost of providing the service is borne wholly or in part by the government. Government contributions to a PPP may also be in kind (notably the transfer of existing assets). In projects that are aimed at creating infrastructure, the government may provide a capital subsidy in the form of a one-time grant, so as to make it more attractive to the private investors. In some other cases, the government may support the project by providing revenue subsidies, including tax breaks.

Conclusion with Judgment

Level	Descriptors
L1	**L1 Knowledge/ Recognise (Description)**
	• Weak or inappropriate applications of the concepts. • Not able to give other reasons apart from those in part (a)
L2	**L2 Consolidate (Add some detail – application)**
	• Able to explain and apply the concepts in part (a) correctly • Some attempt at providing other reasons
L3	**L3 Elaborate (Extend to include analysis)**
	• Able to provide good applications with appropriate examples • Able to give other reasons to go beyond merely the issue of private vs merit good.
Evaluation	
E1	• Able to make some evaluation or limitations of the use of the market failure concepts in the context
E2	• Good evaluations and/or conclusions based on the ability to see the crux of the issue is not merely that of private vs merit good

Prelim 2013 EQ4

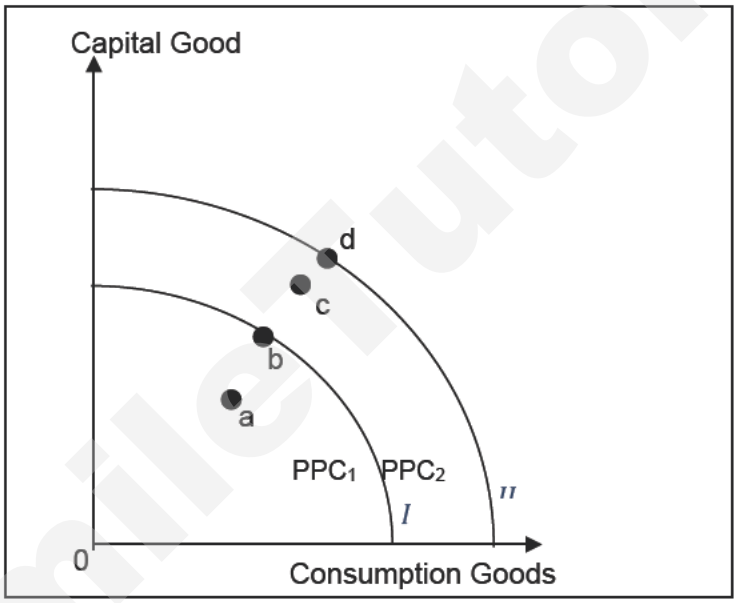
(a) Explain what is meant by actual and potential economic growth using the Production Possiblity Curve (PPC) (8m)

(b) Discuss the most appropriate economic policies for different economies to move their PPC outwards. (17m)

Part (a)

The distinction between actual and potential growth in output can be illustrated on a PPC

Using the PPC



Actual economic growth is the annual percentage increase in national output, i.e. the rate of growth in output which the economy produces. Actual growth is a SR concept where it shows how much resources is used in the current level of production. It is also shows if there are idle resources in the economy too.

- Initially, the economy is operating at pt a (there is unemployment)
- Actual growth can arise from a fuller use of resources (e.g. a movement from pt a to pt b)

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. It is a long run concept as for actual growth to be sustained in the long run, however, there would also have to be an increase in potential output. This is to about how to increase the quantity or quality of the resources

- To get beyond pt b (eg. to reach pt c), the PPC itself would have to shift outwards beyond PPC1 to PPC2. When this occurs, potential growth is realised

Level	Level Descriptors
L1	Largely descriptive or inaccurate explanation of actual and potential growth. Students use AD-AS analysis

L2	For an answer that shows an explanation of the actual and potential. Explanation may not be clear or fully elaborated. Links to diagrams may not be clear. Description of diagrams only max 4m
L3	For an excellent explanation and detailed illustrations of actual and potential growth.

Discuss the most appropriate economic policies for different economies to move their PPC outwards. (17m)

Part (b):

**** Note that students can use any two economies to illustrate the differences in appropriateness. SG and China used in the answer plan is just for demonstrating the kind of comparison.**

Introduction:
In any economy, it is insufficient to move from point within the PPC to a point onto the PPC. It is also important to be able to shift the PPC outwards i.e. achieve growth the productive capacity of the economy, enabling the economy to achieve non-inflationary growth. Supply-side policies targeting the increase in quantity and quality of resources will be discussed in this essay.

Increase in quantity of resources:

1) Reduction in Tax to encourage capital accumulation and entreprenuership
There is no doubt that productive capacity of an economy can be increased chiefly by increasing the quantity and improving the quality of its capital equipment. Investment in new capital increases the amount of capital each worker can work with, hence contributing to increases in productivity.

This implies that the level of output would have the potential to increase, leading to economic growth (make reference to diagram). The funds needed for capital formation can be obtained from savings and/or foreign direct investment (FDI).

The entrepreneur contributes to production through innovations, looking for new markets and new methods of production.

	Singapore Economy **(small and more open / industrialized)**	**China Economy** **(large and less open / industrializing)**
Exemplification	In 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.	China has also reduced corporate tax rates to encourage inflow of FDI. The tax rates have decreased from 33% to 25%. Certain industries and qualified

	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. Promote R&D : Heavily subsidise R&D; build the Biopolis Centre, enforce intellectual property rights (IPRs), etc To encourage entrepreneurship, Spring Singapore gives out grants and seed fund to aspiring entrepreneurs. – incentives offered to encourage individuals to start their own business. For example, the Singapore Economic Development Board launched the Start-Up Enterprise Development Scheme (SEEDS) in 2001, to match $1 for $1 in investment/business up to $300, 000	businesses may be entitled to lower corporate income tax rates such as 15 percent. Some tax holidays are also available to qualified taxpayers. However FDI still constitutes a very small portion of the overall investment in China. Most of the investment is from the government spending on infrastructure. Many of these investment is partnered with local firms. In 2011, the government launch the 12th 5 years national development program that marks the turning point of China's economy in search of sustainable growth. Just for Guandong province alone, 44 major construction plans in the infrastructure mounts up to RMB235.3 billion. 60% of these are actually traffic and urban construction based. Sichuan province announced that they will be spending as much as RMB 3.7 trillion by 2012, industrial projects accounting for most of the pie. Transport infrastructure: • Since 2000, China's expressway network has been growing by over 16% annually. • Building of high speed railway to connect major cities in China. With the target of 120.000km of toal track by 2020, annual invesmtnets of RMB800 billion into railway infrastructure were announced. • Coastal port investment increased to RMB80billion in 2011. • The government has announced plans to build 50 more airports by 2015. RMB45 billion in airport construction investment was incurred in 2011 alone with another RMB100 billion expected over the next five years.

		China also decreased interest rates to close to 5% since 2009. Only until recently that they started to allow interest rate to rise to combat inflationary pressures. This has allowed companies to obtain a cheap loans for investments too.
Evaluation	Singapore is reaching a max in terms of infrastructural investments. The original model of depending on this area as a pillar is gradually being obsolete. The main driver is into knowledge in innovation based which is based more on human capital. People might be risk averse to take risk in being an entrepreneur. This is especially when a person might have other considerations like family issues. Singapore unlike China, cannot use interest policy.	Being a developing country which is in the mist of industrialization, China need to build up its infrastructure esp since they have a lot of other resources already. This is right now what China needs especially since China has the reserves to conduct such expansionary fiscal policy and also monetary policies. Thus these policies with supply-side impact is appropriate for China.

General Limitations

Corporate tax is only one factor which affects investment decisions. Ultimately for firms to invest in a country there are many other contributing factors such as the business climate or ease of conducting business in the country.

Although the shift in tax regime helps to encourage investment and work efforts, it may result in greater income inequality.

2) Increase in quantity of labour

With a larger potential workforce it increases the productive capacity of the nation.

	Singapore Economy	China Economy
	1. Relaxing immigration law to increase the population size. This policy will result in a larger population which means an	China's working-age population numbered over 1 billion (74.4% of 1,347,350,000) in 2011 for the first time but is expected fall thereafter. China's dependency ratio (the number of Chinese not of working age as a

Exemplification	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 eg. work from home.	percentage of those who are) is still low, compared with its past or its peers. It was lower in 2011 than in any recent year except 2010. It was also lower than the ratio in all but five countries, according to UN figures. This means that for now, it is not having an ageing population. However, this is expected to be the start of the turning point. This is largely because China's one-child policy restricts the number of young dependants a family can add. The number of 15-29 year olds--the nimble-fingered youngsters who man China's assembly lines, stitching, twisting, fixing and stamping--peaked in 2011 at 326.6m, according to UN estimates. That number will fall this year, the UN projects. According to Cai Fang, director of the Institute of Population and Labor Economics, the number of people of working age in China will decrease by almost 30 million before the end of this decade, posing a serious challenge to economic growth. To offset the effects of a decreasing labor population in the major cities, there has been suggestions of reforms in China's permanent residencty system or the Hukou system. Without Hukou, migrant workers tend not to stay long in cities and usually return home to rural areas in their 40s. By giving them Hukou at their workplace would help stabilize the nation's labor force and attract more workers from rural areas (to cities).
Evaluation	Given that Singapore has really no other resources, labor is really the only one we can increase and deal with, the supply side policies implement has been really appropriate. Relaxing immigration laws and foreign workers policy	Nearly 100 million residents still living in rural areas are already absorbed in non-agriculture sectors. An absolute decline in China's working-age population was expected around the middle of this decade, but appears to have happened a few years earlier than anticipated. In turn, it implies a very big change in China's economic

	often creates social tension as they are seen to be a threat to local citizens. In addition, too fast an increase in population size may also lead to problems such as congestion or rising property prices. Like the case of Singapore where the population ballooned to more than 5 million, the public transport system is not able to cope and property prices sky rocketed.	model, which, till now, has relied heavily on the bulk deployment of labour and capital into infrastructure building and export-oriented manufacturing. It is reasonable to expect that China's economy will adapt to these demographic changes by changing its economic model in the long run. However, the speed of the change is so quick that there is a danger that its existing industries could be severely squeezed by shortages of workers. China has seen sharp increases in wages in the last few years, but these demographic projections would imply even greater wage pressure. As such the Hukou reforms may not be sufficient to deal with the problems in view and thus greater measures like changing its growth model faster are needed.

3) Increase in Land Space

Land – all natural resources made available to mankind by nature. Examples include rivers, soil, climate, forests, farmland and mineral deposits. More intensive exploration of mineral deposits resulting in new discovery of mineral deposits; land reclamation; Application of fertilizers, Irrigation schemes and improve techniques of production.

	Singapore Economy	China Economy
Exemplification	Reclamation of land for Singapore; increase in vertical land space by building taller building or to go underground level. Singapore will grow its land area by 5,200 ha through reclamation between now and 2030, to cater for a projected population of between 6.5 million and 6.9 million by then. The increase in land area will be the size of nine Ang Mo Kio towns. Singapore's total land area will grow to up to 76,600 ha, up from about 71,400 ha currently.	China land area is about 9706961 km-sq. There is really no need for China to reclaim physical land. China is rich in people and land but short of resources, and it wants to have stable supplies of its own rather than having to buy on the open market. Thus while much of the developed world is baulking at its debts in the aftermath of the financial crisis, China has continued a global spending spree of unprecedented proportions, snapping up everything from oil and gas reserves to mining concessions to agricultural land, with vast reserves of US dollars.

Evaluation	There is so much that a country can reclaim before we are restricted by international boundaries. One good example is in 2003, Malaysia submitted a case to the International Tribunal for the Law of the Sea and requested for provisional measures against Singapore's reclamation works.	However Chinese acquisitions are increasingly on the political data. As much as China simply wish to be able to fuel its own economy and development, the rest of the world is also worried if there is other vested interest.

Improvement in quality of resources:

1) Investment in 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.

Through investment in human capital, we will be able to raise the level of knowledge and skills present in the workforce. Hence, productivity will be increased, which will boost the economy's ability to produce.

	Singapore Economy	China Economy
Exemplification	In Singapore, the Skills Programme for Upgrading and Resilience (SPUR) is 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.	China is making a $250 billion-a-year investment in what economists call human capital. The Chinese government is using large subsidies to educate tens of millions of young people as they move from farms to cities. The aim is to change the current system, in which a tiny, highly educated elite oversees vast armies of semi-trained factory workers and rural laborers. China wants to move up the development curve by fostering a much more broadly educated public, which in turn will increase productivity. Sheer numbers make the educational push by China, a nation of more than 1.3 billion people, potentially breathtaking. In the last decade, China doubled the number of colleges and universities, to 2,409. As recently as 1996, only one in six Chinese 17-year-olds graduated from high school. Now, three in five young Chinese graduate from high school, matching the

		United States in the mid-1950s. By quadrupling its output of college graduates in the past decade, China now produces eight million graduates a year from universities and community colleges. By the end of the decade, China expects to have nearly 195 million community college and university graduates. ** See Charts on China
Evaluation	Retraining/re-skilling efforts will be limited by the mindset of workers. They must be willing learners. In addition, not having the ability to learn new skills is also a contributing limitation. As there are many workers, especially low-skilled workers, who have received no/little education will not be able to pick up new skills easily and hence might be even more resistant to retraining/re-skilling. In less developed countries, a more pressing issue will be to raise the quality of education to ensure basic literacy for the population.	Given the changes in the type of manufacturing and the fact that China need to move forward in its industrialization, this policy is indeed appropriate.

2) <u>Technological Advancements</u>

Over the years, technology has been playing 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 when technology improves. It is now possible to obtain more output from the same amount of inputs than before. To reap the benefits of technology advancements, capital—both physical and human, must increase.

	Singapore Economy	China Economy
Exemplification	We used to be dependent on the transfer of technology from MNCs. However we have been encouraging R&D efforts domestically. For example, Singapore aims to increase the R&D spending to 3.5% of its GDP by 2015.	China has moved mightily over the last 30 years to increase its capacity to develop indigenous technology to invigorate its industrial base and shift it from the world's factory to the world's developer and manufacturer of products. Additionally, the development of a functioning and agile venture capital

	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. Singapore IE Singapore has also been making a lot of effort to get foreign firms to set up R& D offices in Singapore. An environment that is R&D friendly has also been created, with strong IP laws etc.	system to invest in these new technologies, coupled with liquid equity markets for consummating IPO's have been developed in record time. China undoubtedly will become the world's largest customer for technology transfers both domestically and internationally, but global leadership in new technology development and licensing from research institutions is unlikely to be achieved over the next 10 years. Foreign firms, especially those within the US or with strong ties to the US are most likely to dominate this sector due to the US's comprehensive university network coupled with its well established IP technology transfer industry.
Evaluation	R&D efforts have a long gestation period and one can never be guaranteed results. However given that we are moving on the industrialization curve, it seems that we have to move towards this direction to find new niches of growth for the country.	To achieve this requires buttressing an emerging intellectual property system, increasing university research while encouraging scientists to patent and commercialize their discoveries. As China's labor population is going to shrink, the country has to find ways to increase productivity for growth.

Synthesis and conclusion

The most effective policies yet as we had analyzed is supply side oriented to shift the PPC outwards will have to target increasing quantity and improving quality of resources. However, all policies have their limitations and governments would have to implement supporting measures which is appropriate for their countries.

Level	Level Descriptors
L1	Lower Failure to grasp the relevant economic concepts Mere listing of policies with little or no elaboration. Upper Presented policies but no links to increasing quantity and quality of resources which will result a shift of PPC
L2	Explained the effect of different policies for different economies in contrast, linking adequately to the increase in quantity and quality of resources.
L3	Excellent explanation of the effect of different policies for different economies in contrast, linking adequately to both the increase in quantity and quality of resources. Excellent exemplification of the examples given.
E1	For an unexplained assessment, or one that is not supported by analysis
E2	Judgment based on economic analysis

Prelim 2013 EQ5

5 Amidst the slow growth in the EU, the persistently high budget deficit and ballooning public debt have become major concerns for many governments in the EU. As a result, they have implemented 'austerity measures' to reduce their budget deficit by raising taxes and cutting back on public spending.

(a) Explain what would limit the effectiveness of the austerity measures in the EU. [10]

(b) Discuss the extent to which the austerity measures in the EU will have an adverse impact on the Singapore economy. [15]

(a) Explain what would limit the effectiveness of the austerity measures in the EU. [10]

Introduction

Key words	**Austerity measures:** To raise taxes and cut back on public spending **Budget deficit:** A budget deficit exists when government spending exceeds the tax revenue.
Issue	**State objectives of austerity measures explicitly**: In light of the debt crisis in the EU, many EU governments have resorted to austerity measures to reduce their persistently high budget deficits.
Approach	This essay will explain the factors that will limit the effectiveness of austerity measures in the EU

Body

Brief explanation of how austerity measures work to reduce budget deficits
With a fall in government spending and an increase in taxes, budget positions will be improved. A previously large budget deficit will now be reduced as a result of the austerity measures.

Factors that limit the effectiveness of austerity measures in reducing budget deficit in the EU
The following factors will either lead to a limited reduction of the budget deficit and/or worsen the budget deficit.

Current state of the EU economy
Given the fact that the current state of EU economy is that of slow growth, any reduction in govt spending and increasing taxes will further reduce its AD, causing a possible negative economic growth, increase unemployment & lead to a recession. Moreover cutting back public spending will have negative repercussion on national income and employment. (Draw AD/AS diagram to illustrate effects)

If spending cuts cause an economic slowdown, it would hurt the government's attempt to reduce the budget deficit. When the economy goes into a recession, the government would receive lower tax revenues (eg less income tax and consumption tax). If unemployment rises, the government would have to spend more on unemployment benefits and welfare.

- Falling income and consumption spending due to rising unemployment and possibly recession => less income tax & consumption tax revenue => worsening budget deficit.
- More government spending is required in terms of unemployment benefit & welfare payment in an economic slowdown or recession => worsening budget deficit.
- Overall, the current state of the EU economy will worsen the budget deficit.

Poor business sentiments (weak investors' and consumers' confidence)
Poor investors' confidence owing to the current state of the EU economy and the large government debt or fiscal deficit would result in capital flight in terms of outflow of FDI.
This will result not only in less revenue collected in the form of corporate tax revenue but also in more government spending in the form of unemployment benefits (Capital flight and FDI outflow will contribute to unemployment - cyclical & structural). Moreover, poor consumers' confidence would mean less consumption tax collected as well when C is reduced.

Disincentive to work, invest & spend due to increase in income tax, corporate tax & consumption tax Increasing income tax will have a work disincentive, reducing personal income tax revenue. Any increase in corporate tax will drive out FDI thus reducing corporate tax revenue. Similarly, increase in consumption tax will reduce spending by consumers and hence govt will receive less tax revenue.
Inflexibility of govt spending Public spending may be hard to reduce in the short run due to contractual agreements. In addition, for some merit goods such as healthcare where govt has to make them affordable, govt cuts in these areas are limited. Hence the extent of a cut in govt spending will be limited.
Lower credit ratings leads to higher interest repayments on borrowing Given that the public sector debt appears to be growing too quickly and the poor business sentiments, credit ratings agencies would reduce the country's AAA rating. AAA rating means investment is safe and unlikely to default. If the credit ratings are reduced, this will make it more difficult for the EU countries to borrow. It will put off potential buyers of government debt. Given the credit crunch and fiscal problems in European countries, markets are increasing nervous about high levels of government debt. Hence, it may be difficult for some EU governments to borrow without being charged high interest rate due to the risk of default.
Conclusion The effectiveness of austerity measures to reduce the budget deficit is limited due to the above factors.

Level	Descriptors
L1	• 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. • Ability to explain what is meant by budget deficit and austerity measures but is unable to analyse the limitation of austerity measures to correct the budget deficit.
L2	• Answer shows knowledge of analysis of how austerity measures are supposed to work in order to reduce the budget deficit. • Accurate though undeveloped explanation of the link from austerity measures to the reducing the budget deficit.
L3 Lower	• Answer shows a good knowledge of the link between austerity measures and its effectiveness in reducing the budget deficit. • There is also a clear evidence of the ability to use theory with accurate reference to the question.
L3 Upper	• Thorough knowledge of facts and theory with an excellent ability to describe & explain this in a precise, logical, reasoned manner. • Graphs are properly drawn and explained.

(b) Discuss the extent to which the austerity measures in the EU will have an adverse impact on the Singapore economy. [15]

Introduction • As explained in part (a), a persistently high budget deficit and a ballooning public debt is a concern and thus the EU govts decided to implement austerity measures via raising taxes and cutting government spending. • But such measures will have a recessionary effect on EU economy in the short-run. • This essay aims to discuss the extent to which the austerity measures in the EU will have an adverse impact on the Singapore economy, by examining the effects on the macroeconomic objectives and SOL of Singapore.

Body

Briefly explain impact of austerity measures on EU: recessionary impact on Economy + ↓SOL

- Increasing taxes → fall in disposable income → C and together with a cut in government spending will significantly reduce AD, causing a slowdown in economic growth & even a recession
- Increase in cyclical unemployment
- This may trigger social unrest, strike or political instability →↓SOL → business confidence may be shaken and I↓
- Increase in income tax will have a work disincentive and may slow down the growth of AS

Impact of austerity measures in the EU on Singapore

Thesis: Adverse impact on Singapore	Anti-thesis: Impact on Singapore is not so adverse
Thesis 1: Externally induced recession **Slower economic growth and higher cyclical unemployment** • ↓Y_{EU} → DD Singapore's export↓ assuming normal goods → ↓ net exports, c.p condition • Low business confidence → Less inflow of FDI • ↓AD → ↓Y_{SG} → ↑cyclical unemployment • ↓Actual economic growth (via k) **AD-AS diagram to illustrate** **Thesis 2: worsens BOP position** • ↓ net exports → worsens current account via BOT • ↑ inflow of hot money • Assuming the fall is larger – BOP worsens If the austerity measures fail to reduce the budget deficit or government debt in the short term, there will be loss in investors' confidence in the EU economy and there will be capital flight. When investors sell Euro in the foreign exchange market, this would weaken the Euro as well as lead to an inflow of hot money to Singapore ie if investors deem Singapore currency as a better "store of value". Foreign investors may buy Singapore properties and assets, thereby driving up inflation rate in Singapore. ***Evaluation:*** *Inflow of hot money may lower our interest rate as supply of loanable funds increases and thus may increase C+I.* **Thesis 3: Falling value of Euro** Loss in confidence of investors due to growing public debt result in sale of EU government bond and outflow of hot money & FDI • *The impact of **capital flight** from EU would result in **depreciation of Euro**. This may make EU exports relatively cheaper. If Singapore exports are close substitutes, then this will erode Singapore export price competitiveness **relative to EU** exports. When Singapore exchange rate is relatively higher than **Euro**, Singapore balance of trade position with the EU would worsen if Marshal-*	**Anti-thesis 1: The fall in AD can be offset by other factors** Singapore has top trading partners such as US and Asia. There may be a rise in X from these countries and together with domestic demand, it will cushion the fall in AD and it may even increase. ***Evaluation:*** *EU27 is Singapore's top trading partner and the fact US economy is not doing well, Singapore's growth will be slowed down. Moreover, due to the inter-connectedness of global economies, if Singapore other trading partners are also adversely affected by the UK and the EU financial & government debt crisis, then Singapore economy will also be indirectly affected.* **Anti-thesis 2: Mitigating effects from government policies to buffer the negative contagion effect** **Singapore's trade policy** of FTA and diversifying trading partners, decoupling from EU; exchange rate policy, fiscal policy and supply-side policy to ensure sustained continuous growth. **Singapore's exchange rate policy** may change from gradual appreciation to zero appreciation or even depreciation if S$ is deemed to be too strong relative to Euro. This will mitigate the fall in export price competitiveness & hence reduce the adverse impact on BOT. **Singapore's expansionary fiscal policy** **Singapore's supply-side policies**. Use of such policies such as education / retraining / developing new comparative advantage are relevant. And it will be better if answers tie-up with the eventual recovery of EU in the LR when the austerity measures finally work. **Anti-thesis 3: There may be FDI inflow to Singapore** Due to the economic and political instability in EU, their MNCs may offshore to Singapore – an attractive destination to FDI due to our strong economic fundamentals and political stability.

Lerner condition is fulfilled. • ↓DD of Euro & ↑SS of Euro in the foreign exchange market → depreciation of Euro • Singapore export is relatively less price competitive vis-à-vis EU exports • Worsen Singapore BOT if PEDx > 1 or if ML condition is fulfilled • *However, it will also benefit Singapore if Singapore is a net importer of EU goods and services. A weaker Euro would mean cheaper imported input or finished products.*	**Anti-thesis 4: The impact on the economy depends on the state of Singapore's economy & government policy to control speculative demand** If Singapore has tight capacity and experiencing demand-pull inflation, a fall in X+FDI from EU may bring down GPL and have little impact on real GDP ***Evaluation:*** *Singapore is an* ***export-led growth oriented*** *economy and if external market is indeed weakened, we probably will have spare capacity.* Singapore government has implemented statutory rules to regulate speculative demand to cool down property asset inflation. (**Anti-Thesis 5: Austerity measures might lead to economic recovery in the EU in the long run when the budget deficit is reduced.** This increase in aggregate demand will lead to increased imports, which will benefit Singapore as some of this increase will be for exported goods from Singapore. In addition, there may be positive effect on Singapore's trading partners eg China & India, which would in turn result in greater export revenue for Singapore. **Anti-thesis 6: small k** Since k is small, any fall in AD will not bring about a large change in Real NI. **Anti-thesis 7: state of economy** Adverse impact on EG and unemployment will not be significant if Singapore is currently undergoing inflationary pressure. In fact, the ease in inflationary pressure will boost export price competitiveness.
Conclusion The likely impact of the Singapore economy of growing public sector debt and austerity measures in the EU is mainly negative unless mitigated by appropriate government policies or when the EU recovers from its macro problems in the long run.	

Level	Descriptors
L1	• 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	• For an under-developed analysis and unconvincing discussion of the extent of the adverse impact and mitigating policies though there are some correct use of concepts • If only explain how austerity measures are supposed to have a negative effect on Singapore, but no or insufficient discussion of the mitigating factors as a result of government policies
L3	• For an excellent and comprehensive analysis of how government debt and austerity measures could affect Singapore economy negatively with well developed mitigating government policies • Good two-sided discussion about negative contagion effect and mitigating effect of government policies on Singapore.
E1	• Relevant stand taken with regard to impact of government debt and austerity measures on Singapore economy.
E2	• Relevant stand taken with regards to the extent of contagion impact on Singapore economy, include ability to question assumption(s).

Prelim 2013 EQ6

6 External instability such as excessive trade imbalances and large exchange rate fluctuations generally has negative economic consequences.

Assess the extent to which an improvement in the living standards of an economy requires that external stability be the top economic priority. [25]

Introduction

SOL refers to the welfare/well-being for the average person in a country.
Measured in terms of RGDPpc (PPP) ie Real GDP divided by total population size. It is a used as a gauge of the level of output available for consumption on a per head or per person basis, adjusted for differences in PPP for the purpose of international comparison. Since GDP growth is a key factor in influencing per capita Income governments aiming to achieve a better SOL may have to leverage on external trade and investment to drive economic growth. The aim of this essay is to discuss the extent external stability should be the foremost macroeconomic policy in achieving a better SOL.

(Thesis)	Yes, it should be the TOP priority to achieve better SOL

	Explain the problems of external instability:
Trade **<u>If trade is unstable</u>**: • Persistently large Trade surpluses => inflationary impact on economic growth => overheating => derail growth …. negative impact on employment, income levels and hence SOL • Persistently large Trade deficits => deflationary impact on economic growth => economic slow-down (soft or hard landing)….. negative impact on employment , income levels and hence SOL Ideally neither persistently large trade surpluses nor trade deficits is good for the economy. Both are likely to result in negative impact on economic growth and hence SOL.	
Impact on BOP: Exchange rate or currency rate **<u>If currency is unstable:</u>** Depreciation => cost push inflationary pressures….. undermine the confidence of foreign investors; capital flight etc.. ..impact on economic growth, employment, income and hence SOL Appreciation => erodes export price competitiveness… negative impact on economic growth, employment and income and hence SOL. Ideally neither sharp nor sudden depreciation or appreciation to prevent negative impact on economic growth and hence SOL e.g. Recently the Indian Rupee has fallen sharply by over 40% against the USD. The Indian government has to intervene to stabilize the currency by raising interest rates.	

Generally

Currency volatility is harmful to external trade and investment –
Exposes traders, investors, tourists and travellers to too much exchange rate risks and uncertainties ie sudden and unexpected losses due to unfavourable exchange rate movements.

For example, a SG exporter receiving payment in a foreign currency (e.g. US$) could easily up with unexpected losses due to adverse currency movements when converting his sales proceeds into the domestic currency. Assuming the exporter marked up (profit-margin) is 10% in SGD, a depreciation of the foreign currency proceeds e.g. US$ by say 10% would have wiped out the entire profit-margin.

Negative impact on economic growth and therefore SOL
Ideally exchange rates should be managed (SG case) or fixed (HK or China) to prevent volatility.

Assess the extent

Degree of Openness
Small and open economies versus large and less open economies.

Example:
SG versus USA
USA has a relatively large domestic sector or consumption to drive growth and act as a buffer to insulate the economy from external shocks. In the USA, consumption constitutes 70% of GDP.
Hence, the macroeconomic priority in America is to focus on stimulating their domestic economy so as to raise SOL e.g. use of mega fiscal stimulus and aggressive monetary stimulus such as QE or quantitative easing.

In contrast, SOEs such as SG is more vulnerable to external shocks.
Trade constitutes more than 100% of GDP. The total trade to GDP ratio = 400%.
Hence ensuring external stability is a major priority to protect the economy from external shocks.

Evaluative comments:
Generally, important in the context of a (G) or globalized world today.
Trade is an important potential engine of growth for most economies – some more than others (e.g. more for SOEs) and hence none can truly be totally immune from negative impact of external shocks.

Policies to mitigate external shocks:

- FTAs – SG has the highest no of FTAs (currently SG is in the process negotiating a FTA with Turkey) such agreements extend beyond merchandise trade to services and investment.
  The aim is to diversify export markets so as to prevent over-reliance on certain countries or regions for growth.
- GRAMA policy to maintain currency stability. This policy focuses on "gradual" and "modest" as opposed to sudden and sharp fluctuations in the currency rates. A gradual change is non-de-stabilising as it gives traders and investors sufficient notice and time to adjust to changing currency rates so as to avoid making sudden unexpected losses. (ie calculated versus blind risks)
  Moreover an appreciating currency keeps out imported inflation and generally help to ease cost push inflationary pressures thereby supporting economic growth.

- SSP to cut costs and boost productivity/productive capacity.

SG response to external shocks to build resiliency by implementing flexible wage system (e.g. cut variable wage component in times of a crisis such as a global recession); provide wage subsidies to employers; cut rentals, utility charges as well as taxes to give immediate relief to employers and help businesses stay afloat and to save jobs.

The government has also launched on-going skills upgrading and training schemes (e.g. e2i) to improve labour mobility as well as boost workers productivity and earnings. All these benefit the economy by reducing costs and increasing productive capacity and hence also enable the economy to grow at a sustained non-inflationary rate.

(anti-thesis)	Explain why external stability is not the TOP priority to achieve better SOL

However…..

<u>Quality of life indicators</u>

Focusing on external sources of growth via trade and FDIs might even be harmful to attaining a clean and liveable environment.

Exemplify:
China is the best example.
Negative externalities like pollution has brought harmful effects to the quality of the environment 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. However, it came at a heavy price in terms of high level of pollution from factories and motor vehicles.
e.g. Out of the world's 20th most polluted cities, the top 16 came from China. Not uncommon to see many parts of China covered by smog including Beijing. Rapid urbanization also brought harmful effects on its environment e.g. building of the 3 Gorges Dam to provide electricity. (refer to google.com on the environmental impact of the dam)

Evaluative comments:
Thus it in the interest of the country to shift their priority to focus on green or sustainable growth e.g. use green technology; alternative fuels e.g.solar and biofuels.

<u>Growth leads to more stress and less leisure.</u>

Exemplify:
For instance, today in SG despite enjoying one of the world's highest per capita income, Singaporeans have been ranked as one of the world's most unhappy people. A large part of it is due to the high level of stress and poor work-life balance, brought about in part by the constant strive to be the most competitive economy in the world. Reliance on external sources of growth would mean SG exports have to be competitive in the global markets. This put a lot of stress on the workforce to outperform the rest of the world e.g. stressful education system aimed at producing world-class workforce.

Income inequality – Income distribution

Focusing on growth might be harmful to attaining a better SoI because it accentuates income inequality. This is even more so for open economies and city states that attract foreign talent and enterprises.

Exemplify:
Relatively open and cosmopolitan cities states like SG and HK have one of the highest Gini-coefficent or level of income inequality. Such high and worsening income disparities can lead to social tension and social divisiveness which could eventually derail growth.

Hence, the priority is to focus on reducing income disparity through the use of government transfers (e.g. workfare income supplement; subsidies for lower income for health-care; housing etc) and tax (e.g. more progressive income tax. In SG, studies done have revealed that 80% of income taxes collected comes from the top 20% of income earners).

Composition of output

Export oriented economies tend to focus on the production of goods and services for the export market instead of for domestic consumption. Hence, such export-led growth model may not directly contribute to higher level of consumption at home. Moreover, if the exporting firms are FDI or foreign owned, a large % of the share of profits will be repatriated abroad, thus not benefitting the residents of the country.

The priority is to focus on rebalancing the economy. For example, in recent years countries like China has been implementing policies to rebalance or restructure her economy to stimulate more domestic consumption and imports which contribute directly to enhancing the level of welfare of the people.
Such policies include increasing disposable incomes through government transfers and lower personal income taxes; reducing savings through strengthening the social safety net e.g. health care insurance.

Conclusion

In a globalized world as more and more countries tapped on external sources of growth by opening up their economies to trade, FDI and inflow of foreign talent and manpower, invariably their growth and hence SOL would be more vulnerable to external instability or shocks. Therefore, it can be said that the TOP macroeconomic priority is to achieve external stability.

However, at the same time, there is need to balance the trade-offs or negative impact on the quality of life. Priority must also be given to redress issues like environmental degradation, stressful lifestyle and high and worsening income disparities, so that the country can achieve a better overall SOL (ie both tangible and intangible welfare) for the residents of the population.

Mark Scheme	
L3	Excellent and well-balanced analysis showing good understanding of the requirements of the question. Demonstrate ability to integrate the 3 key issues clearly into a coherent structure. Use of appropriate/refreshing/interesting exemplifications.
	Able to focus clearly on the link between external stability and SOL. Adequate scope and depth. However, lacking in terms of good overall structure. Exemplification is appropriate but mundane.
L2	Able to focus on the link between external stability and SOL with much more depth and clarity. However, discussion is incomplete which some major issues omitted.
	Able to focus on the link between external stability and SOL, however lacking generally in depth and scope. For example, analysis is incomplete or lop-sided such as either focus is on trade instability or exchange rates instability but not both and/or focus is on material SOL or intangible SOL but not both.
L1	Weak link between external stability and SOL. For example, some reference to external stability and SOL, but lacking in coherence and depth. Too sketchy and superficial
	Mostly irrelevant or out of focus – unable to link external stability to SOL. Major conceptual errors.
E2	Judgment supported by analysis Pretty strong conclusion demonstrating clear understanding of the issues.
E1	Unexplained judgment Conclusion that is either missing or not supported by analysis. Unexplained stand.

INNOVA JUNIOR COLLEGE
JC 2 PRELIMINARY EXAMINATION 2
in preparation for General Certificate of Education Advanced Level
Higher 1

ECONOMICS 8819/01

Paper 1 **17 September 2013**

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: Essays

Answer **one out of two** questions.

At the end of the examination, fasten all your work securely together.
You are to submit your answers for Section **A** and Section **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 **9** printed pages and **1** blank page.

Section A

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.

Extract 1: Rare earths prices

The demand for rare-earths is rising rapidly as they are increasingly being used in a wide range of high-technology products. Production of wind turbines is expected to climb sharply amid the clamour for cleaner energy alternatives that reduce dependence on fossil fuels blamed for global climate change.

China, supplier of 95% of the 17 elements known as rare earths, has shut-down many of its rare earths mining sites and cut its export quotas of rare earths. The government may further reduce export quotas.

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.

Adapted from Bloomberg, 17 June 2011

Figure 1: Rare Earths Price Index: 2002 – 2010

Source: The Economist

Extract 2: The Chinese consolidate the industry

Beijing authorities are creating a single government-controlled monopoly, Bao Gang Rare Earth, to mine and process ore in northern China, the region that accounts for two-thirds of China's output. The government is ordering 31 mostly private rare earths processing companies to close this year in that region and is forcing four other companies into mergers with Bao Gang.

Chinese officials say that the government is worried about the external costs from the rare earths industry such as polluted water, polluted air and radioactive residues, particularly among many small and private companies, some of which operate without the proper licenses. While rare earths themselves are not radioactive, they are always found in ore containing radioactive thorium and require careful handling and processing to avoid contaminating the environment.

Rare earths ore has to be refined before it can be used commercially. The waste generated from this process is both acidic and radioactive. The refining process leaves behind a radioactive sludge laced with toxic chemical compounds that is stored in artificial lakes. Due to lax regulations, this radioactive waste material often seeps into the water supply, adversely affecting the health of residents in the area.

Adapted from The New York Times, 15 September 2011

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.

Adapted from China Daily, 27 September 2011

Extract 4: Will China continue to dominate the rare earths market?

China has only 37% of the world's proven rare earths reserves but accounts for 95% of global production. This is not only due to the country's good geographical location but also its willingness to do dirty, toxic and often radioactive work that the rest of the world has long shunned.

Even so, the costs of mineral extraction are increasing because of lower ore grades and increasing capital costs. China's costs of production are likely to rise as environmental and social costs and the potential for rising labor costs begin to be incorporated into China's rare earths production and processing operations. China would likely be unable to increase production significantly to drive prices down.

While limited production and processing capacity for rare earths currently exists elsewhere in the world, additional capacity is expected to be developed in the United States, Australia, and Canada within two to five years, according to some experts. 34 Chinese producers are also seeking to expand their production capacity or seek long-term supply agreements in areas around the world, particularly in Africa and Australia. There are only a few exploration companies that develop the resource, and because of long lead times needed from discovery to refined elements, supply constraints are likely in the short term.

Adapted from The New York Times, 29 October 2010

Questions:

(a) **(i)** With reference to Figure 1, describe the trend in the world price for rare earths between 2002 and 2010. [2]

(ii) Explain how the trend in world price for rare earths would impact the market for hybrid cars. [4]

(b) **(i)** With reference to Extract 2, explain how the existence of 'external costs' leads to market failure. [4]

(ii) With reference to Extract 3, explain how China can reduce these 'external costs' through the imposition of a tax on rare earths minerals. [6]

(c) Assess the impact of export quota of rare earths on China's Balance of Payments. [6]

(d) Using information from the data where appropriate, discuss what may happen to the world price of rare earths in the future. [8]

[Total 30 marks]

Question 2 Rising Youth Unemployment in Europe

Countries throughout the world had experienced a sharp economic slowdown due to 2008 Global Financial Crisis. These challenges are expected to prolong as the European Debt Crisis unfolds and there is an urgent need for governments to address the high unemployment rate, especially among the youth.

Table 1: Trade Figures for Spain and Germany (US$ Billions)

		2007	2008	2009	2010	2011
Spain	Export	253	281	227	254	307
	Import	389	421	293	327	377
Germany	Export	1321	1446	1120	1259	1474
	Import	1055	1185	926	1055	1255

Source: World Trade Organisation, Statistic Database

Table 2: Spain's GDP value (€ Billions)

	2007	2008	2009	2010	2011
GDP at constant price	1,078.2	1,087.8	1,047.1	1,043.7	1,048.1
GDP at current price	1,053.2	1,087.8	1,048.1	1,048.9	1,063.4

Source: International Monetary Fund, World Economic Outlook Database, October 2012

Table 3: United Kingdom's GDP value (£ Billions)

	2007	2008	2009	2010	2011
GDP at constant price	1,474.2	1,459.9	1,401.8	1,427.1	1,437.9
GDP at current price	1,412.1	1,440.9	1,401.8	1,466.6	1,516.2

Source: International Monetary Fund, World Economic Outlook Database, October 2012

Table 4: Unemployment Rate (%)

	2007	2008	2009	2010	2011
Spain	8.3	11.3	18	20.1	21.7
United Kingdom	5.4	5.6	7.5	7.9	8.0

Source: International Monetary Fund, World Economic Outlook Database, October 2012

Extract 5: Spain, hostage to the Eurozone

Spain's problems are mostly associated with the euro and its recovery is being delayed as a result of decisions made by the European authorities. When Spain decides to adopt a common currency with other Eurozone countries that have much higher levels of productivity, it cannot be as competitive in terms of exports and domestic industries that compete with imports. If Spain had its own currency, it could let the value of its currency falls and help the economy to grow again.

To help Spain resolves her economic woes, European authorities have prescribed what is called an "internal devaluation" – where a country seeks to regain competitiveness through lowering wage costs and increasing productivity and not reducing value of exchange rate. In practicing internal devaluation, Spain has reduced public sector wages to put pressure on other wages to decrease as there is much pressure to cut government spending and pursue fiscal austerity. These measures will shrink the economy and raise unemployment enough so that the country can become competitive, through lower prices and wages, without changing the exchange rate (i.e., without leaving the euro). Hence, it allows Spain's economy to grow over time with increased competitiveness.

Spain also needs expansionary policy to boost the economy. But monetary policy is controlled by the European Central Bank, which, just announced that it may raise interest rates, despite Europe's anaemic recovery and growing unemployment in the eurozone's weakest economies. Expansionary fiscal policy is prohibited by pressure from the European authorities, which are actually pushing Spain to do the opposite due to her borrowing from IMF to finance the huge government debt.

It is the strong economic link between Spain and the other countries within the Eurozone that prohibits it from using any of the three most important macroeconomic policies. Spain should refuse to accept any policies that prolong its slump and prevent it from reducing unemployment. If that means leaving the euro, then these options should be on the table in any negotiations with the European authorities.

Adapted from Various Sources

Extract 6: Overseas workers preferred over "unskilled" school leavers

School leavers are being pushed to the back of the jobs queue as Britain's employers turn to migrant labour to fill vacancies. The Chartered Institute of Personnel and Development said demand for workers from overseas had reached record levels because companies felt that young people in the UK lacked the skills to make them employable.

Its quarterly survey of the labour market found that the government's cap on non-EU workers had been ineffective since firms had switched to employing staff from within the European Union, where there are no barriers to labour mobility. Employers seem eager to take full advantage of this, to make use of the EU older workers' positive attitude and skills. The perception among many companies is that too many young people in the UK do not have these qualities, which may explain why fewer of them are being hired. The government therefore needs to redouble efforts to ensure that

the education and skills system is fit for purpose so that young people can find a foothold in an increasingly competitive jobs market.

Adapted from The Guardian, 23 August 2011

Extract 7: World youth unemployment on the rise

The International Labour Organisation (ILO) estimates that there are 75 million 15-to-24-year-olds looking for work across the globe. Youth unemployment has increased by 30% across the Organisation for Economic Co-operation and Development (OECD), and in Spain it has doubled to 20%.

The effects of youth unemployment can persist for years. The economic loss can be substantial, too, and not just in the form of higher welfare payments. Part of these losses may be due to missing out on training and experience accumulation that typically occurs with young workers as they tend to change jobs at much higher rates than their older counterparts. Realising this problem, governments are trying to address the no match and mismatch between skills and jobs.

Source: Adapted from The Economist, 8 May 2013

Extract 8: The youth unemployment bomb

What makes rising youth unemployment extra-worrisome is the fact that the world is aging. In many countries the young are being crushed by the social phenomenon where older workers are determined to cling to the better jobs for as long as possible. When the older workers retire, they demand impossibly rich private and public pensions that the younger generation will be forced to shoulder. In addition, Britain is reducing subsidy to university education in an attempt to reduce government debt thus resulting in a rise of the university tuition fees.

In Britain, Employment Minister Chris Grayling has called the chronic unemployment a "ticking time bomb." The only surefire cure for youth unemployment is strong sustained economic growth that generates so much demand for labour that employers have no choice but to hire the young. In the absence of a growth panacea, economists have been working on microscale solutions, such as training programs to smooth the transition from school to work. These days, there is a newfound appreciation in such apprenticeship, because it greases the transition from learning to doing. Germany and Austria experienced milder youth unemployment in the global downturn partly because of apprenticeship programmes. More youths in Netherlands, Italy and Portugal are gaining work experience while in school.

Chronic youth unemployment may not be fixable. But there is evidence it can be reduced through the concerted efforts of government, labour, business, education, and young people themselves. The spike in youth unemployment should also ease in the West as the after-effects of the 2008 Global Financial Crisis diminish. Eventually, growth will resume in the U.S., Europe, Japan, and other nations. The retirement of the baby boomers will increase demand for younger workers.

Source: Business Week, 2 February 2011

Questions

(a) **(i)** Describe the trend of Spain's balance of trade between 2007 and 2011. [2]

(ii) Compare this trend with changes in Germany's balance of trade during the same period. [2]

(b) From Table 2,

(i) Identify the base year for Spain's GDP value. [1]

(ii) Explain the difference between GDP at constant price and GDP at current price. [3]

(c) Explain why governments should be concerned with rising youth unemployment in recent years. [4]

(d) **(i)** To what extent was the "2008 Global Financial Crisis" a cause of the increase in youth unemployment in both Spain and UK? [8]

(ii) Internal devaluation will allow "Spain's economy to grow over time with increased competitiveness".

To what extent is internal devaluation the best policy for the Spanish government to resolve its rising youth unemployment problem. [10]

[Total 30 marks]

Section B

Answer **one** question from this section.

3 **(a)** Explain how the price mechanism may allocate resources efficiently. [10]

(b) Discuss the view that government intervention in situations when the market fails will always result in more efficient outcomes. [15]

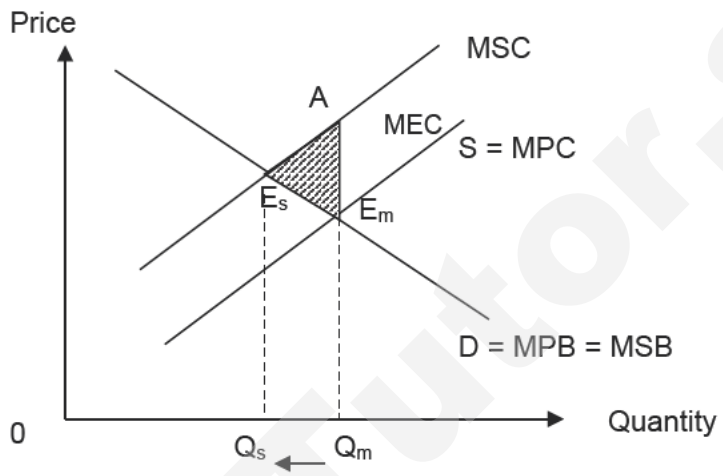
4 **(a)** Explain how rising global protectionism may affect Singapore's circular flow of income. [10]

(b) Discuss the view that globalisation is likely to support an economy's recovery from the global economic slowdown. [15]

-End of Paper-

Econ Prelim 2 H1 Case Study Q1 Suggested Answers

(a)	**(i)**	**With reference to Figure 1, describe the trend in the world price for rare earths between 2002 and 2010.** General trend – rise in world price for rare earths [1m] Specific trend – sharp increase/ spike in world price in 2010 [1m] (No mark awarded for decrease in price in 2008 since it is not a significant feature in the trend)	[2]
	(ii)	**Explain how the trend in world price for rare earths would impact the market for hybrid cars.** *(The answer should be based on the trend given in a(i).)* Rare earths are used as raw materials to produces parts of hybrid cars. The rise in the price of rare earths will increase the cost of production for producing hybrid cars. [1m] The supply curve will hence shifts left. [1m] *A diagram is helpful although there is no specific mark awarded for diagram as it is not asked in the question).* Assuming ceteris paribus, the equilibrium price of hybrid cars will increase [1m] and the equilibrium quantity sold will fall. [1m] Given that the demand for hybrid cars is likely to be price elastic (luxury good), the price will increase more than proportionately than the fall in quantity of cars sold. [optional 1m]	[4]
(b)	**(i)**	**With reference to Extract 2, explain how the existence of 'external costs' leads to market failure.** · *Evidence from the extract: Some of the external costs identified in extract 2 include polluted air and water and radioactive residues.* · *Explain how external costs cause a difference between MPC and MSC. [1m]* · *Explain how both market and social equilibria are reached. [2m]* · *Explain how overproduction of rare earths occurs in this case with presence of deadweight loss. [1m]* The mining of rare earths resulted in negative externality where these external costs (such as polluted air and water and radioactive residues) causes harm to the environment and people who are not involved in the production of rare earths. As such, the marginal social cost (MSC) is higher than marginal private costs (MPC) due to these external costs. [1m] Private producers acts in their own self-interest and will produce up to	[4]

		marginal private benefit (MPB) equal to marginal private cost (MPC). However, the society's optimal production of rare earths is where marginal social benefit (MSB) equals marginal social cost (MSC). This results in an overproduction of rare earths from the society's perspective. [2m] There is the presence of deadweight due to overproduction of rare earths which is allocative inefficient as MSC> MSB at that level of production of rare earths. [1m]  (No additional mark is given for diagram separately but they can be considered in totality as part of the answer. Students are not expected to draw the diagram to access the full range of marks since it is not in the syllabus nor required in the question.)	
	(ii)	With reference to Extract 3, explain how China can reduce these 'external costs' through the imposition of a tax on rare earths minerals. (The essence of this question is to test students' understanding of how external costs can be reduced: i) through increasing MPC towards MSC so that with lesser production of rare earths, external costs can be reduced AND ii) through reducing the external costs of mining rare earths so that MSC falls and can allow a higher optimal production of rare earths. <u>Explain how the tax will increase MPC, reduce production of rare earths and hence less external costs.</u> From the extract, China will be imposing a tax of 60 yuan per tonnes on mining of light rare earths and that of 30 yuan for medium and heavy rare earths. The tax will increase the cost of production of mining rare earths for producers which results in the shifting up of MPC. As producers internalise the tax, they will produce less rare earths since the production is now at MSB = MSC+tax. With less production of rare earths, the	[6]

external costs will be lesser and hence there is less deadweight loss incurred by the society. If the tax is exactly equal to the MEC, then the deadweight loss will be removed and there is allocative efficiency.

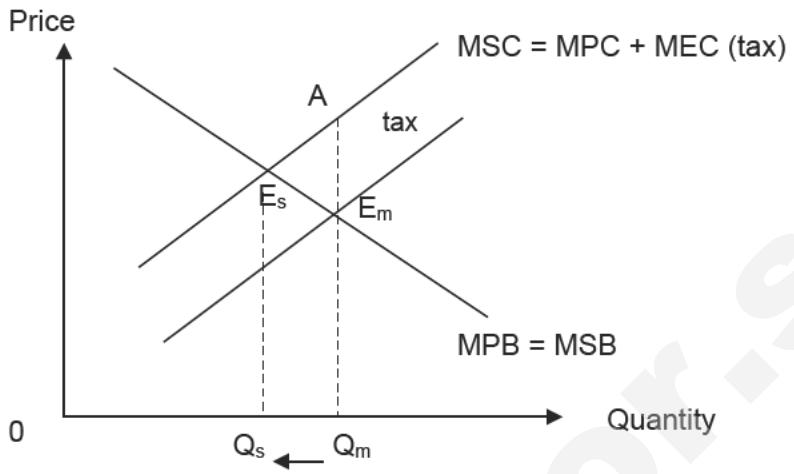


Figure 6: Government tax to correct negative externality

<u>Explain how the tax can be used to reduce MSC of rare earths production in the long run.</u>

From extract 3, the tax will be used to support research on rare earths processing and set up environmental compensation fund. The purpose is to reduce the external costs of mining rare earths to the environment which will lower the MEC and hence the MSC of rare earths mining. With cleaner methods of mining rare earths, this will allow producer to produce the same of production but with lesser externals cost of production.

Hence, the tax can reduce these externals costs in both the short and long run.

L2	Clear and well explained answer in terms of how the tax can reduce the external costs in the short run using MPC analysis and how the tax revenue can be used to improve the efficiency of rare earths mining and to protect the environment in the long run. - The answer do not necessary have to show MPC at optimal level due to tax, but as long as it shows how MPC is raised and hence lead to reduced production of rare earths and DWL. Answer that explains how external costs can be reduced in the short run only – 4m max.	4-6
L1	Undeveloped explanation of how a tax can reduce the external costs of rare earths mining. There may be some inaccuracies in expression or conceptual understanding.	1-3

(c)	Assess the impact of export quota of rare earths on China's Balance of Payments.	[6]

Export quota – a limit of the amount of rare earths allowed to be exported to other countries.

Short run impact

The fall in amount of export rare earths led to higher 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 supply results in the more than proportionate increase in price, hence export revenue increases. This improves the current account of China's BOP.

Long run impact - (only one required)

i) Firms began to shift to China for access to cheap rare earths (extract 3) which will results in inflow of long term capital into China (improve capital/financial account).

ii) Other countries may discover rare earths or build capability to mine rare earths makes the demand for rare from China less price inelastic since there are alternatives sources of rare earths from other countries, current account may not improve as much compared to the short run.)

Conclusion

China's BOP is likely to improve greatly with the rare earths export quota in the short run increased export revenue and FDI inflows but that improvement will likely to diminish in the future when other countries began to produce rare earths on their own.

L2	Clear and well developed explanation of the impact of export quota on China's Balance of Payments by analyzing its impact on both current and capital/financial accounts. A conclusion is given for the impact on BOP. - An answer that examines impact on both current and capital/financial accounts without conclusion or judgment is given a max of 5 marks. - An answer that examines impact on only current without conclusion or judgment is given a max of 4 marks.	4-6
L1	Undeveloped explanation of how an export quota can affect China's BOP in terms of either current or capital/financial accounts. No conclusion is given.	1-3

(d)	**Using information from the data where appropriate, discuss what may happen to the world price of rare earths in the future.** Students are required to use demand, supply and elasticity analysis as the main framework in their answer. Students would have to use the data in the case study to examine the likely demand and supply shifts in the future, coupled with elasticity, to forecast the price of rare earths. **Evidence on future demand:** - demand is expected to rise in the future as rare earths can be used as inputs into the production of wider range of consumer products as well as higher demand for these consumer products (extract 1) **Evidence on future supply:** - Supply of rare earths may possibly decrease in China as new licenses were not issued by Chinese authorities as well as due to higher taxes and increased production caps, building of rare earths reserves (extract 3) Supply of rare earths may possibly decrease due to higher cost of production when environmental, social and labour costs involved in the production of rare earths rises. - Supply of rare earths may increase in other parts of the world as US, Australia and Canada seeks to increase rare earths output. Chinese producers are seeking to expand their production capacity in China. (extract 4) - Students would have to evaluate and argue for their case of supply shifts **Evidence on elasticity of rare earths:** In the near future, demand is price inelastic because it is a necessary components for a wide range of consumer products - Supply is price inelastic because a long time period is required to explore and to build facilities to mine and process the rare earths. Time taken to get license would be substantial as well since the mining of rare earths causes negative externalities. Students will be expected to draw a demand and supply diagram incorporating the possible shifts of demand, supply and their elasticities and evaluate and conclude on the final impact on equilibrium price and quantity in the market in the short and long run.	[8]

L3	Clear and well developed explanation using demand and supply analysis coupled with elasticity concepts to forecast future price of rare earths. The explanation was based on evidence from the case study. Well drawn diagram to illustrate the future price of rare earths. Evaluative comment on the determinants and hence impact on	7-8

	future world price of rare earths was given.		
L2	Well explained answer using demand and supply and elasticity concepts to forecast future price of rare earths. The explanation was based on evidence from the case study. Analysis may be underdeveloped. A diagram was drawn to illustrate the future price of rare earths. No evaluative comment was made. Max 4m - if only demand and supply factors were considered without any evaluation.	4-6	
L1	Undeveloped explanation on how demand and supply factors may affect the future price of rare earths. Elasticity concepts were not evident. There is some attempt to use evidence from the case study. Max 3 - if only demand OR supply factors was given.	1-3	

Suggested Answer

(a) (i) Describe the trend of Spain's balance of trade between 2007 and 2011. [2]

General: Spain's BOT deficit is generally decreasing (1 mark) and/or Spain is constantly in a deficit (1 mark)

Specific: In 2009, Spain's trade deficit fall sharply. (1 mark)

(ii) Compare this trend with changes in Germany's balance of trade during the same period. [2]

Spain is experiencing a decreasing trade deficit (1 mark) whereas Germany is experiencing a decreasing trade surplus (1mark).

(b) From Table 2,

(i) Identify the base year for Spain. [1]

Year 2008

(ii) Explain the difference between GDP at constant price and GDP at current prices. [3]

GDP is the monetary value of all final goods and services produced within the country regardless of nationality in a given year. (1 mark)

Spain's GDP at constant price is generally lower than it's GDP at current price from the period of 2009 to 2011. (1 mark) This is due to the increasing general price level/ inflation.(1 mark)

(c) Explain why governments should be concerned with rising youth unemployment in recent years. [4]

The rising youth unemployment is a concern to the governments as it will lead to loss of resources and rising welfare expenditure.

Rising youth unemployment will lead to a fall in income tax revenue collected. This will lead to lesser revenue for government to spend on infrastructure development and provision of merit and public goods. This in turn will result in fall in the countries' standard of living. In addition, welfare countries like UK and Spain will also have to experience an increase in unemployment benefit expenditure (extract 3), thus leading to an increase in budget deficit. (2 marks)

(or any other SR consequences that results from rising youth unemployment – 1mark)

In the long run, the rising youth unemployment will lead to a fall in productive capacity of the country as the unemployed youth will missed out their opportunity to accumulate working experience or gain on the job training (extract 3), hence their current skills or knowledge will gradually

become obsolete. This will in turn reduce the efficiency and productive level of the labour force, thus leading to the fall in productive capacity and a leftward shift of the LRAS from LRAS0 to LRAS1. This will lead to a fall in the country's potential economic growth. (2marks)

(d) (i) To what extent was the "2008 financial crisis" a cause of the increase in youth unemployment in Spain and the UK? [8]

Thesis:

The rising youth unemployment could be due to 2008 financial crisis.

- From Table 2 & 3, GDP at constant price for both UK and Spain has decreased in 2009.
- Analysis: The 2008 financial crisis à worldwide recession à income level of household around the world has fallen à demand for imports from all countries fallen => the demand for export from Spain and UK fallen à fall in AD à multiplied fall in NY => lower production level à lesser need for factor of production à increase in cyclical unemployment (as in table 4, the unemployment rate for UK and Spain has been rising in 2009). Hence the 2008 financial crisis à fall in no. of job vacancies available, coupled with the rising trend among older workers who wish to hold on to their job as long as possible (extract 4) à no. of job opportunities for the youth is significantly reduced à rising youth unemployment
- However, in 2010 and 2011, the GDP at constant price for both Spain and UK has increased, which indicate increase in production level in both countries and thus increasing need for factor of production such as labour, but the unemployment rate for both countries are still rising the same period à this indicate that it is possible that the rising youth unemployment may not be due to the 2008 financial crisis.

Anti-thesis:

The rising youth unemployment can be due to mismatch of skill sets and increase factor mobility within the Eurozone region.

- The reduction of university tuition fee subsidy in UK (extract 4) à university education to be less affordable as university tuition fee increases à more youth are not able to receive higher education à youths that start working at earlier age lacks the required skill sets or knowledge for the jobs in the various industries (extract 2) à inability to get a job à rising youth employment
- In addition, the lack of barrier to labour mobility within the Eurozone à increased ease for UK and Spain employers to hire older EU-foreign workers, which the employers preferred over the youth workers as the older workers have more experienced or skills as well as better working attitude than the youth workers à less job opportunities for youth à rising youth unemployment.

Conclusion:

The 2008 financial crisis could be the main cause of rising youth cyclical unemployment in UK and Spain in 2009, but the lack of appropriate skill sets

among the youth is the main cause for the persistent increase in youth structural unemployment.

Level	Descriptor	Marks
L3	For an answer that presents a 2-sided discussion with reference to case evidence and sufficient reasoned judgment on view	7-8
L2	For an answer that presents a underdeveloped 2-sided discussion with reference to case evidence but no judgment on view For a one-sided answer with reference to case evidence –max 4 marks	4-6
L1	For an answer with no attempt to answer directly to question OR For an answer with gross misconceptions OR For a one-sided answer without reference to case evidence	1-3

(ii) Internal devaluation will allow "Spain's economy to grow over time with increase competitiveness". [10]

To what extent is internal devaluation the best policy for the Spanish government to resolve its rising youth unemployment.

Internal Evaluation:

Spain's rising youth unemployment is caused by both cyclical unemployment resulting from the 2008 financial crisis as well as structural unemployment due to lack of relevant skill and knowledge among the youth. Hence the Spanish government can reduce its rising youth unemployment from by adopting internal devaluation, expansionary monetary or fiscal policy or supply-side policy.

Internal devaluation:

- Objective of policy: To boost competitiveness to simulate E.G
- By adopting an internal devaluation policy à reduce the wages of public sector's wages à fall in COP à fall in SRAS à decrease in GPL (with diagram)
- As GPL falls => price of export and domestic goods to fall à increase price competitiveness à qty demanded for export and consumption to increase à AD increase in the future à increase NY à increase the cyclical employment

Limitation:

- Wage stickiness: The reduction in the public sector may not necessarily lead to a significant reduction in wage reduction in private sector à the fall in COP will be significant to increase the price competitiveness of Spain's export and domestic goods.
- The fall in wage rate can be a further disincentive for worker to seek employment since unemployment benefit is provided à insignificant increase in youth employment.
- Only more effective in the LR when AD is boost due to increase competitiveness.
- Only effective to resolve cyclical causes of youth unemployment.

Expansionary Monetary or Fiscal Policy:

Objective: To simulate AD with increase in components of AD

Fiscal policy:

- Spain government can increase government expenditure à increase G as well as reduce corporate and income tax à increase I & C, thus leading to increase AD à increase in NY (with diagram)

Limitation:

- Reduce of tax à insignificant increase in I & C. Corporate tax is not the only consideration for investment, the other factors such as poor economic outlook in Spain & social instability à lead to uncertainty in investor à I may not increase . In addition, the Spain's domestic goods are not as price competitive than the imports from the other Eurozone countries, so C may not increase despite the increase in disposable income due to lower income tax. Hence rendering the fiscal policy to be ineffective.

- Spain is in a severe fiscal budget deficit, so the increase G or reduction in tax à worsening of their fiscal position. In addition, Spain is pressured by the other countries to reduce her fiscal budget deficit in return for assistance from the IMF (extract 1, para 3) à rendering them unable to adopt expansionary fiscal policy.

Monetary policy:

- Spain government can increase money supply and lower interest rate à lower COB for investors à increase I à increase AD à increase NY (with diagram) à increase in youth unemployment as more job opportunities are provided.

Limitation:

- Interest rate is not the only consideration for investment, the other factors such as poor economic outlook in Spain & social instability à lead to uncertainty in investor à I may not increase.
- The monetary policy is controlled by the ECB, which is adopting a contractionary monetary policy (extract 1, para 3), and Spain government has

little influence over the decision as compared to the larger Eurozone countries like Germany and France etc. Hence this is not a viable option for Spain unless she leaves the Eurozone.

Although adoptation of expansionary policies is able to increase the demand-deficiency in SR and improve the youth unemployment, but these policies are still unable to resolve the structural cause of youth unemployment.

Supply-side policies:

Objective: To reduce the mismatch of skill between the youth and industry's requirement as well as increase the youth's productivity.

Example: On the job training to be incorporated into their school curriculum and provide more apprenticeship training programme. (Extract 4, para 3)

- The provision of these programme à increase the opportunity for youth to gain more working experience and increase their awareness/knowledge about the job requirement à reduces job mismatch and allowing the youths to better transit from school to the job à increase the employability of youth à reducing youth unemployment
- In addition , the on-the-job training and apprenticeship à increase in productivity level among youth workers à increase in LRAS à increase potential E.G and increase Spain's future competitiveness against other Eurozone countries à increase in AD in the future à further fall in youth unemployment due to demand-deficiency reasons.

Limitation:

- Long term policy à no immediate reduction in youth unemployment
- A concerted effort needed from the government, trade unions and Employers for the policy to be effective (extract 4, para 4).
    - Corporate employers might not be willing to accept apprentice due to the lower productivity level in early part of training and some of these apprentice may switch to other firms after learning the skills.
    - Corporate employers may exploit the apprentice or student on training by offering a relative low wage or providing sub-standard working environment or conditions, which may disincentivise youth from participating in the programmes.

Level	Descriptor	Marks
L3	For a well-developed answer with 2 policies. The answer should contained the detailed analysis and limitations, with evidence from the C.S.	7-8

L2	For a underdeveloped answer with 2 policies. The answer contained under-developed analysis and limitations, with little/no evidence from C.S.	4-6
L1	For an answer with no attempt to answer directly to question OR For an answer with gross misconceptions.	1-3
E2	Well explained and reasoned judgement.	2
E1	Judgement that is not well explained or reasoned.	1

3(a) Explain how the price mechanism may allocate resources efficiently. [10]

<u>Suggested Detail Essay Outline</u>

Step 1: Explain the price mechanism

<u>- Define price mechanism, demand and supply</u>

The price mechanism is a system where demand and supply interacts with each other to determine the equilibrium price and quantity of goods and services sold in markets.

The demand shows the willingness and ability of consumers to purchase a particular good/service at various prices.

The supply shows the willingness and ability of producers to produce a particular good/service at various prices.

<u>- Explain the role of price mechanism in a free market</u>

In a free market, economic agents such as producers and consumers are assumed to act rationally and governed by their self-interest. Producers would aim to maximise profits while consumers would aim to maximise satisfaction.

The price mechanism uses price to act as a signal to producers and consumers on how to allocate their resources in order to maximise their own satisfaction.

Step 2: Explain how the price mechanism allow producers and consumers to make decision on the allocation of their resource

<u>- Explain how the price mechanism address the 3 basic questions on resource allocation what and how to produce and for whom to produce</u>

- Basic concept: price mechanism à use price as signalling (what to produce & how to produce) and rationing role (for whom to produce

What and How much to produce?

In the price mechanism, consumers decide what is to be produced (consumer sovereignty) by exercising their 'dollar votes'. Producers then respond to the desire of the consumers by producing those goods and services that the consumers demand to maximise their profits. As such, producers then address how much to produce by looking at the prices consumers are willing and able to pay.

How to produce?

In order to maximise profits, firms will use the least cost method of production to produce the goods for the consumers.

For whom to produce?

The price mechanism also plays a rationing role in the sense that only consumers who are willing and able to pay for the good/service get to consume it eventually. As such, only consumers with the highest dollar vote get to enjoy these goods/services.

Step 3: Explain how the price mechanism always try to reach equilibrium and why the equilibrium is allocative efficient

- Explain how the price mechanism allocates resources to achieve equilibrium when there is a shortage or surplus.

[Using the case of shortage]: The price mechanism in, using price as a signalling and rationing role in the market economy, will automatically adjust to reach equilibrium. For example, if the price of a good is currently too low such that quantity demanded exceeds quantity supplied, resulting in a shortage, consumers and producers will begin to respond to the shortage. Due to the shortage, consumers will begin to bid up the price so that they can get the good/service. As the price increase, some consumers will not be willing or able to pay for it and hence quantity demanded falls. Concurrently, as the price rises, producers find it more profitable and will increase their quantity supplied. The price will continue to rise until quantity demanded equals quantity supplied. This is where equilibrium quantity and price is attained. At this point, consumer and producer surpluses are maximised and hence it is allocative efficient.

L3	Clear and well developed explanation on the processes in which price mechanism allocates resources and how that equilibrium reached is efficient. There was diagrammatic analysis of the price mechanism. Concepts and economic terms were used accurately.	7-10
L2	There was underdeveloped explanation of the price mechanism in terms of how resources are being allocated due to lack of explanation on how the three basic allocation questions were being addressed. There is largely accurate usage of terms and concepts.	5-6
L1	There was a lack of coherence in the explanation and instead a list of unconnected points was given. There were some understanding of the price mechanism but the allocation process was inadequately explained.	1-4

(b) Discuss the view that government intervention in situations when the market fails will always result in more efficient outcomes. [15]

INTRODUCTION

- Define market failure in relation to allocative efficiency.

- Explain briefly the various situations in which the markets may fail (in the case of public good, merit good or demerit good, externalities) and hence it is allocative inefficient

Market failure occurs when the price mechanism is unable to allocate resources efficiently on its own; as such government intervention is necessary to improve the allocation of resources. In situation such as public good, merit and demerit goods or when the production or consumption of goods and services causes positive or negative externalities, the price mechanism will allocate resources inefficiently on its own, resulting in market failure.

BODY

*- By giving two situations (question said situation**s**), explain how government intervention may result in an outcome in the market that is more allocative efficient or less efficient outcomes as compared to free market outcomes due to government failures. The explanation should be linked to general limitations of government intervention as well as limitations of specific government measures used.*

- The quality of the examples would depend on the appropriateness of the examples, whether students use real life examples on why market fails to show application skills and the quality of the explanation coupled with economic analysis. You should choose two from either public good; merit good or positive externality; demerit good or negative externality. The examples should be connected in both thesis and anti-thesis.

Market Failure Situation 1:

- Explain the market failure, the thesis, anti-thesis then mini-conclusion

One situation of market failure would be education where it is deemed as a merit good by our society due to its positive externality. Positive externality refers to external benefits on third parties not involved in the consumption of the service. In the case of education, the positive externalities would be the external benefits in terms of a more educated and productive workforce driving our economic growth as well as a more civilised and refined society.

When consumption of education has positive externality, this will cause its marginal social benefits (MSB) to be higher than the marginal private benefit (MPB). Since there are no negative externalities, marginal private (MPC) = marginal social cost (MSC). Individuals will consume education up to MPC/MSC = MPB. However, the society will prefers consumption to be at MSB = MSC/MPC where it is allocative efficient. Since MSB is higher than MPB, from the society's point of view, there is under consumption of education which results in deadweight loss.

Thesis: Government intervention in market failure will result in more efficient outcomes.

In Singapore, a large part of our education is provided by the government directly. Primary school education is free while the rest are heavily subsidized. Consumers receiving the subsidies will internalise the benefits. This increases their MPB of consuming education which leads to greater consumption of education. Consuming more education towards the socially optimal consumption will allows us to tap more of the positive externalities. The deadweight loss will be smaller.

Anti-thesis: Government intervention in market failure may not result in more efficient outcomes.

One limitation is that the provision of free and subsidized education would require large funds which may implies higher income tax on our workforce. This may also drain resources away from other areas of development in the country. Hence it may not lead to more efficient outcomes as a whole for the country. Over subsidise leads to wastage of money. Another limitation is that because education is largely provided by the government, the variety and diversity of our education is limited and so while it encourages consumption, consumer choice may be limited.

Mini-conclusion:

Given the importance of an educated labour force to Singapore's economy, the large amount of money spent on education is justified because of the huge external benefits to our economy. However, the long terms outcomes of education are always uncertain and this is a risk that our government have to take in the provision of education for all our young.

Market Failure Situation 2:

- Explain the market failure, the thesis, anti-thesis then mini-conclusion

In the case of the public good where they are non-rival and non-excludable such as the case of national defence in Singapore, government intervention is needed. National defence is non-rival because the consumption of it does not lower the quality and quantity of defence to other people in Singapore. We are all protected together. It is non-excludable because non-payers are being protected as well. This creates the problem of free ridership and hence producers are not able to get price signal from consumers to pay for the service. As a result, no private producer is willing to provide national defence.

Thesis: Government intervention in market failure will result in more efficient outcomes.

The Singapore government provides national defence to the entire country due to the nature of it being a public good as well as for national security reason. Singapore's National Defence is provided through two ways. First, we have regulars who work in Ministry of National Defence (MINDEF) as their occupations. Secondly, we have conscription of males Singaporeans and Permanent Residents who are required by law to serve National Service for two years. As such, our National Defence is provided by the government through both regulars and our citizens and PRs. This allows our small nation with a small population to provides a large army that is adequate to provide national defence to our country as compare to no provision if left to private sector.

Anti-thesis: Government intervention in market failure may not result in more efficient outcomes.

While Singapore is able to provide adequate national defence, it does incur high opportunity cost. One of the limitations of our government policy with regards to National Defence is that young males adults who have to serve National Service will only be able to contribute economically two years later, hence the potential economic output of our NSmen is lost. Secondly, the government would have to spend huge amount of the budget to provide for the large army that we have. In the real world, the government do not really have the information on what is the optimal amount of national defence it should provides. Over provision of national defence would result in efficient use of resources.

Mini-conclusion:

The Singapore government has sufficient funds to provide for National Defence and while MINDEF is given the largest proportion of budget each year, the government does cater funds to other areas of development in Singapore. National defence do have positive effects on our country as well given that it helps to provide a stable environment for our economy to

thrive. Hence, in this case I feel that the government intervention results in more efficient outcome.

CONCLUSION

- Weigh the thesis and anti-thesis to carve out the criteria which tips the argument to either one.

- A conclusion and judgement on the view in the question.

Overall, whether government intervention leads to more efficient outcomes than the market really depends on the type of polices chosen by the government based on its financial and political ability. In the case of Singapore, due to the adequate amount of financial resources that they have, they are able to carry out policies effectively to deal with the various market failures without compromising other areas of development in the country. However, the same cannot be said for all countries. For governments with limited resources, they may not be able to come out with effective policies to deal with market failure due to the high opportunity costs incurred.

Knowledge, Comprehension, Application and Analysis		
L3	Clear and well explained balanced answer on how government intervention may or may not lead to more efficient outcomes. The answer was well analysed in terms of examining the limitations of the government intervention. Market failure examples were well explained and substantiated with real life examples.	9-11
L2	Underdeveloped explanation on how government intervention may or may not lead to more efficient outcomes. Limitations of the government intervention were briefly stated. Market failure examples were explained with some attempt to use real life examples superficially.	6-8
L1	Mere listing or description of various government interventions. Explanation of market failures is generic without using any specific examples of market failures or government intervention.	1-5

Evaluation		
L2	A well-reasoned conclusion that is supported by economic analysis and is formed to address the question.	3-4
L1	An unjustified conclusion that is not supported by economic analysis.	1-2

H1 Macro Essays

4a) Explain how rising global protectionism may affect Singapore's circular flow of income. [10]

4b) Discuss the view that globalisation is likely to support an economy's recovery from the global economic slowdown. [15]

(a)

INTRODUCTION	
Define circular flow of income Define rising global protectionism State how rising global protectionism may affect SG's CFY	In a 4 sector economy, the circular flow of income is a model showing flows of goods and services, factors of production and income between the various economic players: firms, households, government and foreign sector. This model is used to illustrate how changes in its key components, which are consumption expenditure, injections (investment, government expenditure & export revenue) and withdrawals (savings, taxes and import expenditure), would affect the equilibrium level of national income of an economy. Rising global protectionism is the response of some governments to protect their domestic industries' production and employment in face of the global recession. Common protectionism measures are import tariffs and/or quotas, export subsidies and export quotas even. SG is a small open economy which embraces free trade but faces the threat of rising global protectionism by its trading partners. This may affect SG CFY through the foreign sector, mainly the injection of export revenue and the withdrawal of import expenditure. These changes will affect the equilibrium level of national income of SG economy.
BODY	
Para 1 to explain CFY (with or without a simple diagram)	Figure one shows a simple illustration of the circular flow of income. Firstly, households provide the factors of production for firms who produce goods and services. In return, households receive factor payments (such as wages, rent, dividend, interest, profits). Households will in turn spend their wages on final goods and services produced by the firms. This shows that consumption expenditure is necessary to generate income in the circular flow as factors of production will be employed to produce goods and services and factor payments will continue to be paid by firms. This allows households to have disposable income to afford consumption of goods and services. With the various economic players, the circular flow is more dynamic with injections such as investments by firms, government expenditure and export expenditure; as well as withdrawals such as savings, taxes

	and import spending. Injections refer to expenditure which does not come from the expenditure of households. They include investment expenditure, government spending and export expenditure. Investment is the money that firms spend on buying new plant and equipment or the act of firms building up stocks or inputs, semi-finished or finished goods. Government expenditure is expenditure made by local and national government agencies on goods and services that domestic firms produce. Expenditure on exports occurs when residents abroad buy a country's exports of goods and services. On the other hand, withdrawals refer to any part of income that is not passed on within the circular flow of income. Withdrawals comprise savings, taxes and import expenditure. Savings are income that households choose not to spend but to put aside for the future, taxes are paid to the government out of household income , consumer expenditure or firms' profits, while import expenditure is domestic expenditure on foreign produced goods and services. Any changes in these key components, which are consumption expenditure, injections and withdrawals, would affect the equilibrium level of income of an economy. The circular flow will be at equilibrium as long as total income = total expenditure = total output.
Para 2 to explain how rising global protectionism may affect SG CFY through X revenue	Rising global protection à SG trading partners such as USA imposes import tariffs à Rise in P of SG exports to USA à Fall in Qd of SG exports to USA by MTP à Ep>1, assuming USA domestically produced goods are close substitutes for SG exports à X revenue of SG falls
Para 3 to explain how rising global protectionism may affect SG CFY through M expenditure	Rising global protectionism à SG trading partners e.g. China imposes export subsidies à Lower prices of imports into SG à rise in Qd of imports by SG by less than proportionate à Ep <1 as they are mainly imported raw materials & necessities à M expenditure falls à fall in withdrawals of SG CFY OR Rising global protectionism à SG trading partners e.g. China lowers export quotas of raw materials like rare earths à Higher prices of imported raw materials into SG à fall in Qd of imports by SG by less than proportionate à Ep <1 as they are mainly imported raw materials & necessities à M expenditure rises à rise in withdrawals of SG CFY

Para 4 on the likely change in eqm income of SG CFY	Assuming CFY at equilibrium initially à injections = withdrawals à total expenditure = total income Assuming that à X rev falls & M exp rises à injections < withdrawals à total expenditure < total income à signaling a weaker demand for goods and services à encourages firms to produce less output à employ less factors of production à pay out less factor payments to households in the form of wages, salaries, profits, rent and interest à fall in total income until it equals to total expenditure and reaches equilibrium

Marking Scheme

L3	For a well-developed explanation of how rising global protectionism may affect components of CFY and the equilibrium level of national income, supported by analysis and good examples. Max 7 for a well-developed explanation but lacking an explanation of how CFY works in general.	**7-10**
L2	For an underdeveloped explanation of how rising global protectionism may affect components of CFY and the equilibrium level of national income, without clear economic analysis.	**5-6**
L1	For an answer which shows some knowledge e.g. components of CFY, names of measures for protectionism.	**1-4**

(b)

INTRODUCTION	
Globalisation is likely to support an economy's recovery from the global economic slowdown. à Globalisation: breaking down trade barriers & liberalisation of markets à more free trade à more capital flows (FDIs) à more labour flows à support an economy's recovery: boost real national income to achieve higher positive economic growth & also employment	
BODY	
Thesis	**Anti-thesis**
Globalisation allows more free trade which may help in economy recovery. à lower trade barriers e.g. import tarrifs/ quotas à more free trade based on CA à Countries with strong CA can export more à higher export revenue à higher AD à multiplied increase in real NY and employment à lower trade barriers e.g. export subsidies à Imports relatively more expensive than domestically produced goods à DD for domestically produced goods rises à higher consumption à higher AD à multiplied increase in real NY and employment	Globalisation intensifies trade competition which may not help in economic recovery. à lower trade barriers e.g. import tarrifs/ quotas à lower price of imports à Countries with relatively weaker CA will experience fall in demand for domestically produced goods à fall in C à lower AD à multiplied fall in real NY & employment For import-dependent countries e.g. SG à lower export subsidies by trading partners à rise in price of imports à fall in Qd by LTP (Ep <1) à rise in M expenditure à lower AD à multiplied fall in real NY & employment
Globalisation allows more capital flows which may help in economic recovery. à lower investment regulations & increase market access à more FDI inflow à higher AD à multiplied increase in real NY and employment If FDIs are of export-oriented industries à higher X rev which boosts AD as well	However, this increase in capital mobility which may not help in economic recovery. à more FDI outflow too à Countries with relatively higher land and labour cost will suffer à FDIs relocate to countries with abundance of cheap land & labour resources à lower AD à multiplied fall in real NY & employment

In the long-run à higher FDI à increase quantity of resources through capital accumulation à increase quality of resources through advanced production technologies and workers' training à expand economy's productive capacity à increase LRAS à higher potential EG	
Globalisation allows for greater labour mobility which helps in economic recovery à ease immigration regulations to allow for inflow of foreign labour and foreign talents à increase availability of cheap foreign labour lowers labour cost à increase SRAS à also attracts investments as lower cost of production helps increases profitability à AD increases à both increase in SRAS and AD will raise real national income and supports economic recovery In the long-run à inflow of foreign labour and talents increase quantity and quality of labour à LRAS increases à higher potential EG	However, this greater labour mobility may not help in economic recovery. à economic recession results in demand-deficient unemployment à lack of job opportunities causes domestic labour to look abroad for work à outflow of domestic labour à fall in consumption expenditure à fall in AD and multiplied fall in real national income
Conclusion	
Whether globalisation helps with economy recovery depends on: - whether the economy has strong CA in one or few industries relative to its trading partners - whether the economy is import dependent or has domestic industries that compete with import - whether global demand picks as governments all over the world implement expansionary policies to recover from the global recession	

L3	For a well-developed, balanced explanation of how globalisation may help with economic recovery and may not help, with clear economic analysis. Max 9 for a well-developed, balanced explanation but limited in scope e.g. only on one of the flows of globalisation (free trade/ capital flow/ labour mobility only)	**9-11**
L2	For an underdeveloped explanation of how globalisation may help with economic recovery and may not help, lacking clear economic analysis. Max 8 for a well-developed explanation but one-sided e.g. globalisation may	**6-8**

	OR may not help with economic recovery.	
L1	For an answer which shows some knowledge e.g. unexplained listing effects of globalisation.	**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 analysis. Evaluation can be the weighing of effectiveness vs limitations, the criteria to consider for the "best" policy.	**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 **17 September 2013**

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.

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.

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, plasma TVs, energy-saving light bulbs, wind turbines and hybrid cars.

Extract 1: Rare earths prices

Figure 1: Rare Earths Price Index: 2002 – 2010

Source: The Economist

The demand for rare earths is rapidly rising as they are increasingly being used in a wide range of high-technology products. Production of both hybrids cars and wind turbines is expected to climb sharply amid the clamour for cleaner transportation and energy alternatives that reduce dependence on fossil fuels.

China, supplier of 95% of the 17 elements known as rare earths, has shut-down many of its mining sites, cut its export quotas and stopped issuing new licenses for rare earths mining. 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.

Adequate mine capacity is only a part of the solution to any rare earths supply shortfall. Additional processing, refining, and manufacturing capacity is necessary to meet growing demand. Some raw material dependence will be addressed in the near term but the longer-term challenge is building out the entire supply chain outside China to meet growing global demand. While sustained high prices may attract some investors, the technology and skills must also be available to carry out the work.

Adapted from Bloomberg, 17 June 2011

Extract 2: Consolidation of the Chinese rare earths industry

Beijing authorities are creating a single government-controlled monopoly, Bao Gang Rare Earth, to mine and process ore in northern China, the region that accounts for two-thirds of China's output. The Chinese government consolidates the industry by ordering 31 mostly private rare earth processing companies to close this year in that region and four other companies to merge with Bao Gang.

Chinese officials explain that the government is worried about polluted water, polluted air and radioactive residues from the rare earths industry, particularly among many small and private companies, some of which operate without the proper licenses. While rare earths themselves are not radioactive, they are always found in ore containing radioactive thorium and require careful handling and processing to avoid contaminating the environment.

Rare earths ore has to be refined before it can be used commercially. The waste generated from this process is both acidic and radioactive. The refining process leaves behind a radioactive sludge laced with toxic chemical compounds that is stored in artificial lakes. Due to lax regulations, this radioactive waste material often seeps into the water supply, adversely affecting the health of residents in the area.

Adapted from The New York Times, 15 September 2011

Extract 3: Will China continue dominating the rare earths market?

China has only 37% of the world's proven rare earths reserves but accounts for 95% of global production. This is not only due to the country's good geographical location but also its willingness to do dirty, toxic and often radioactive work that the rest of the world has long shunned. However, the large Chinese firms in rare earths industry are beginning to experience an accelerating rise in costs of production due to increasing production. Hence, China would likely be unable to increase production significantly to drive prices down.

Smaller mining companies have difficulty raising the $100 million to $1 billion it takes to open a rare-earths ore mine, while global mining companies are often not interested because of the relatively small size of the $3 billion market and its unpredictability.

While limited production capacity for rare earths currently exists elsewhere in the world, additional capacity is expected to be developed in the United States, Australia, and Canada within two to five years, according to some experts. It is betting that new technologies can drive their operating costs lower than the level of Chinese mines. Large-scale production in these countries, though, may still be several years away. Chinese producers are also seeking to expand their production capacity or seek long-term supply agreements in areas around the world, particularly in Africa and Australia.

Adapted from Congressional Research Service, 8 June 2012

Extract 4: China's domination of rare earths could challenge US control over hi-tec future

China had imposed taxes and quotas on the exports of rare earths but not on the exports of most industrial products that are manufactured in China using rare earths. This disrupts the manufacturing in Japan, Europe and the United States as the prices of even the cheapest of the 17 rare earth elements rose 40%. America risks losing control over the production of a host of technologies, from smart phones to smart bombs, electric car batteries to wind turbines. This has resulted in many foreign 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. Aside from raw materials, it is also unclear whether the US still has the expertise for the complicated process of turning minerals into usable clean tech components.

Now America, like Japan and Europe, is desperate to find alternatives. "Reopening domestic production is an important part of a globalised supply chain," David Sandalow, the energy department's assistant secretary for international affairs told a seminar in Washington. Some companies, such as General Electric, are already moving to reduce their use of rare earths. "What we are going to absolutely have to do is diversify our sources and optimise the use of these materials in manufacturing," said Steve Duclos, who heads GE's global research division.

Adapted from The Guardian, 26 Dec 2010

Questions:

(a) **(i)** With reference to Figure 1, describe the trend in the world price for rare earths between 2002 and 2010. [2]

(ii) Using economic analysis, account for the trend above. [4]

(b) With reference to Extract 2, explain why the Chinese government 'consolidates' the rare earths industry. [4]

(c) **(i)** With the use of an appropriate example from the extracts, explain one type of barrier to entry that exists in the rare earths industry. [2]

(ii) Discuss whether large Chinese firms are likely to continue dominating the world market for production of rare earths. [8]

(d) "China had imposed taxes and quotas on the exports of rare earths but not on the exports of most industrial products that are manufactured in China using rare earths."

Discuss the impact of such a decision by the Chinese government on her economy and the importing countries of rare earths. [10]

[Total 30 marks]

Question 2 Rising Youth Unemployment in Europe

Countries throughout the world had experienced a sharp economic slowdown due to 2008 Global Financial Crisis. These challenges are expected to prolong as the European Debt Crisis unfolds and there is an urgent need for governments to address the high unemployment rate, especially among the youth.

Table 1: Trade Figures for Spain and Germany (US$ Billions)

		2007	2008	2009	2010	2011
Spain	Export	253	281	227	254	307
	Import	389	421	293	327	377
Germany	Export	1321	1446	1120	1259	1474
	Import	1055	1185	926	1055	1255

Source: World Trade Organisation, Statistic Database

Table 2: Spain's GDP value (€ Billions)

	2007	2008	2009	2010	2011
GDP at constant price	1,078.2	1,087.8	1,047.1	1,043.7	1,048.1
GDP at current price	1,053.2	1,087.8	1,048.1	1,048.9	1,063.4

Source: International Monetary Fund, World Economic Outlook Database, October 2012

Table 3: United Kingdom's GDP value (£ Billions)

	2007	2008	2009	2010	2011
GDP at constant price	1,474.2	1,459.9	1,401.8	1,427.1	1,437.9
GDP at current price	1,412.1	1,440.9	1,401.8	1,466.6	1,516.2

Source: International Monetary Fund, World Economic Outlook Database, October 2012

Table 4: Unemployment Rate (%)

	2007	2008	2009	2010	2011
Spain	8.3	11.3	18	20.1	21.7
United Kingdom	5.4	5.6	7.5	7.9	8.0

Source: International Monetary Fund, World Economic Outlook Database, October 2012

Extract 5: Spain, hostage to the Eurozone

Spain's problems are mostly associated with the euro and its recovery is being delayed as a result of decisions made by the European authorities. When Spain decides to adopt a common currency with other Eurozone countries that have much higher levels of productivity, it cannot be as competitive in terms of exports and domestic industries that compete with imports. If Spain had its own currency, it could let the value of its currency fall and help the economy to grow again.

To help Spain resolve her economic woes, European authorities have prescribed what is called an "internal devaluation" – where a country seeks to regain competitiveness through lowering wage costs and increasing productivity and not reducing value of exchange rate. In practicing internal devaluation, Spain has reduced public sector wages to put pressure on other wages to decrease as there is much pressure to cut government spending and pursue fiscal austerity. These measures will shrink the economy and raise unemployment enough so that the country can become competitive, through lower prices and wages, without changing the exchange rate (i.e., without leaving the euro). Hence, it allows Spain's economy to grow over time with increased competitiveness.

Spain also needs expansionary policy to boost the economy. But monetary policy is controlled by the European Central Bank, which, just announced that it may raise interest rates, despite Europe's anaemic recovery and growing unemployment in the eurozone's weakest economies. Expansionary fiscal policy is prohibited by pressure from the European authorities, which are actually pushing Spain to do the opposite due to her borrowing from IMF to finance the huge government debt.

It is the strong economic link between Spain and the other countries within the Eurozone that prohibits it from using any of the three most important macroeconomic policies. Spain should refuse to accept any policies that prolong its slump and prevent it from reducing unemployment. If that means leaving the euro, then these options should be on the table in any negotiations with the European authorities.

Adapted from Various Sources

Extract 6: Overseas workers preferred over "unskilled" school leavers

School leavers are being pushed to the back of the jobs queue as Britain's employers turn to migrant labour to fill vacancies. The Chartered Institute of Personnel and Development said demand for workers from overseas had reached record levels because companies felt that young people in the UK lacked the skills to make them employable.

Its quarterly survey of the labour market found that the government's cap on non-EU workers had been ineffective since firms had switched to employing staff from within the European Union, where there are no barriers to labour mobility. Employers seem eager to take full advantage of this, to make use of the EU older workers' positive attitude and skills. The perception among many companies is that too many young people in the UK do not have these qualities, which may explain why fewer of them are being hired. The government therefore needs to redouble efforts to ensure that

the education and skills system is fit for purpose so that young people can find a foothold in an increasingly competitive jobs market.

Adapted from The Guardian, 23 August 2011

Extract 7: World youth unemployment on the rise

The International Labour Organisation (ILO) estimates that there are 75 million 15-to-24-year-olds looking for work across the globe. Youth unemployment has increased by 30% across the Organisation for Economic Co-operation and Development (OECD), and in Spain it has doubled to 20%.

The effects of youth unemployment can persist for years. The economic loss can be substantial, too, and not just in the form of higher welfare payments. Part of these losses may be due to missing out on training and experience accumulation that typically occurs with young workers as they tend to change jobs at much higher rates than their older counterparts. Realising this problem, governments are trying to address the mismatch between skills and jobs.

Source: Adapted from The Economist, 8 May 2013

Extract 8: The youth unemployment bomb

What makes rising youth unemployment extra-worrisome is the fact that the world is aging. In many countries the young are being crushed by the social phenomenon where older workers are determined to cling to the better jobs for as long as possible. When the older workers retire, they demand impossibly rich private and public pensions that the younger generation will be forced to shoulder. In addition, Britain is reducing subsidy to university education in an attempt to reduce government debt thus resulting in a rise of the university tuition fee.

In Britain, Employment Minister Chris Grayling has called the chronic unemployment a "ticking time bomb." The only surefire cure for youth unemployment is strong sustained economic growth that generates so much demand for labour that employers have no choice but to hire the young. In the absence of a growth panacea, economists have been working on microscale solutions, such as training programs to smooth the transition from school to work. These days, there is a newfound appreciation in such apprenticeship, because it greases the transition from learning to doing. Germany and Austria experienced milder youth unemployment in the global downturn partly because of apprenticeship programmes. More youths in Netherlands, Italy and Portugal are gaining work experience while in school.

Chronic youth unemployment may not be fixable. But there is evidence it can be reduced through the concerted efforts of government, labour, business, education, and young people themselves. The spike in youth unemployment should also ease in the West as the after-effects of the 2008 financial crisis diminish. Eventually, growth will resume in the U.S., Europe, Japan, and other nations. The retirement of the baby boomers will increase demand for younger workers.

Source: Business Week, 2 February 2011

Questions

(a) **(i)** Describe the trend of Spain's balance of trade between 2007 and 2011. [2]

(ii) Compare this trend with changes in Germany's balance of trade during the same period. [2]

(b) From Table 2,

(i) Identify the base year for Spain's GDP value. [1]

(ii) Explain the difference between GDP at constant price and GDP at current prices. [3]

(c) Explain why governments should be concerned with rising youth unemployment in recent years. [4]

(d) **(i)** To what extent was the "2008 Global Financial Crisis" a cause of the increase in youth unemployment in both Spain and UK? [8]

(ii) Internal devaluation will allow "Spain's economy to grow over time with increased competitiveness".

To what extent is internal devaluation the best policy for the Spanish government to resolve its rising youth unemployment problem. [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 **23 September 2013**

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.

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 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 The declining price of technology in consumer electronic gadgets is driven by gains in manufacturing efficiency, lower labour costs as manufacturing moved to lower-wage countries, and improvements in product design.

(a) Explain the impact of declining price of technology on the total sales of consumer electronic gadgets. [10]

(b) Assess the likely effects of these trends on consumers and producers. [15]

2 Explain why the behaviour of firms differs across industries and discuss if such behaviour is desirable. [25]

3 **(a)** Explain why government intervention is advocated in markets with both market dominance and income inequity. [10]

(b) Discuss the measures that can be used to address these sources of market failure. [15]

Section B

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

4 Assess the relative importance of the various components of the circular flow of income in driving economic growth in different economies. [25]

5 In the study of macroeconomics, inflation can take various forms including demand-pull inflation, imported cost-push inflation and wage-price spiral.

(a) Explain what is meant by these different types of inflation. [10]

(b) Discuss the impact of high inflation on Singapore's balance of payment. [15]

6 Many developed and developing countries have experienced increases in within-country inequality. The growing income gap has coincided with periods of increasing exposure of countries to globalization through increased flows of goods, services, capital and labour across international borders.

(a) Explain how the trend towards globalisation results in greater income disparity in Singapore. [8]

(b) Assess whether Singapore government's approach to globalisation should be adjusted in response to her growing income gap. [17]

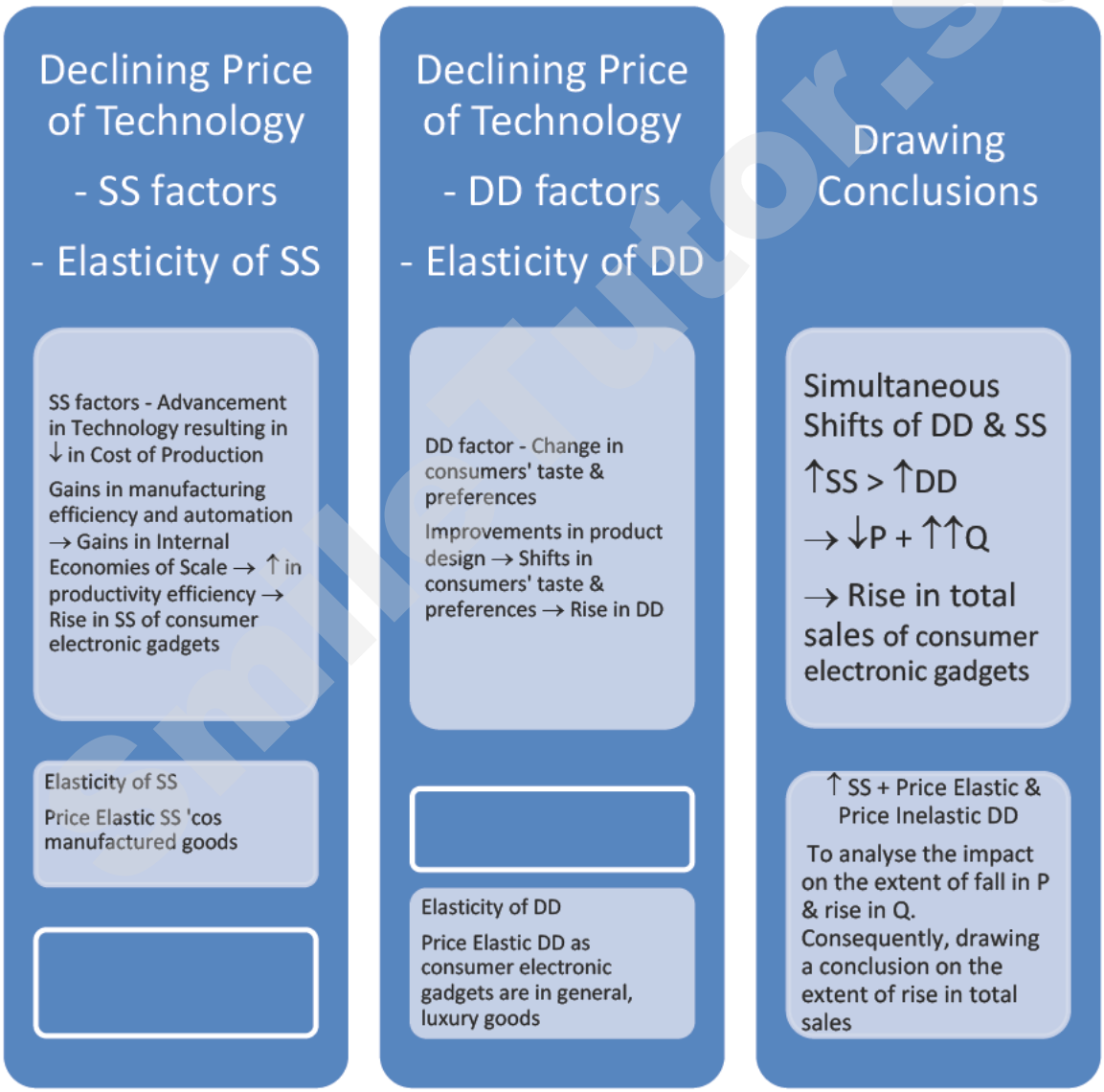
-End of Paper-

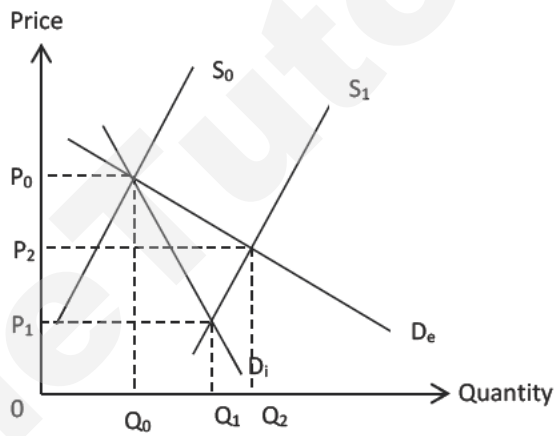
Question 1

The declining price of technology in consumer electronic gadgets is driven by gains in manufacturing efficiency, lower labor costs as manufacturing has moved to lower-wage countries, and improvements in product design.

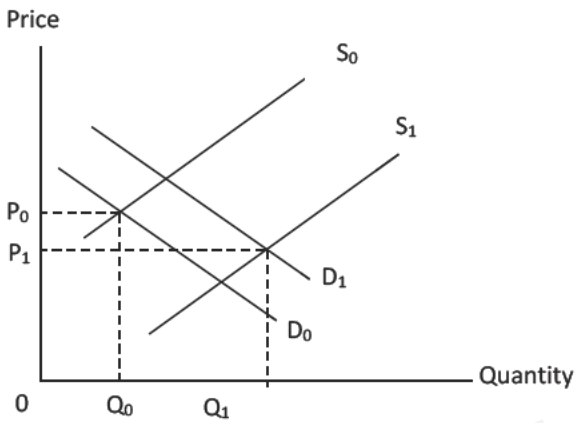
a) Explain the impact of declining price of technology on the total sales of consumer electronic gadgets. [10]
b) Assess the likely effects of these trends on consumers and producers. [15]

Part a:



Introduction	State the total sales concept (= P x Q) Highlight the economic model used in this question (DD & SS model)
Main Body **SS factors + Price Elastic DD** **➔ Impact on Price & Output** **➔ Impact on Total Sales**	SS factors - Advancement in Technology resulting in ↓ in Cost of Production • Gains in manufacturing efficiency and automation ➔ Gains in Internal Economies of Scale ➔ ↑ in productivity efficiency ➔ Rise in SS of consumer electronic gadgets With Price Elastic DD • ↓ P of consumer electronic gadgets ➔ More than proportionate increase in quantity demanded  Fig 1: Increase in Supply with varying price elasticity of Demand Result: More significant rise in total sales of consumer electronic gadgets
Main Body **Simultaneous Shifts (SS & DD factors)** **➔ Impact on Price & Output** **➔ Impact on Total Sales**	Simultaneous Shifts of DD & SS

↑SS	↑DD
As above	Improvements in product design ➔ Shifts in consumers' taste & preferences ➔ Rise in DD
↑SS > ↑DD	
↓P, ↑↑Q ➔ Rise in Total Sales of consumer electronic gadgets	

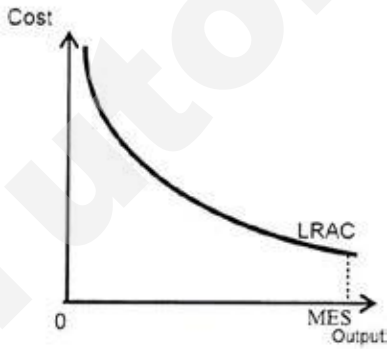
	 Fig 2: Simultaneous Shifts of Demand and Supply
Conclusion	Summarise key conclusions

Marking scheme

Level	Descriptor	Marks
L3	For a well-developed explanation on the impact of the declining price of technology on the total sales of consumer electronic gadgets. Both the impact on the supply and demand perspectives (inclusive of elasticity concepts) is well considered. The extent of fall in price and rise in quantity are explained.	7-10
L2	For an underdeveloped explanation on the impact of the declining price of technology on the total sales of consumer gadgets. Only the supply or demand perspective is considered.	5-6
L1	For an answer that contains conceptual errors or just smattering of some valid points.	1-4

b) Assess the **likely effects** of these trends on consumers and producers. [15]

Introduction	§ **Candidates need to explain briefly the trends arise** § **Highlight the key likely effects on consumers and producers**
Main Body **Assess the likely effects on producers**	

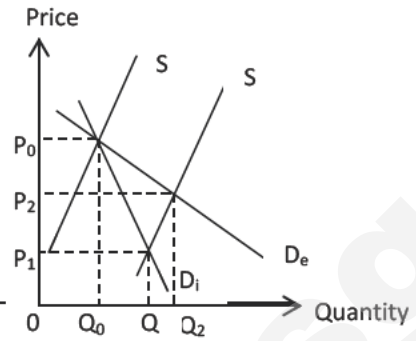
Likely Effects	Explanation
Fall in cost of production	**Profit-driven firms' heightened ability to harness each country's comparative advantage è Lower labour costs** **+** **Gains in manufacturing efficiency** è Rise in productive efficiency è Fall in LRAC 
Expansion of firms	è Rise in MES
Rise in supernormal proftts	è Rise in supernormal profits earned
Increase in efficiencies	è Supernormal profits earned are channeled back into the R&D into research on process technologies è More sophisticated manufacturing technologies è Rise in dynamic efficiency è Greater fragmentation of the global supply chain & advancement in transport technologies è Enable production processes to be completed at a faster rate è Higher ability to exploit IEOS è Rise in productive efficiency
Market dominance	è Firms gain more market power 'cos of patent technology

	è Rise in barriers to entry è Firms become more oligopolistic in nature in the long run. There are only a few large firms in the industry. è Possible exploitation of consumers eg: Higher price set for the latest product

Main Body

Assess the likely effects on consumers

Likely Effects	Explanation
Better quality Wider choices	Supernormal profits earned are channeled back into the R&D into research on product design è **Improvements in product design** è Target different consumer niche markets (mass market consumer electronic gadgets vs high-end gadgets) è Wider choices (Firms: Expansion of market share Building a global brand)
Rise in consumers' surplus	è Rise in consumers' surplus è Rise consumers' welfare/ consumer sovereignty è Rise in SOL
Lower prices Higher output	**Gains in manufacturing efficiency & reduction in labour costs** **è** Lower prices **è** Higher output
Non-Material SOL	Greater accessibility è Increased convenience è Increase in quality of lifestyle product However Gadgets – Non-biodegradable è Gives rise to negative externalities
Evaluation	A wide range of consumer electronic gadgets è Different price elasticities of demand Thus, the falling prices of consumer electronic gadgets è the extent of rise in consumers' surpluses differ

		Consumers' surplus will rise by a larger extent when demand is more price inelastic. 
Conclusion	Highlight the key dominant effects in both the short run and the long run	

Marking scheme

Level	Description	Marks
L3	For a well-balanced analysis on the key likely effects of these trends on both consumers and producers in the short run and the long run.	9-11
L2	For an underdeveloped analysis the likely effects on consumers and producers.	6-8
L1	For an answer that shows some understanding or an inaccurate explanation on the likely effects of these trends.	1-5

Evaluation		
E2	For a well-reasoned judgment that is supported by economic analysis.	**3-4**
E1	For an unexplained judgment or one that is not supported by economic analysis.	**1-2**

2. Explain why the behaviour of the firms will differ across industries and discuss if the firms' behaviour is desirable. [25]

<u>Suggested Outline</u>

1) INTRODUCTION

- Define and set the context for the different industries for the discussion of the question:
  - è Monopoly, Oligopoly, Monopolistic Competition.
  - è Note that the discussion for Perfect Competition is omitted due as the nature of the perfect market competition is not really seen in reality and would have difficulties in application.
- State that key objective of the firms in these different market structures – profit maximization (vs. the other alternative objectives)
- and why it will behave differently.
- Explain what does desirability means to the following
  = Consumers à Max Satisfaction
  = Producers à Max Profit
  = Society à Max Surplus (No DWL)

2) BODY: (Part 1) Explain the key reasons why these firms will behave differently

- <u>Thesis statement: Firms in the different industries behave differently due to the differences in characteristics of the different market structures.</u>
- Explain the differences in terms of the following:
  - è Number of sellers, the types of products and the degree of barriers to entry.
- Discussion of why the above characteristics will be different and how it will affect the behavior of the different firms.
  - Price and Non Price Competition (includes mutual interdependence in the case of oligopolies)
  - Price Discrimination
  - Collusion vs. Competition

3) BODY: (Part 2) Behavior can be both desirable and not desirable.

Part 2a: Price and Non Price Competition (includes mutual interdependence in the case of oligopolies

- <u>Thesis statement: Firms operating in the different types of market structures engage in different forms of non-price competition which is desirable to the consumers, producers and the society.</u>
- Explain the different types of non-price competition by the different firms
- Analyse the impact with the desirability with reference to the consumers, producers and the society

- Anti-Thesis statement: Firms operating in the different market structures will engage in different forms of price competition which will not be desirable to the consumers, producers and the society.
- Explain the different types of price competition by the different firms
- Analyse the impact with the desirability with reference to the consumers, producers and the society

Mutual Interdependence of Oligopoly firms

- Thesis statement: Due to the mutual interdependence of oligopoly firms, the pricing and non-pricing strategies of these firms might be desirable to the consumers, producers and the society.
- Explain the different types of pricing and non-pricing strategies of the oligopoly firms
- Analyse the impact with the desirability with reference to the consumers, producers and the society

- Anti-Thesis statement: Due to the mutual interdependence of oligopoly firms, the pricing and non-pricing strategies of these firms might not be desirable to the consumers, producers and the society.
- Explain the different types of pricing and non-pricing strategies of the oligopoly firms
- Analyse the impact with the desirability with reference to the consumers, producers and the society

Part 2b: Price Discrimination

- Thesis statement: Firms can engage in price discrimination which could likely be desirable to the producers, consumers and the society.
- Explain how these firms are likely to engage in price discrimination
- Use a diagram to analyse the impact of the price discrimination
- Analyse the impact with the desirability with reference to the consumers, producers and the society

- Anti-Thesis statement: Firms can engage in price discrimination which could likely be undesirable to the consumers and the society, but only desirable to the producers.
- Explain how these firms are likely to engage in price discrimination
- Use a diagram to analyse the impact of the price discrimination
- Analyse the impact with the desirability with reference to the consumers, producers and the society

Part 2c: Collusion vs. competition

- Thesis statement: Firms operating in the monopolistic competition would compete which would likely be desirable to the producers, consumers and the society
- Explain how these firms are likely to engage in competitive behaviors.
- Analyse the impact with the desirability with reference to the consumers, producers and the society

- Anti-Thesis statement: Firms operating in the oligopoly can either choose to collude or to compete, resulting in different behaviours which could likely be undesirable to the producers, consumers and the society
- Explain how these firms are likely to engage in collusive or competitive behaviours.
- Analyse the impact with the desirability with reference to the consumers, producers and the society

4) CONCLUSION:

- Compare which are the market structures are likely to behave in a desirable manner to the different economic agents or likely to behave in a manner that is undesirable to the different economic agents.
- Give a judgment or conclusion on which market structure is likely to exhibit the most desirable behavior or not based on your earlier arguments and analysis.

Mark Scheme

Knowledge, Understanding, Application, Analysis		
L3	- The answer has good, clear and balanced explanation of how the behaviour of the firms will differ across the industries and there is a clear discussion on whether the firms' behaviour is desirable or not. - Adequate analysis is given in terms of how the behaviour of the firms will differ across the industries and there is a clear discussion on whether the firms' behaviour is desirable or not to the producer, consumer and society - Diagram(s) are being used actively to discuss on the issue whether the firms' behaviour is desirable. - Good application of economic concepts to the context of the question, with regards to the different industries. - Application to real life context.	**15-21**
L2	- For an answer that explains how the behaviour of the firms will	**10-14**

	differ across the industries and there is a clear discussion on whether the firms' behaviour is desirable or not to the producer and consumer. - The explanation however has undeveloped analysis and are generic in nature. - Lack of application to context. *For an answer on the discussion on the desirability to producer or consumer only (max 10 marks)*	
L1	- For an answer which show some knowledge of the behaviour of firms and/or the desirability of the different firms in the different market structures. - The behaviour of firms and the desirability of the different firms in the different market structures are discussed in isolation and is not linked. - The behaviour of firms are simply stated rather than explained in terms of its desirability. *For an answer on the discussion on the behaviour of the firms only (max 9 marks)*	**1-9**

Evaluation		
E2	For a well-reasoned judgment that is supported by economic analysis. - The evaluation is done across all the desirability of the behaviour of the firms using a common criteria to evaluate them with a final judgment given.	**3-4**
E1	For an unexplained judgment or one that is not supported by economic analysis.	**1-2**

a) Explain why government intervention is advocated in markets with both market dominance and income inequity.[10]

Market dominance à set price much above marginal cost for earning higher level of profits à consumers lose out in terms of paying higher prices and consuming lesser output. Results in allocative inefficiency as price is above marginal cost and economy is producing too little of the good, with consumer welfare not maximised and existence of deadweight loss.

Income inequity à within a free and unregulated market where price is determined by market forces, equilibrium price may be high due to the higher willingness and ability to pay by the higher income group à cause the lower income group not being able to afford for the goods due to lower willingness and ability to pay.

Example: Public Transport industry in Singapore, operated by 2 large firms, when left unregulated, likely to charge much higher price than MC to maximise profit, DWL to the society plus lower income group unable to afford.

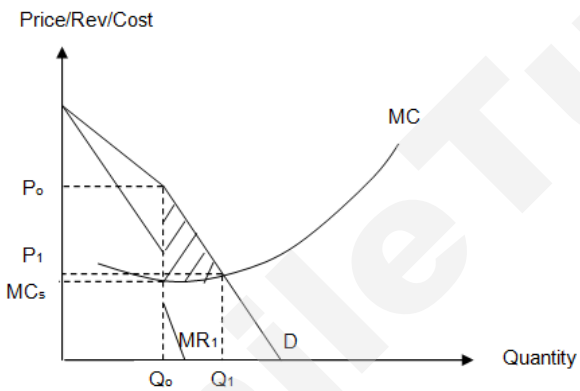


Figure 1: Allocative Inefficiency in Public Transport Industry

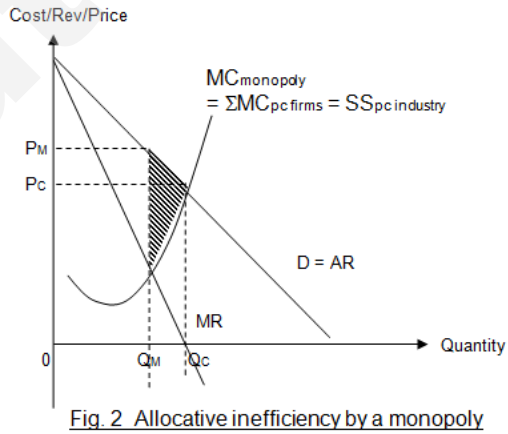


Fig. 2 Allocative inefficiency by a monopoly

In conclusion, government intervention is advocated in the case both of market dominance and income inequity as to achieve allocative efficiency and reduce deadweight loss, and at the same time, moving towards income equity among the different income groups of consumers.

Level	Descriptor	Marks
L3	Explanation with detailed analysis of why government intervention is advocated in markets with both market dominance and income inequity. Diagrammatical explanation of market dominance resulting in deadweight loss is necessary.	7-10
L2	Explanation of why government intervention is advocated in markets with both market dominance and income inequity, but not adequately analysed. Max 6 marks if different markets are used to explain for market dominance and income inequity. Max 5 marks for one sided answer that explains why government intervention is advocated in markets with either market dominance or income inequity.	5-6
L1	Answers with little or inaccurate explanation.	1-4

b) Discuss the measures that can be used to address these sources of market failure. [15]

Measures to address these sources of market failure (market dominance & income inequity)

1) Regulate the service quality and fares to ensure that acceptable service is provided at affordable price. If stipulated amount equals to P=MC, allocative efficiency can be achieved with lower price charged and higher output of provided by the public transport companies. At the same time, lower fares ensure that public transport becomes more affordable for lower income groups, address income inequity.

   Limitations: Regular checks to be conducted can be costly. Difficult for the public transport council to determine the price level at which P=MC.

2) Regulation in terms price discrimination to minimise income inequity à set different fares for different group of consumers à ensure that the relatively lower income groups like the elderly and students can utilise public transport and not marginalised.

   Limitations: Still be a possibility where low income adults paying relatively higher fares while wealthy elderly and students paying concessionary fares.

3) Introducing more competition à With more firms in the public transport industry and consumers having more choices to choose from, firms tends to charge a lower price in order to compete the competitors and also likely to be more productive efficient à charger price is closer to marginal cost. Will also provide better service quality to ensure that consumers not switching over to competitors' services. Consumers also benefit from having more choice to choose and better service quality. Lower prices help to reduce income inequity as public transport becomes more affordable for the lower income.

   Limitation: May not be able to enjoy the EOS enjoyed by larger firms before, higher cost translates to higher prices.

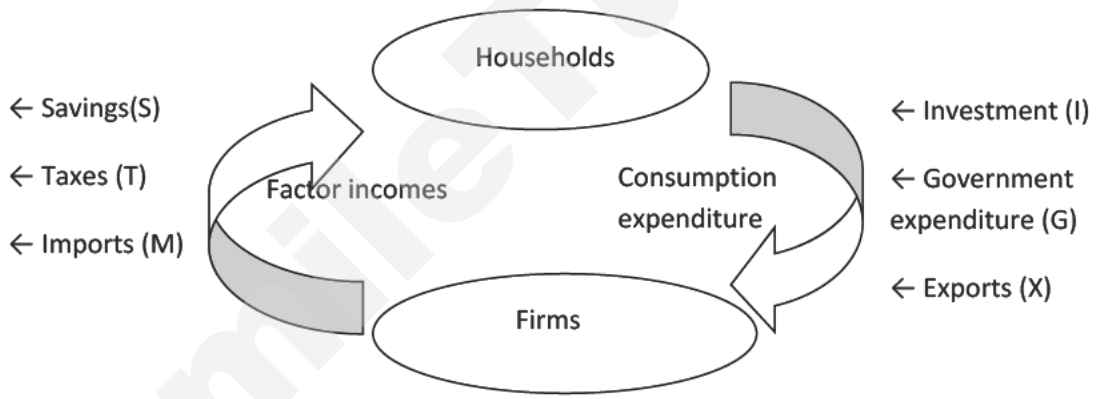
Level	Descriptor	Marks
L3	A well-balanced discussion with detailed analysis with limitation on measures that can be used to address both sources market dominance and income inequity.	9-11
L2	A balanced discussion with weak or no limitation on measures that can be used to address both sources market dominance and income inequity, but not adequately analysed. Max 6 marks for discussion on measures that are either used to address market dominance or income inequity.	6-8
L1	Answers that are briefly related to the question, with inaccuracies.	1-5
E2	Judgements are well explained and supported by analysis.	3-4
E1	Attempts to make judgement but left unexplained.	1-2

4. **Assess the relative importance of the various components of the circular flow of income in driving economic growth in different economies.** **[25]**

Suggested Outline

1) INTRODUCTION

- Define and set the context for the different economies for the discussion of the question:
  - ➔ Small and Open vs. Large and Less Open
  - ➔ Developed Economies (Advanced) vs. Developing Economies (Emerging)
    - ** Note that students can choose either one classification of the above two.*
- Explain the different components of the circular flow of income.
  - The circular flows 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.
  - Define J & give examples. (I+G+X)
  - Define W & give examples. (S+T+M)
  - I+G+X = S+T+M



- Explain actual and potential economic growth.
- Explain the measure of "relative importance": Must contribute significantly to the achievement of the actual and potential economic growth

2) BODY Part 1: Components that are more important in Large and Less Open Economies like USA

Characteristics of a Large and Less Open Economy:

- Large domestic sector as compared to the foreign sector
- High consumption (C) culture
- Big Taxable base (T)

- <u>Thesis statement 1: Domestic demand components like Consumption (C), investment (I) and government expenditure (G) play a relatively more important</u>

role in large and less open economies like USA as compared to small and open economies like Singapore

- Explain why C, I and G play a more significant role in driving economic growth in these economies linking to the characteristics of the large and less open economy.
- E.g. USA has high Consumption (C) due to relatively lesser Savings (S) à high multiplier à C can bring about a higher increase in AD à higher increase in NY.
- Domestic Investment is likely to play a more significant role in driving economic in economies like USA due to the higher amount of domestic capital accumulation.
- Investments can lead to potential Economic Growth.

- Thesis statement 2: Withdrawal components such as Taxation (T) play a relatively more important role in large and less open economies like USA as compared to small and open economies like Singapore
- Explain why T play a more significant role in driving (or affecting) economic growth in these economies linking to the characteristics of the large and less open economy.
- Lower corporate and income taxes can drive investment and consumption respectively and this components of C and I can help to contribute actual economic growth in the SR and potential economic growth in the LR.

3) BODY Part 2: Components that are more important in Small and Open Economies like Singapore

- Thesis statement 1: Injection components like investment (I) and exports (X) play a relatively more important role in small and open economies like Singapore as compared to large and less open economies like USA.
- Explain why I and X play a more significant role in driving economic growth in these economies linking to the characteristics of the small and open economy.
- E.g. for small and open economies rely more heavily on foreign direct investment due to the smaller pool of capital accumulation in the economy. Therefore, foreign injection of investments is more needed to drive growth.

- Thesis statement 2: Withdrawal components such as Savings (S) and Taxes (T) play a relatively more important role in small and open economies like Singapore as compared to large and less open economies like USA.
- Explain why S and T play a more significant role in driving (or affecting) economic growth in these economies linking to the characteristics of the small and open economy.
- Higher S can lead to more capital accumulation for future investments à actual economic growth in the SR and potential economic growth in the LR.
- Lower corporate and income taxes can drive investment and consumption respectively and this components of C and I can help to contribute actual economic growth in the SR and potential economic growth in the LR.

4) CONCLUSION:

- Large and Less Open economies like USA à depend on injection of the domestic sector
- Small and Open economies like Singapore à depend on injection from the foreign sector.
- Compare which are the components of the circular flow of income are more likely to play a more significant role in driving economic growth in the different economies.
- Consider the current economic situation (or the different economic situation).
- Give a judgment or conclusion on which components of the circular flow of income are likely to remain as the most significant components in the different types of economies based on your earlier arguments and analysis.

<u>Mark Scheme</u>

Knowledge, Understanding, Application, Analysis		
L3	- The answer has good, clear and balanced explanation of how the various components (3 per each type of economy) of the circular flow of income will drive economic growth in the different economies. - Adequate analysis is given in terms of how the different components will drive actual and potential economic growth in the different economies pertaining to the specific economies. - Circular flow of income diagram being used to explain the concept of the circular flow of income. - Good application of economic concepts to the 2 different types of economies discussed in the question. *For an answer on how only 2 components of the circular flow of income affecting the economic growth on the 2 different types of economies (max 15 marks).*	**15-21**
L2	- For an answer that explains how the different components will drive economic growth in the different economies pertaining to the specific economies. - The explanation however has undeveloped analysis on the circular flow of income - Some application of linking the circular flow of income to a type of economy *For an answer on the discussion of the circular flow of income on only 1 type of economy (max 10 marks).*	**10-14**

L1	- For an answer which show some knowledge of the circular flow of income and/or the different types of economies. - The answer is written in isolation without any linkages between the various concepts. - The components of the circular flow of income are simply stated rather than explained in terms of its relative significance. *For an answer that only discuss about economic growth (max 5)*	**1-9**

Evaluation		
E2	For a well-reasoned judgment that is supported by economic analysis. - The evaluation is done across the different components of the circular flow of income in terms of the most important component, the short run vs. long run importance of the different components of the circular flow of income that will drive economic growth in the countries.	**3-4**
E1	For an unexplained judgment or one that is not supported by economic analysis.	**1-2**

5a) In the study of macroeconomics, inflation can take various forms including demand-pull inflation, imported cost-push inflation and wage-price spiral.

Explain what is meant by these different types of inflation. [10]

A demand-pull inflation is caused by an increase in aggregate demand along a near which can be contributed by an increase in consumption, investment, government expenditure, export or a decrease in import, and it occurs when aggregate demand persistently exceeds aggregate supply when the economy is near or at full employment level. There will be higher competition of factors of production which would have already been employed to produce goods and services. The higher competition for the factors of production drives up prices of these factors and will lead to an increase in cost of production, which will be translated to higher general price level as producers pass on the increased cost to the consumers.

From figure 1, at near full employment, increase in government expenditure leads to an increase in aggregate demand from AD0 to AD1, general price level increase form P0 to P1, resulting in demand pull inflation.

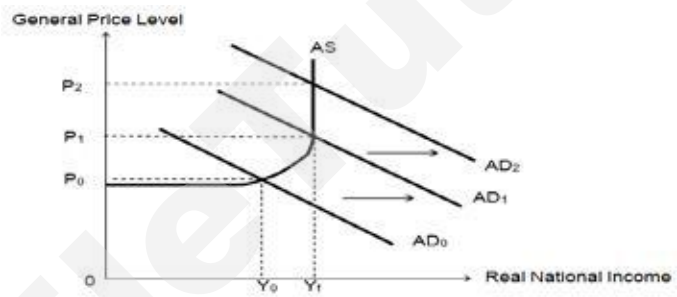


Figure 1: Demand Pull Inflation

Imported cost-push inflation arises when a country imports from countries which experience inflation, the prices of their imports will rise. If these imports are intermediate goods, this will push up the unit cost of production and final price. Imported consumer goods will be more expensive contributing to the overall increase in general price level. For example Singapore, being a small open economy that is heavily dependent on foreign imports such as oil, when there is an increase in the price of oil, it increases the unit cost of production in Singapore. From Figure 2, there will be a fall in SRAS from AS0 to AS1. As cost of production becomes higher, producers cut back in production, resulting in a lower national output from Y0 to Y1, general price level increases from P0 to P1, resulting in imported cost-push inflation.

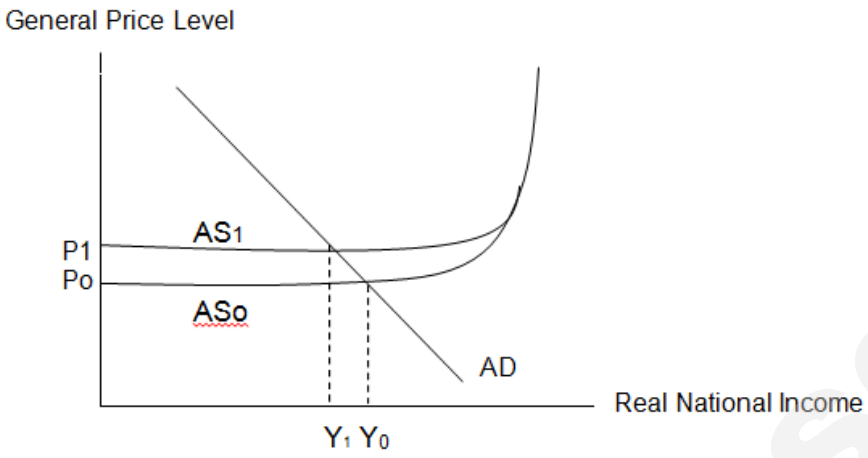


Figure 2: The effect of a decrease in AS
(due to imported cost-push inflation/wage-price spiral)

Wage-price spiral happens when powerful union demands for higher wages not due to any change in demand for labour. As the employers give in to their demand for higher wages, and assume that the wage increase is not matched by a corresponding or higher increase in labour productivity, this will lead to higher unit costs of production, similar to the earlier analysis in figure 2, which in turn leads to higher prices and inflationary pressures.
The higher prices can in turn lead to trade unions demanding higher wages and which then causes the firm to raise their prices again to maintain the profit margin, thereby triggering a "wage-price spiral" as the cycle continues.

Level	Descriptor	Marks
L3	Detailed explanation with clear analysis of all three types of inflation: demand-pull inflation, imported cost-push inflation and wage-price spiral.	7-10
L2	Explanation of all three types of inflation: demand-pull inflation, imported cost-push inflation and wage-price spiral, but not adequately analysed. Max 6 marks if only two types of inflation are being explained.	5-6
L1	Answers with little or inaccurate explanation. Max 4 marks if only one type of inflation is being explained.	1-4

5b) Discuss the impact of high inflation on Singapore's Balance of Payment. [15]

High imported cost-push inflation makes intermediate goods more expensive, which will increase cost of production in Singapore à export less price competitive due to increase in price caused by the increase in cost of production. Given that Singapore export demand tends to be price elastic with the availability of substitutes, the increase in price will lead to a more than proportionate fall in quantity demanded, hence Singapore export revenue is likely to fall.

Furthermore, Singapore is very dependent on imported goods due to lack of natural resources à demand for imports tends to be price inelastic à Singapore import expenditure is likely to increase. The fall in export revenue and the increase in import expenditure in Singapore will worsen Singapore trade balance under the current account, which translates to a worsening of Singapore Balance of Payment.

However, if Singapore managed to improve her export competitiveness at the same time through research and development in coming up more cost-effective methods of production and better quality of goods and services produced, the extent of the worsening of Balance of Payment may not be significant.

Singapore's gradual appreciate of exchange policy can also help to mitigate the worsening of Balance of Payment by high imported cost-push inflation. As appreciation of Singapore dollar can allow imports to be relatively cheaper in Singapore dollar, it will help to reduce the import expenditure of Singapore. While export price will be costlier in foreign currencies, since most exports have high import content, the appreciation of Singapore dollar which lowers the cost of production can help to offset part of the increase in prices of exports, thus keeping the fall in Singapore export revenue to a smaller extent, which will lessen the worsening of Balance of Payment due to imported cost-push inflation.

High inflation in the form of higher wages in Singapore will result in hiring of workers in Singapore to become more expensive. This is espcially so if the increase in wage does not match with the improvement in productivity of the workers. This will deter foreign direct investments from investing into Singapore since labour in Singapore becomes more expensive, which lowers the expected returns from investments.

Furthermore, there could be Singapore firms whom choose to move out of Singapore in search of cheaper labour, especially those firms whom are labour intensive in the production. With lesser foreign direct investment into Singapore plus more Singapore firms moving overseas, the capital and financial account is likely to be worsened, which translates to a worsening of Singapore Balance of Payment.

However, as there is lesser foreign direct investment in Singapore, this also suggests that there will be lesser income to be transferred to home countries by the foreign investments in Singapore. Furthermore, with more Singapore direct investment at abroad making profits and repatriating them back into Singapore, this can indicate an improvement in the income balance, thus Singapore Balance of Payment might improve. Also, if the increase in the wages of labour in Singapore

can be justified by the increase in productivity level, investment in Singapore is unlikely to fall. It might even lead to higher investment in attempt to employ the Singapore productive labour, thus leading to an improvement in the capital and financial account and subsequently, Balance of Payment.

Level	Descriptor	Marks
L3	A well-balanced discussion with detailed analysis on impact of high inflation on Singapore's Balance of Payment.	9-11
L2	A balanced discussion on impact of high inflation on Singapore's Balance of Payment, but not adequately analysed.	6-8
L1	Answers that are briefly related to the question, with inaccuracies.	1-5
E2	Judgements are well explained and supported by analysis.	3-4
E1	Attempts to make judgement but left unexplained.	1-2

Question 6

Many developed and developing countries have experienced increases in within-country inequality. The growing income gap has coincided with the period of increasing exposure of countries to globalisation through increased flows of goods, services, capital and labour across international borders.

a) Explain how the trend towards globalisation results in greater income disparity in Singapore. [8]

b) Assess whether Singapore government's approach to globalisation should be adjusted in response to her growing income gap. [17]

Part a:

Question requires the knowledge and understanding of the 'trend towards globalisation' and how this trend results in greater income disparity in Singapore.

Trend towards Globalisation

- Increased in trade volume & trading partners. Wider variety of Ms.
- Higher capital mobility
- Higher labour mobility → Increase in availabilty of labour (esp human capital)

Explain how this results in greater income disparity in Singapore

- Higher labour mobility results in greater wage disaparity beween the low-skilled and the higly-skill labour
- Increased in trade volume & trading partners → unequal gains with The Have and The Have-Not
- Higher capital mobiity results in (1) unequal gains between the capital owners and the working population (2) greater inflationary pressures → adversely affected the cost of living of the lower income group

Introduction - **Define**	**Globalization has led to increasing connectedness and integration among countries. It offers countries a path to greater economic development through <u>more intense trade</u>, <u>freer capital flows</u> and <u>increase availability of labour (especially human capital)</u>.**
Main Body - **Explain how the trend towards globalization results in greater income disparity in Singapore**	Globalisation exacerbates greater income disparity:

Higher labour mobility	Massive influx of low-wage workers from neighbouring developing economies è Depresses nominal wages è Wage stagnation § Real income ¯ for the bottom 30% of the working population between 2001 and 2008. § Real income stagnated for the next two deciles of the working population.
	Wages of the highly skilled talents rises rapidly, on par with world market levels § due to huge opportunities avail to highly skilled talents in the global market.
Increased in trade volume & trading partners	Higher economic growth è unequal gains with capital owners benefiting more and little gains trickling down to the 'have-not
Higher capital mobility	As above § Leads to greater inflationary pressures è Rise in cost of living è Impact the poor more adversely

<u>Marking Scheme</u>

Level	Descriptor	Marks
L3	For an answer that clearly explain how the trend towards globalisation results in greater income disparity in Singapore.	6 - 8
L2	For an answer that has an explanation on how the trend towards globalisation results in greater income disparity in Singapore.	4 - 5
L1	For an answer that shows knowledge of the meaning of globalisation and income disparity but with no attempt to explain the causal relationship.	1 - 3

b. Assess whether Singapore government's approach to globalisation should be adjusted in response to her growing income gap. [17]

Note: Question was set before PM Lee National Day Rally Speech 2013

Part b:

Approach:	**The main focus of the essay should be on:** · **Singapore government's current approach to globalisation; &** · **Why her current approach to globalisation should adjusted in response to her growing income gap.** **Candidates then have to make a judgement as to which why and how Singapore government's approach to globalisation should be adjusted in response to the growing income gap.**	
Main Body: **Singapore government's current approach to globalisation**	Briefly explain the policies used by Singapore government to achieve her Key Policy Objectives: Briefly explain the prioritisation of policies and the unintended tradeoffs (specifically growing income gap).	
Main Body: **Current policies deployed to narrow income gap** **<u>Subsidies on goods and services</u>**	<u>Subsidies on education, basic healthcare services, public housing</u> - government expenditure on education and training infrastructure and Institutionalising skill upgrade and training programmes è Ensure labour skill relevance to harness technological progress to enable increasing LRAS through increase total factor productivity è Increases in potential economic growth Subsidised healthcare and public housing help ensure the lower income group has a minimum standard of living.	<u>Evaluation</u> § In general more subsidies are enjoyed by those with lower incomes and greater needs. § Higher income families also share in the benefits so while the needs of the poor are addressed, this may not serve well to address the widening income gap. § Highly successful policy to facilitate social mobility and reducing income gap.

Main Body: **Current policies deployed to narrow income gap** **<u>Taxes/ Subsidies on goods and services</u>**	**Market-driven approach:** Prices of many commodities and essential services are adjusted directly by the government in line with economic and social policies. They are adjusted higher (for eg, taxes on alcohol, tobacco and cars) or lower (for eg, subsidies in public care, education and transport) è Narrowing income gap	
Main Body: **Current policies deployed to narrow income gap** **<u>Progressive income tax system (arguable)</u>**	Progressive income tax system - the higher income group pays a higher marginal tax rate. The lower income group may not pay any taxes given the various exemptions.	<u>Evaluation</u> Singapore needs to maintain a competitive tax regime in order to attract top talents to contribute positively to the Singapore economy. Thus, income tax rates cannot be too high or Singapore will have difficulty in attracting talents and FDIs, both of which are important in helping to increase the country's productive capacity leading to potential growth.
Main Body: **Measure adopted to reduce income inequality** **<u>Transfer payments</u>**	<u>Workforce Income Supplement (WIS) scheme.</u> This scheme seeks to supplement the earnings of the lower income group without being a disincentive for the unemployed to look for a job. This scheme benefits those who are employed, not those who have lost their jobs. <u>Public Assistance Schemes</u> The government provides cash grants, medical and educational assistance for those unemployed and with little means of subsistence. These schemes do not significantly decrease the income gap but help the underprivileged to afford basic necessities.	<u>Evaluation</u> § Transfer payments offered some relief but are generally not substantial enough so as not to lead to disincentive to work. § Ignorance and lack of understanding of the process to apply for some of these assistance schemes have resulted in some of the low income groups failing to benefit from these measures. This is especially so for the older and illiterate workers. § Many of the needy do not qualify for these assistance schemes as the criteria set based on income and housing type are too stringent. There is a need to review these criteria to take into consideration the increase in wages and cost of

		living over time.
Highlight why Singapore government's approach should be adjusted	§ The Singapore government's policies to address the issue of income inequality tend to focus more on addressing the needs of the poor rather than significantly narrowing the income gap. § These measures are ineffective in reducing the income gap, evidenced by the rise in Gini coefficient in recent years. The income of the top earners in Singapore has increased many folds compared to the low wage workers whose real income has either fall or increased minimally.	
Main Body: **Adjustment in policies deployed to narrow income gap** **<u>Healthcare</u>**	Widen safety nets to everyone, regardless of age & including those with pre-existing health conditions, to deal with health-care costs è Revamp healthcare insurance scheme MediShield to a universal and compulsory healthcare insurance scheme. It should cover all Singaporeans and pre-existing illnesses, with no opting out.	<u>Evaluation</u> § Singapore government should provide targeted subsidies for the poor who cannot afford to pay the insurance premiums. § Fiscal sustainability remains a guiding principle. So MediShield "must break even"; Medisave can be used for more outpatient treatments, but contribution rates will have to rise. At some point, taxes will have to go up.
Main Body: **Adjustment in policies deployed to narrow income gap** **<u>Education</u>**	Move from competitive meritocracy to a more managed one, where effort goes to ensuring every generation gets a more equal chance to compete against those with accumulated wealth and privilege.	<u>Evaluation</u> Market believers will fret: Will this blunt the drive to excel?
Main Body: **Adjustment in policies deployed to narrow income gap** **<u>Housing</u>**	§ Provide support for every working family to afford a flat § Housing Grant of $20,000 should be given to middle-income (household income of $4000) households to purchases HDB flats.	
Evaluation	Singapore government should tread carefully to ensure these adjustments do not undermine self-reliance, lead to overconsumption of healthcare or compromise academic standards and rigour. Over the longer term, it may have to raise her taxes or cut back on other spending so she can pay for stronger safety nets and new social programmes without saddling the next generation with debt.	

Conclusion:	To summarise, the growing income gap between the rich and the poor is a systematic challenge caused by the interaction of globalisation, skill-biased technological change and domestic policies. It is paramount that Singapore government's approach to globalisation be adjusted to narrow the growing income gap.

Marking Scheme

Level	Descriptor	Marks
L3	For a well-balanced analysis on Singapore government's approach to globalization and why this approach should be adjusted to her growing income gap.	10 -13
L2	For an answer that is largely one-sided, without thesis or antithesis or one that explains Singapore government's approach to globalization.	7 - 9
L1	For an answer that explains the various policies implemented by the Singapore government with little regard to key question requirements. Or For an answer that contains conceptual errors.	1 - 6

	Allow up to 4 additional marks for Evaluation	
E2	For a well-reasoned judgment that is supported by economic analysis.	3 - 4
E1	For an unexplained judgment or one that is not supported by economic analysis.	1 - 2

ECONOMICS **JURONG JUNIOR COLLEGE**
PRELIMINARY EXAMINATION 2013

Higher 1 **8819/01**

2 September 2013

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.

This document consists of **8** printed pages.

Section A

Answer **all** questions in this section.

Question 1 Education and its merits

Table 1: Government expenditure on education
(Thousand Dollars)

	2006	2007	2008	2009	2010	2011
Total	6,959,285	7,527,667	8,229,69	8,685,326	9,875,445	10,789,740
Recurrent Expenditure	6,351,717	6,785,625	7,476,521	7,837,909	8,998,709	9,743,977
Primary Schools/ Secondary/Junior Colleges	3,122,956	3,618,288	3,729,318	3,809,233	4,407,659	4,382,909
Institute of Technical Education	249,154	253,506	281,262	262,509	328,067	347,338
Tertiary	2,548,043	2,410,538	2,865,478	3,072,091	3,554,419	4,242,479
Universities	1,719,156	1,491,382	1,808,987	2,014,807	2,305,921	2,944,796
National Institute of Education	100,147	102,243	110,378	112,474	123,625	118,558
Polytechnics	728,741	816,913	946,113	944,810	1,124,873	1,179,125
Others*	431,564	503,292	600,463	694,076	708,564	771,251
Development Expenditure	607,569	742,043	753,173	847,417	876,736	1,045,763

***** *Includes MOE Headquarters, Institute of Southeast Asian Studies, Science Centre Board, SIM-Open University Centre, Special Education, Nanyang Academy of Fine Arts, LASALLE College of the Arts and Singapore Examinations and Assessment Board.*

Source: *Yearbook of Statistics, Singapore,* 2012

Table 2: Enrolment in educational institutions by sector
(Number)

	2006	2007	2008	2009	2010	2011
Total	688,310	700,774	704,117	704,719	698,544	689,060
Primary Schools/Secondary Schools/Junior Colleges	530,423	534,737	528,932	521,594	510,714	498,563
Institute of Technical Education	22,954	23,465	24,367	24,846	24,789	25,279
Tertiary	134,933	142,572	150,818	158,279	163,041	165,218

Source: *Yearbook of Statistics, Singapore,* 2012

Extract 1 Asia spending billions on tutors

Asian parents are spending billions of dollars on private tutors for their children, and the practice is growing despite doubts over its effectiveness. Private tuition is a lucrative business not only in wealthy countries but also in some of the region's poorer nations as parents try to give their children the best start in life, the Asian Development Bank said.

Nearly nine out of 10 South Korean elementary pupils have private tutoring. It estimated that the costs of private tutoring in South Korea were equivalent to 80 percent of government spending on public education. Japan spent $12 billion on extra teaching in 2010. In Hong Kong, where 85 percent of senior secondary students receive tutoring, companies advertise the services of "star" tutors, on television, newspapers and the back of buses.

But despite its popularity, particularly in East Asia, tutoring has had mixed results, said the study, conducted with the University of Hong Kong's Comparative Education Research Centre. The study called for state supervision and regulation of the industry, in part due to the ease of recruiting suitable candidates as private tutors resulting in an influx of players, as well as a review of Asia's educational systems.

Source: Adapted from *AFP*, 5 July 2012

Extract 2 $15m programme to develop student entrepreneurs unveiled

THE Action Community for Entrepreneurship (ACE) is teaming up with the Ministry of Education (MOE) to roll out a $15 million Entrepreneurship Programme, which will be rolled out over a three-year period and targets secondary schools, junior colleges (JCs), polytechnics and Institute of Technical Education (ITE) Colleges.

Key features of the programme include internship opportunities with entrepreneurial firms and funding support for polytechnic and ITE students to test out their business ideas. For the secondary schools and JCs, an entrepreneur will be attached to each participating school, who will provide guidance and advice to students. It will also comprise learning modules, workshops and competitions that aim to give students a glimpse of the world of business.

ACE Chairman Teo Ser Luck said: “We want to inculcate certain values in them. The value of taking risks, the value of trying something new, the value of believing in their passion, and also at the same time understanding about embracing failures because most entrepreneurs would have failed many times, or would have failed before and then finally succeeded. Entrepreneurship is a key driver of Singapore’s economy; they create growth and meaningful jobs. ACE believes that entrepreneurship can drive the renewal of our small and medium enterprises landscape to ensure a pipeline of better and stronger enterprises.”

Extract 3 More support for students with special needs

In line with the government’s aim to achieve inclusive growth so as to improve the welfare of the disadvantaged and less fortunate, MOE has expanded the school-based dyslexia remediation to 22 more primary schools, bringing the total to 42 primary schools. MOE will also extend its assistance to more parents of children with special needs to enable them to better understand the learning experiences in the Special Education (SPED) schools and help them find a suitable education programme for their child. SPED schools will receive additional resources to promote stronger home-school partnerships and support students from needy families.

Extract 4 Post-Secondary Education (PSE) scheme

As part of the government's efforts to encourage every Singaporean to complete post-secondary education, the PSE Account (PSEA) was created to help parents to save for their children's education in approved tertiary institutions such as the universities and polytechnics. In Budget 2010, the government announced that it would top up the PSEA for every Singaporean child aged 7 to 20 in 2010. The top-up ranged from $100 to $500. It underscores the government's commitment to support families in investing in further education for their children, and to prepare them for the economy of the future.

Extract 5 New degree programmes at polytechnic - lower fees are a big draw

The Singapore Institute of Technology (SIT)-Trinity College Dublin (TCD) undergraduate degree programmes in Occupational Therapy and Physiotherapy is an initiative by MOE offering undergraduate degree programmes mainly to polytechnic graduates. Singaporean students were attracted to the programmes for many reasons. But one main draw was the lower cost compared to similar programmes overseas. International students have to pay fees of $45,000 for each programme, but Singaporean students pay only $15,000, due to subsidies from MOE.

In addition, the TCD programme will cater more to the Singapore context and teach more analytical skills, which will enable a service provider to better meet Singapore's health-care needs. Besides the lower cost, the TCD programme offers two modules, Critical Appraisal and Leadership and Management, which are not offered in programmes from other schools.

Source: Adapted from *MOE Press Releases*, 2012-2013

Questions

(a) **(i)** Compare the change in government expenditure on education between primary schools/secondary schools/junior colleges and tertiary sector for the period 2006-2011. [2]

(ii) Identify the educational sector that has the highest government recurrent expenditure on education per student in Year 2011. [1]

(b) Extract 1 refers to the increased emphasis placed on private tuition as Asian parents try to give their children the best start in life.

Use demand and supply analysis to explain the impact of the increased emphasis placed on private tuition by Asian parents on the private tuition market. [5]

(c) **(i)** What is meant by price elasticity of supply? [1]

(ii) Justify the value of the price elasticity of supply for tuition services. [2]

(d) Explain how the policy options mentioned in Extracts 2-5 can help Singapore achieve a sustained and inclusive economic growth. [6]

(e) With the aid of a diagram, explain how inefficient allocation of resources arises in the market for education. [5]

(f) Evaluate the effectiveness of the policies used by the Singapore government to achieve an efficient allocation of resources in the market for tertiary education. [8]

[Total: 30 marks]

Question 2

Growth and Trade

Extract 6: China warns of grim trade outlook

China has warned of a grim outlook for trade as the world's second-largest economy surprised financial markets by reporting a fall in exports and imports when both had been expected to rise. The figures, which follow a government crackdown on the use of fake invoicing that had exaggerated exports earlier this year, are likely to raise fresh concerns about the extent of the slowdown in the China economy and global demand.

"China faces relatively stern challenges in trade currently," customs spokesman Zheng Yuesheng told a news briefing. Exporters are losing confidence in the face of weak overseas demand, rising labour costs and a strong Yuan currency. "The surprisingly weak June exports show China's economy is facing increasing downward pressure on lacklustre external demand," said Li Huiyong, an economist at Shenyin & Wanguo Securities in Shanghai.

Source: *The Guardian, 10 July 2013*

Extract 7: Chinese consumers are still not spending enough

Retailers and policymakers have high hopes for consumer spending in China driving profits and economic growth. And while on the rise, consumption is not getting there as fast as many had hoped. China is trying to rebalance its economy away from exports towards consumption, which Beijing hopes will deliver more stable long-term growth for the world's second-largest economy but the problem is that China's consumers remain elusive. China's rapid economic development and wage rises have helped boost consumer spending. However, consumption as a proportion of GDP is much lower than other major economies such as the US where it accounts for about 70 percent of GDP or regional neighbour India where it makes up roughly 60 percent of GDP.

Source: *CNBC, 29 May 2013*

Extract 8: The slow boat in China is good for the region

Even more crucial for China's rebalancing effort is the need to reduce its dependence on exports. This is because China’s comparative advantage has been seriously eroded by increasing costs and rising wages. Industrial wages went up 14 per cent last year. The gradual appreciation of the Yuan has put additional pressures on China’s export competitiveness. It will be hard for China’s exports to grow at double-digit rates from now on. China's growth pattern actually started to shift last year. But economic restructuring is a slow process that threatens to increase job losses and bring about social unrest. Beijing will continue to embrace slower growth along with macroeconomic rebalancing. Lower growth means less pressure on the environment and society. It also helps make growth more stable and sustainable.

Source: Adapted from *The Straits Times*, 1 June 2013

Extract 9: Strong Growth in Foreign Investment in China

Foreign direct investment (FDI) is an important gauge of the health of China's external economy. Despite the slowing down in growth, investment data showed that "overseas investors are still optimistic on the outlook of China's economy in the medium and long term thanks to China's recent efforts to move the economy up the value chain and its growing domestic consumption," said Li Wei, China economist at Standard Chartered Bank in Shanghai.

China's attractiveness as a destination for investment capital will help develop its infrastructure, increase resource availability and productivity, and enhance workforce skills.

Source: *The New York Times, 17 July 2013*

Extract 10: Free trade can only benefit the region

Singapore and the European Union agreed on a free trade deal recently. Its significance in enhancing greater economic and political ties should not be underestimated. The deal, which has been negotiated for more than two years, will reap benefits for both sides. For Singapore it will mean better access to the EU - the world's most affluent market-place with 500 million consumers. For the EU, it implies easier access to the gateway to Asia and Singapore, which already hosts almost 9,000 EU companies. This should be great news for business on both sides.

Free trade is the way ahead - for economic recovery, growth, jobs and innovation. Even when Europe was affected by sovereign debt crises, protectionism was not pursued though there were calls for it. The EU remains the world's largest market and is likely to see growth, albeit modest, in 2013-2014.

The sense in this is obvious – free trade is and has always been an important source of national income for a country.

Source: *The Ministry of Foreign Affairs, Business Times 2013*

Table 3: Selected Singapore's macroeconomic data

	2009	2010	2011	2012
	Millions S$ (at constant prices)			
Gross Domestic Product (GDP)	249,559.8	286,446.7	301,228.4	305,201.5
Private Consumption Expenditure	95,668.8	101,566.4	106,199.6	108,511.6
Government Expenditure	26,152.4	29,073.7	29,210.4	28,171.3
Gross Fixed Capital Formation	64,845.6	68,778.1	73,118.5	77,975.7
Changes in Inventories	-6,862.7	-7,665.4	-4,237.5	9,370.6
Net Exports of Goods and Services	73,088.9	99,958.5	102,790.7	85,954.3
Statistical Discrepancy	-3,333.2	-5,264.6	-5,853.3	-4,782.0

Source: *Department of Statistics, Singapore*

Questions

(a) Describe the trend of Singapore's real GDP for the period 2009 to 2012**.** [2]

(b) Using Table 3, account for the relationship between Singapore's net exports of goods and services and real GDP between 2009 to 2012. [4]

(c) Explain one piece of information that would be useful in explaining the slowdown in growth in China. [2]

(d) Discuss the view that China should "rebalance its economy". [8]

(e) With the help of an AD/AS diagram, explain the impact in both the short and the long run of a rise in foreign direct investment on the macroeconomic performance of China. [6]

(f) Explain, and comment on, the statement in Extract 10 that "free trade is and has always been an important source of national income for a country". [8]

[Total: 30 marks]

Section B

Answer **one** question from this section.

3 **(a)** Explain the terms ‘public good’ and ‘demerit good’, making clear in each case how they cause the market to fail. [10]

(b) It is generally recognised that casino gambling generates a level of externalities that is unacceptable. Thus, the Singapore government has imposed an entry levy of $100, which is valid for 24 consecutive hours starting from the time of first entry into the casino, on the citizens and permanent residents of Singapore.

Discuss the view that the imposition of an entry levy is the best method to tackle this problem in Singapore. [15]

4 Higher oil prices in 2011 have led to inflation, a slowdown in Singapore’s economic growth and a weakening of the currency.

(a) Explain how higher oil prices led to the above problems in Singapore. [10]

(b) Discuss the measures that the Singapore government can adopt to solve the macroeconomic problems mentioned. [15]

JURONG JUNIOR COLLEGE

2013 JC2 ECONOMICS 8819 (H1)

PRELIMINARY EXAMINATION

ANSWER BOOKLET

Suggested Answers for 2013 J2 H1 (8819) Economics Prelim Case Study Questions

Question 1

(ai) Compare the change in government expenditure on education between primary schools/secondary schools/junior colleges and tertiary sector for the period 2006-2011. [2]

Government expenditure on education for both primary schools/secondary schools/junior colleges **and** tertiary sectors **generally** *increased*.

[1] Overall change in direction.
[1] Refinement: Expenditure on primary schools/secondary schools/junior colleges decreased in 2011 while the expenditure on tertiary sector decreased in 2007 / Rate of change (faster increase on tertiary education of 66% compared to 40% on primary schools/secondary schools/junior colleges).

(aii) Identify the educational sector that has the highest government recurrent expenditure on education per student in Year 2011. [1]

Tertiary sector. [1]

(b) Extract 1 refers to the increased emphasis placed on private tuition as Asian parents try to give their children the best start in life.

Use demand and supply analysis to explain the impact of the increased emphasis placed on private tuition by Asian parents on the private tuition market. [5]

Step 1: Explain the demand factor

§ As mentioned in Extract 1, there is an increased emphasis placed on private tuition by parents as they want to give their children a head start. This is reinforced by the lure of advertisements on the services of "star" tutors in mass media which entices consumers as seen in Extract 1. This has resulted in a **change in taste and preferences** towards private tuition resulting in an **increase in demand for tuition services**.

Step 2: Explain the supply factor

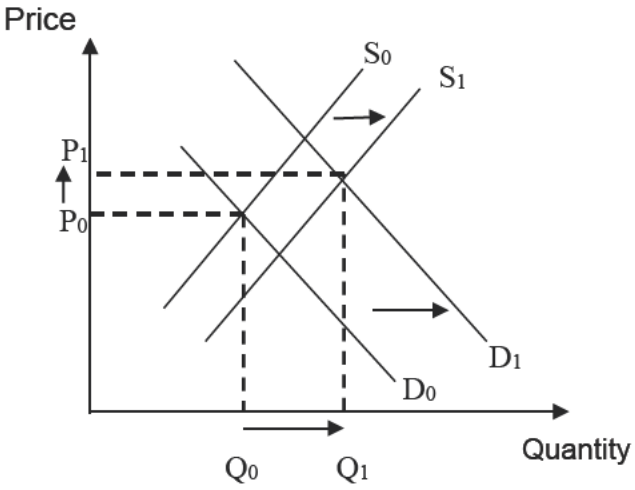
§ There are also incentives to offer tuition services as it is a lucrative and profitable industry, resulting in an **influx of players** in the industry. The increase in the number of producers leads to an **increase in the supply of tuition services**.

Step 3 & 4: Dominating factor/Draw and describe diagram

§ The above factors will result in an increase in demand for private tuition services as shown below by a rightward shift of the demand curve from D_0 to D_1 and an increase in the supply of private tuition services as shown by a rightward shift of the supply curve from S_0 to S_1.

§ The increase in demand for private tuition services is more than the increase in supply because of the **large** change in taste and preferences towards private tuition services as seen by the increased willingness to spend on private tuition services by parents.

§ This leads to both an increase in the price of private tuition services from P_0 to P_1 and quantity of private tuition services from Q_0 to Q_1.



Up to 3 marks *(1m for demand explanation, 1m for supply explanation and 1m for 2 pieces of evidence)* for a well-developed explanation of 1 demand and 1 supply factor with the use of case study evidence.
1 mark to be awarded for candidates who commented on the dominating factor (either demand or supply) with justification.
1 mark to be awarded for a fully-labelled diagram with explanation.

(ci) What is meant by price elasticity of supply? [1]

The price elasticity of supply measures the **responsiveness of the quantity supplied of a good** to a given change in the price of the good itself, ceteris paribus. [1]

(cii) Justify the value of the price elasticity of supply for tuition services. [2]

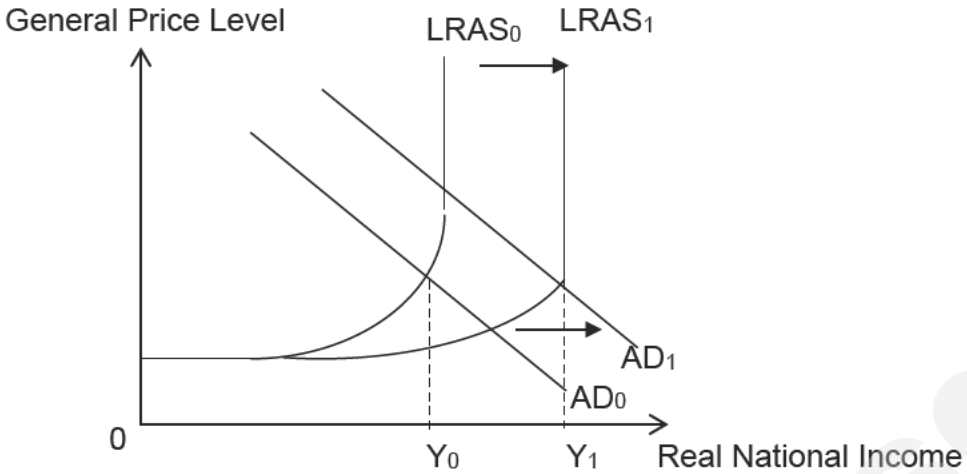
The supply for tuition services is price elastic and the price elasticity of supply value is **more than 1** [1] due to **high factor mobility** [1]. As evident in Extract 1, it is not difficult to employ private tutors, hence producers can increase the supply of private tuition services more readily.

(d) Explain how the policy options mentioned in Extracts 2-5 can help Singapore achieve a sustained and inclusive economic growth. [6]

With an increase in government expenditure on education, there will be more government projects available which might lead to recruitment of staff, hence increasing employment. This will lead to an increase in income, purchasing power and consumption. The increase in G and C will cause Aggregate demand (AD) to increase from AD_0 to AD_1, via the multiplier process, national income will increase by the multiple. Actual growth is achieved as a result.

With a more educated workforce, this will lead to an **increase in labour productivity and quality of labour.** A better-skilled workforce is also more responsive to changes, and is more willing to take up further training to upgrade skills or to acquire new skills. In addition, the promotion of entrepreneurship education in schools and support by ACE which includes internship opportunities, will encourage the birth of more entrepreneurs, leading to an increase in the **quantity of entrepreneurs.** Entrepreneurs organize factors of production, explore new markets, innovate and take risks in anticipation of demand. With greater labour productivity and more entrepreneurs, it will lead to an **increase in the productive capacity** of the economy and long run aggregate supply (LRAS) from $LRAS_0$ to $LRAS_1$. Potential growth is achieved as a result.

With an increase in AD and LRAS, sustained growth is achieved as shown in the diagram below. Real national income has increased from Y_0 to Y_1.



As evident in Extract 3, MOE has expanded the school-based dyslexia remediation and provided more resources to SPED schools. There will also be more support for students from needy families. Extract 5 also showed that more healthcare related courses have been introduced to cater to the needs of Singapore's aging population. With policies in place that aim to improve the welfare of the disadvantaged and less fortunate, it helps to achieve an inclusive growth for Singapore.

Mark Scheme

L2	Well-developed analysis of how actual, potential and inclusive growth is achieved, with reference to the case study evidence.	**4-6**
L1	Under-developed explanation of how actual, potential and inclusive growth is achieved *Maximum 3 marks for answers without reference to case study evidence.*	**1-3**

(e) With the aid of a diagram, explain how inefficient allocation of resources arises in the market for education. [5]

Education is a merit good that yields **positive externalities/external benefits** and is **deemed intrinsically desirable by the government**. Positive externalities are the **benefits to third parties** who are not directly involved in the production or consumption of a good. It is **not reflected in the price of the good**.

External benefits of education include a more **educated workforce** which will contribute to **greater efficiency and productivity** resulting in **potential growth**. **Marginal private benefit (MPB)** refers to the benefit like the knowledge gained by the consumer from an additional unit of the good consumed. **Marginal private cost (MPC)** is the cost incurred like school fees from an additional unit of the good consumed.

Figure 2 illustrates the situation where the consumption of a good generates positive externality. **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 benefit**. **Due to the presence of positive externalities**, which is shown by the MEB at a particular level of output, **MSB will be greater than MPB**, as shown by the divergence of MPB and MSB. This means that the benefits to society include not just the benefits to the consumer but also the benefits to 3rd party enjoying the positive spillover effects, shown as MEB at a particular level of output. **Assuming that MPC = MSC**. Since the consumers will only consider their private benefits and costs, while ignoring external benefits to third parties, they will **consume at output level Qp where MPB = MPC**. However, the **socially optimal level of output occurs at Qs where MSB = MSC**. Since **Qp is less than Qs**, it means that the price mechanism on its own cannot achieve an efficient allocation of resources. There is **under-consumption**. **Between Qp and Qs, the social benefits**

of an additional unit of good consumed is higher than the social costs, resulting in **welfare loss** equivalent to the shaded area. Hence market failure occurs since the market mechanism is not able to achieve an efficient allocation of resources.

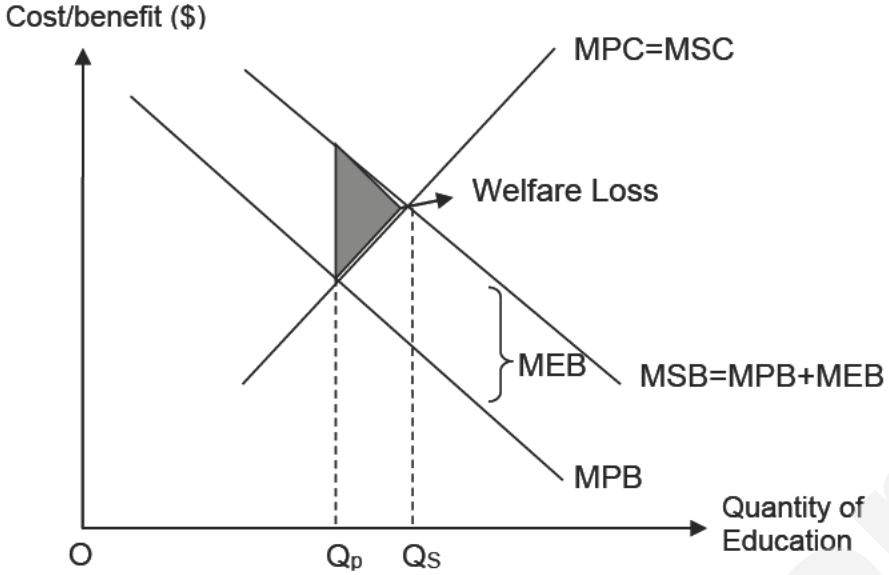


Figure 2

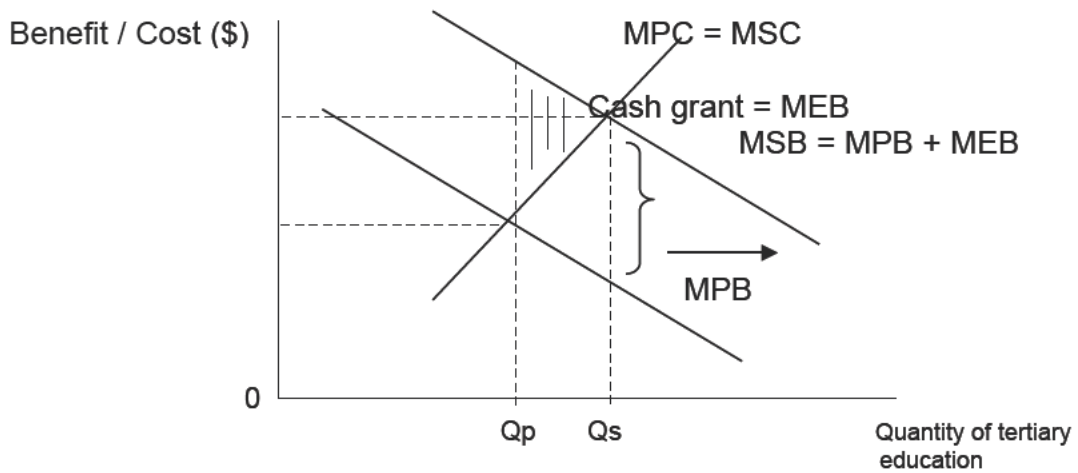
Mark Scheme

L2	Well-developed analysis of why the market fails, aided with a fully labelled/accurate diagram and with reference to the case study evidence. Max 4m for a well-developed analysis with no reference to the context of education.	3-5
L1	Under-developed explanation of why the market fails.	1-2

(f) Evaluate the effectiveness of the policies used by the Singapore government to achieve an efficient allocation of resources in the market for tertiary education. [8]

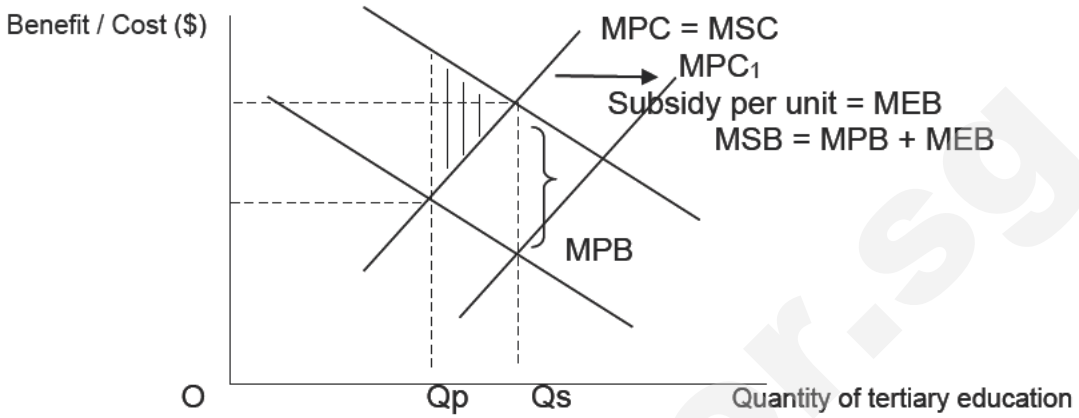
Explain how cash grant works

According to Extract 4, the Singapore government topped up the PSEA for every Singaporean child aged 7 to 20 which ranged from $100 to $500. This cash grant is made available to consumers to encourage the consumption of goods with positive externalities. The government can give consumers a cash grant which is equal to MEB at Qs. This cash grant must be spent on tertiary education only. This measure has the effect of shifting the MPB curve to the right towards the MSB curve and hence increasing consumption from Qp to Qs.



Explain how subsidies works

Accordingly to Extract 5, MOE is offering undergraduate degree programmes at lower cost compared to similar programmes overseas. In this case, the government gives subsidies to the producers, which is equal to MEB at Qs. This will lower the cost of production, making the degree programmes available at a lower price, thus reducing MPC and shifting the MPC curve from MPC to MPC_1 and hence increasing consumption from Qp to Qs.



Explain the limitations

It is hard to measure in monetary terms many of the external effects due to tangible and intangible benefits like a more productive workforce; hence it is difficult and impossible to find the 'right' amount of subsidy or cash grant which will enable the market to consume tertiary education at the socially optimum level of output. If the government underestimates the external benefits, the subsidies or cash grant may be insufficient. In this case, there will still be a situation of under-consumption. If the government overestimates the external benefits, resource allocation is still inefficient.

The policy also incurs opportunity cost on the limited government resources available. The expenditure on tertiary education could have been channelled to other essential sectors like healthcare and defence.

Stand

As shown in Table 2, there has been an **increase in enrolment in the tertiary sector** which implies that the policies adopted by the Singapore government **have been effective** thus far.

Evaluation 1

It is necessary for the government to carry out a thorough cost-benefit analysis to assess whether its measures will lead to net welfare gain, so as to ensure that resources are optimally allocated and society welfare is maximised. Ultimately, a **combination of policies** that influence both the consumers and producers is needed to achieve an efficient allocation of resources.

Or Evaluation 2

The case in today's context is not to simply increase the consumption of education but also to increase the **quality of education** to meet individual's aspirations and the needs of the Singapore economy. Extract 4 also showed that there is a wider choice of courses made available by MOE through collaboration with overseas degree providers.

Or Evaluation 3

There may be **government failure** in terms of bureaucracy, red tape and information failure when government intervenes. Although the socially optimal level of output may not be attained due to limitations of the policies, government intervention usually ensures a better allocation of resources and results in an output level that is closer to the socially optimal level.

Mark Scheme

L3	Well-developed analysis of cash grant and subsidies with strong reference to the diagram and case study evidence + well-justified evaluation. Max 6m for an answer without a well-justified evaluation.	6-8
L2	Under-developed explanation of cash grant and subsidies with some reference to the diagram and case study evidence. Max 3m for a well-developed analysis of one policy with some reference to case study evidence.	3-5
L1	Smattering of valid points	1-2

CS Question 2

(a) Describe the trend of Singapore's real GDP for the period 2009 to 2012. [2]

Singapore's real GDP is increasing **(1)** at a decreasing rate **(1).**

(b) Using Table 3, account for the relationship between Singapore's net exports of goods and services and real GDP between 2009 to 2012. [4]

Both net exports of goods and services and real GDP increased between 2009 to 2011. **(1)** The relationship between Singapore's net exports of goods and services and real GDP is positive **(1)** from 2009 to 2011. However in 2012, net exports decreased while Singapore's real GDP still increased, showing a negative relationship. **(1)** This increase in Singapore's real GDP can be explained by the increase in the consumption and investment components of aggregate demand. **(1)**

(c) Explain one of piece of information that would be useful in explaining the slowdown in growth in China. [2]

Evi 1: **Lacklustre external demand (Extract 6)**. With a weakening of global demand for exports, Chinese exporters are exporting less. There is a fall in export revenue and ceteris paribus this will lead to a fall in net exports. This will mitigate the increase in AD caused by a rise in the other components of AD, thus NY will increase by a smaller extent, resulting in the slowdown in growth.

Evi 2: An **increase in labour cost (Extract 6)** will lead to an increase in cost of production for producers. As profit maximizers, they will not have incentives to increase production when the cost of production increases. This will lead to a cut back in production, leading to a fall in SRAS. NY will fall. This will mitigate the increase in NY caused by a rise in AD, resulting in the slowdown in growth.

Evi 3: **Appreciating Yuan (Extract 6)**: The price of exports will rise in foreign currency. Thus, China will experience a fall in her export competitiveness. If the demand for the exports is price elastic due to availability of substitutes, the quantity demanded will fall more than proportionately, hence export revenue for China will fall. With an appreciation of Yuan, the price of imports will become cheaper in domestic currency. Assuming that the demand for imports is price elastic, a fall in price for imports will lead to a more than proportionate increase in the quantity demanded, thus increasing the import expenditure. A fall in export revenue and an increase in import expenditure will lead to fall in net exports. This will mitigate the increase in AD caused by a rise in the other components of AD, thus NY will increase by a smaller extent, resulting in the slowdown in growth.

Students need to mention that growth is dampened to get the full 2m.

(d) Discuss the view that China should "rebalance its economy". [8]

Rebalancing China's economy means rebalancing away from exports towards consumption.

Thesis: China should "rebalance its economy"

Vulnerability to external shocks

The Chinese government needs to boost the level of domestic consumption so that it is less susceptible to external shocks.

The weak global economic environment may affect China's economic progress as demand for her exports dampen which may worsen her balance of payment position. In addition, the fall in

net exports will decrease AD and thus decrease NY by multiple times through the reverse multiplier process, slowing down growth.

Loss in Comparative Advantage
Extract 8 mentioned that China needs to reduce its reliance on exports as it has lost its comparative advantage due to increasing costs and rising wages. In addition, the gradual appreciation of the Yuan has reduced China's export competitiveness. In order to sustain growth, China has to rebalance and focus on domestic demand as it is difficult for China's exports to grow significantly due to these two factors.

Reduce pollution
Rebalancing slows down the economic growth, which slows down production and leads to less environmental degradation (Extract 8). This may improve the quality of air as less air pollutants are emitted, hence improving the qualitative aspect of SOL.

Anti-Thesis: China should not "rebalance its economy"
Small proportion of Consumption contributing to GDP
Although China is trying to rebalance its economy towards consumption as stated in Extract 7, consumption as a proportion of GDP is much lower than other major economies in the world despite it having a huge domestic market. Given that consumers are elusive and confidence remains low, consumption will not increase significantly. Thus rebalancing has limited success.

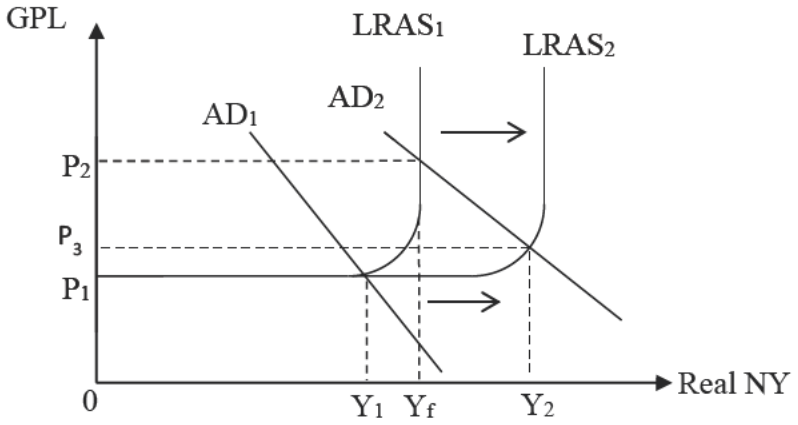
Structural unemployment
Extract 8 mentions that economic restructuring is a slow process, suggesting that there is a lack of available skilled labour to produce the type of goods required for domestic consumption. As displaced workers cannot find jobs in the sunrise industries due to a mismatch of skills, structural unemployment increases. As mentioned, high unemployment may also lead to social unrest.

Conclusion
Overall, China should rebalance the economy as it helps to sustain growth and reduce short term vulnerability. It seems that the Chinese government is committed to rebalancing as it is prepared to accept lower growth with rebalancing, as stated in Extract 8. China can no longer rely mainly on export demand as her major trading partners like the US are not doing well currently and are expected to be so for the next few years.

Mark Scheme

L3	Well-developed explanation of why China should or should not rebalance its economy, with strong use of case study evidence. **Max 6m for an answer without a well-justified evaluation.**	6-8
L2	Under-developed explanation of why China should or should not rebalance its economy, with some use of case study evidence. OR **Max 4m** for a well-developed one-sided explanation of why China should or should not rebalance its economy, with some use of case study evidence. *Maximum 4 marks for answers without reference to case study evidence.*	3-5
L1	Smattering of valid points	1-2

(e) With the help of an AD/AS diagram, explain the impact in both the short and the long run of a rise in foreign direct investment on the macroeconomic performance of China. [6]



Achieving actual growth and full employment
In the **short run**, when foreign direct investment rises, it will bring about an increase in investment. AD will rise as investment is a component of AD. The AD curve will shift from AD_1 to AD_2 and NY will increase by a multiple due to the multiplier from Y_1 to Y_f, thus achieving **actual growth.** The rise in NY will lead to an increase in production and demand for labour, thus **reducing unemployment.** If China is near full employment, the increase in AD will cause GPL to increase from P_1 to P_2, bringing about **demand-pull inflation.**

Achieving potential growth and internal price stability
In the **long run**, foreign direct investments will increase the quantity and quality of the factors of production like capital and labour in the economy. As mentioned in Extract 9, it will help develop China's infrastructure, increase resource availability and productivity, and enhance workforce skills. Hence, the productive capacity of the economy will increase and LRAS will shift from $LRAS_1$ to $LRAS_2$. There is **potential growth** in the Chinese economy. There will be lesser pressure on the general price level and general price level will fall from P_2 to P_3 even though NY increases to Y_2, hence **achieving price stability.**

Achieving healthy balance of payments
In the **short run**, an increase in inflow of FDI into China will increase long-term capital inflow and improve the capital account of China. Ceteris paribus, her **balance of payment position will improve.** In the **long run**, the FDI will repatriate their profits back to the home country, resulting in the outflow of investment income which will worsen the current account. Ceteris paribus, her **balance of payment position will worsen.**

Overall, the short and long run impact of an increase in FDI on the macroeconomic performance of China is largely positive.

Mark Scheme

L2	Well-developed explanation of the impact in both the short and the long run of a rise in FDI on the macroeconomic performance of China with a well explained AD/AS diagram. *Maximum 5 marks for answers without a diagram*	4-6
L1	Under-developed explanation of the impact in both the short and the long run of a rise in FDI on the macroeconomic performance of China.	1-3

(f) Explain, and comment on, the statement in Extract 10 that "free trade is and has always been an important source of national income for a country". [8]

Define free trade
Free trade refers to the international trade between countries without protectionist measures like tariffs, quotas or other restrictions.

(i) Thesis: Explain the benefits of free trade and why it is an important source of national income for a country.

One of the main gains of free trade for a country is the **expanded export market**. With an increase in market size, a country can benefit from increasing specialization based on her comparative advantage. This will allow the country to reap the benefits of more efficient allocation of resources and economies of scale which will help lower their average costs 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, cheaper exports will bring about a more than proportionate increase in quantity demanded. The increase in export earnings will increase X-M ceteris paribus, and AD will increase, bringing about a multiple increase in NY via the multiplier process, thus achieving actual growth (Extract 10). The increase in production will also result in more jobs (Extract 10) and higher employment. This will result in an increase in NY, PP and C which will trigger another increase in AD and NY.

Local producers facing competition from foreign imports will be forced to improve the quality of their products and efficiency. It may stimulate greater research and development and innovation (Extract 10), and the more rapid adoption of new technology to increase productivity that lowers their cost of production. This would improve her export competitiveness in the international market.

Hence the benefits of free trade imply that it will always be an important source of NY for a country.

(ii) Anti-thesis: Free trade is not always an important source of NY for a country

However, for a country like Singapore which is small and open, she is especially **vulnerable to various external risks** due to free trade as she is more closely integrated with other countries. For example, a recession in her major trading partners will cause a fall in demand for Singapore's exports, thus reducing her export revenue. The fall in X-M will reduce her AD and thus NY by a multiple, causing Singapore to suffer from recession and cyclical unemployment. China also suffered from a slowdown in growth due to lacklustre external demand (Extract 6). Thus free trade may not always be an important source of NY to an economy, especially when the global economy is not doing well.

(iii) Protectionism can be a source of NY for a country

In times of recession for example during the Europe debt crisis, there were calls for protectionism (Extract 10) to safeguard jobs as unemployment was rising. Trade barriers can **increase domestic production and employment**. A tariff for example will make imports more expensive and cause consumers to switch to domestic goods. Without protectionism, the fall in employment will reduce the quantitative standard of living. A rise in employment will increase NY and stimulate consumption due to the rise in purchasing power. A rise in consumption will increase AD and thus NY by a multiple due to the multiplier, bringing about actual growth.

However, this argument does not take into consideration the **loss of consumer welfare** caused by higher prices and lower qualities of the local products. Using protectionist measures would only **perpetuate domestic inefficiency** and lead to a misuse of resources.

<u>Conclusion</u>

To a large extent, free trade is and has been an important source of NY for a country as there are significant benefits that can be gained. Nonetheless, there are situations when free trade may not help increase the NY of the country like during a global recession or when countries resort to protectionism. The benefits and risks from free trade will also affect different countries differently. For example, countries that are small and open like Singapore will reap more benefits due to the increase in export markets but will also suffer a greater risk from a slowdown in trade as she is not able to rely on her domestic consumption to prop up AD unlike a big economy like China.

Mark Scheme

L3	Well-developed two-sided explanation of whether free trade is and has always been an important source of national income for a country with strong use of case study evidence. **<u>Max 6m</u> for an answer without a well-justified evaluation.**	6-8
L2	Under-developed two-sided explanation of whether free trade is and has always been an important source of national income for a country with some use of case study evidence. OR **<u>Max 4m</u>** for a well-developed one-sided explanation of whether free trade is and has always been an important source of national income for a country.	3-5
L1	Smattering of valid points	1-2

3a Explain the terms ‘public good’ and ‘demerit good’, making clear in each case how they cause the market to fail. [10]

b It is generally recognised that casino gambling generates a level of externalities that is unacceptable. Thus, the Singapore government has imposed an entry levy of $100, which is valid for 24 consecutive hours starting from the time of first entry into the casino, on the citizens and permanent residents of Singapore.

Discuss the view that the imposition of an entry levy is the best method to tackle this problem in Singapore. [15]

Level	Knowledge, Application, Understanding, and Analysis	Marks
L3	Well-developed explanation of how the existence of a demerit good and a public good result in market failure, with the use of appropriate examples. Max 7 marks if there are no examples given.	7 – 10
L2	Undeveloped explanation of how the existence of a demerit good and a public good result in market failure. OR Max 5 marks for a one-sided explanation of how a demerit good or a public good results in market failure.	4 – 6
L1	For an answer that shows descriptive knowledge of how the existence of a demerit good or a public good results in market failure.	1 – 3
Level	**Knowledge, Application, Understanding, and Analysis**	**Marks**
L3	Well-developed explanation and evaluation of <u>3 policies</u> that the Singapore government can use to correct market failure in the usage of casino.	9 – 11
L2	Under-developed explanation of any <u>2-3 policies</u> that the Singapore government can use to correct market failure in the usage of casino and their limitations. Max 8 marks for a well-developed explanation and evaluation of only <u>2 policies</u> that the Singapore government can use to correct market failure in the usage of casino.	6 – 8
L1	For an answer that shows descriptive knowledge of how the government can intervene in the casino market to correct the market failure.	1 – 5
E2	For an evaluative assessment based on economic analysis, i.e.: one that considers the <u>extent to which government intervention</u> is able to tackle the market failure.	3 – 4
E1	For an unexplained assessment or one that is not supported by economic analysis.	1 – 2

Introduction

Market failure occurs when the unregulated market mechanism fails to allocate resources efficiently. Efficient allocation occurs when **allocative efficiency** is achieved. An efficient allocation of resources is achieved when resources cannot be reallocated in the economy to raise the welfare of one person without simultaneously lowering the welfare of another person. This takes place when **marginal social benefit (MSB) is equal to marginal social cost (MSC).** Government intervention is needed in the case of externalities and provision for public goods. With such intervention and provision, the government aims to achieve a socially optimal resource allocation, ensuring that society's welfare is maximised.

Define Public good

In the case of a public good, the market will fail due to the characteristics of **non-excludability and non-rivalry** in consumption. One example of a public good is the lighthouse.

Explain non-excludability using an example

Non-excludability means that once a good is provided, it is impossible to exclude anyone from consuming a good even if he/she does not pay for it. In the case of the lighthouse, one cannot prevent other ships which did not pay for the service (light) to be excluded from its consumption.

Explain how market failure occurs due to non-excludability

In the case of non-excludability in consumption, even the non-paying users cannot be excluded from consuming the good. Hence, there will be a problem of free riders. No one will want to pay for the good and therefore **demand is concealed and preferences are not revealed.**

Explain non-rivalry in consumption using an example

Non-rivalry in consumption means that even if the good is consumed by one person, it does not diminish the amount available for consumption by other, i.e. **collective consumption is possible**. For example, the consumption of the light from the lighthouse by one ship does not reduce the amount of light available for other ships in the same vicinity.

Explain how market failure occurs due to non-rivalry

Non-rivalry in consumption means that the supply of the public good is not depleted by an additional user and hence the marginal cost of providing the public good for an additional user is zero. Thus the **price charged for the good must also be zero**, based on the condition for allocative efficiency where **price=marginal cost**. Thus, it is **impossible to charge a market price for the public good**. The free market does not provide the public good even if there is demand in principle for these goods. Hence there is market failure as the **private market fails to allocate resources to produce public goods.** These goods have to be **provided by the government** and financed by taxes.

Explain how the consumption of demerit goods results in market failure

In the case when market fails due to the existence of externalities in a demerit good, the government often has to intervene to ensure a more efficient allocation of resources. A demerit good is a good that is deemed intrinsically undesirable by the government and generates negative externalities. Government intervention is needed to correct the problem of over-consumption of a demerit good

Negative externalities are cost to the third parties who are not directly involved in the consumption or production of the good. Such costs are not reflected in the price of the good. For example, in the case of gambling, the external cost is the lower productivity of the workforce that is caused by the addiction to gambling. This will result in a lower economic growth. There will also be social disintegration if addiction to gambling and bankruptcy rises, resulting in higher crime rates.

MPC refers to the money spent on gambling due to an additional unit of casino usage while MPB refers to the thrill and satisfaction Singaporeans derived from an additional unit of casino usage. The Singapore citizens who gamble in the casinos would only take into consideration their

marginal private cost (MPC) and marginal private benefit (MPB). The marginal external cost of using the casino is not taken into consideration. The true costs to society for the last unit of casino usage is reflected by marginal social cost (MSC), which is the addition of marginal private cost and external costs. MSC= MPC+ MEC

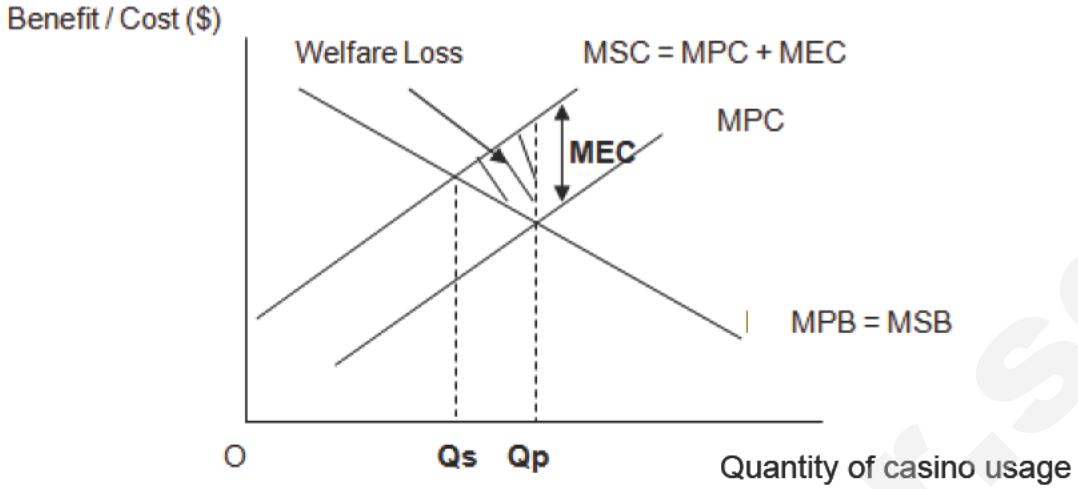


Figure 1: Market Failure due to Negative Externalities

Referring to figure 1, this results in a divergence of marginal social cost and marginal private cost. Assuming that MPB = MSB, when left to the free market, consumers pursuing their self-interest would only take into account their private costs and benefits and would use the casinos until OQ_p where marginal private benefit (MPB) equals marginal private cost (MPC). However, the socially efficient level is at OQ_s where marginal social benefit (MSB) equals marginal social cost (MSC). Since Qp is **greater** than Qs, it means that the price mechanism on its own cannot achieve an optimal allocation of resources. There is **overusage** of the casino by Singaporeans.

Between Qp and Qs, the social cost of an additional unit of casino usage is higher than the social benefits gain, resulting in welfare loss shown by the shaded area. Thus, the government would need to intervene in the operation of the casinos.

Conclusion

Market failure occurs in the case of public and demerit goods. Hence, government intervention is needed in both cases to bring about an efficient allocation of resources.

b) Discuss the view that the imposition of an entry levy is the best method to tackle this problem in Singapore [15]

The Singapore government has started the operation of two integrated resorts, Resort World Sentosa and Marina Bay Sands in Singapore in 2010. These integrated resorts consist of casinos and other attractions. This is seen as a strategic project to boost the Singapore tourism industry which has been facing competition from the neighbouring countries in Asia such as Thailand, Hong Kong and Malaysia. Therefore, the government has legalised casino in Singapore.

However, despite the economic benefits, there are unacceptable externalities, which are the negative externalities that arise from casino gambling as mentioned in part (a). Thus, the government needs to intervene by imposing legislations and coming up with awareness campaigns to safeguard against addiction to gambling among Singaporeans

Policy 1: Entry Levy on Casino Patrons

The first policy is to impose an entry levy of S$100 for every 24 hours spent in the casino to restrict the use of casinos to only citizens who are willing and able to pay for the tax. This entry levy is similar to a tax. The tax should be equal to **MEC at Qs**. By imposing this entry levy, the marginal private cost of using the casino will increase. As such, it is **more expensive to enter** the casino. As seen in Figure 1, **the MPC curve will shift to the left to MSC**, reducing **overconsumption of casino services**. This will reduce the usage of casinos from Qp to the socially optimal level at Qs.

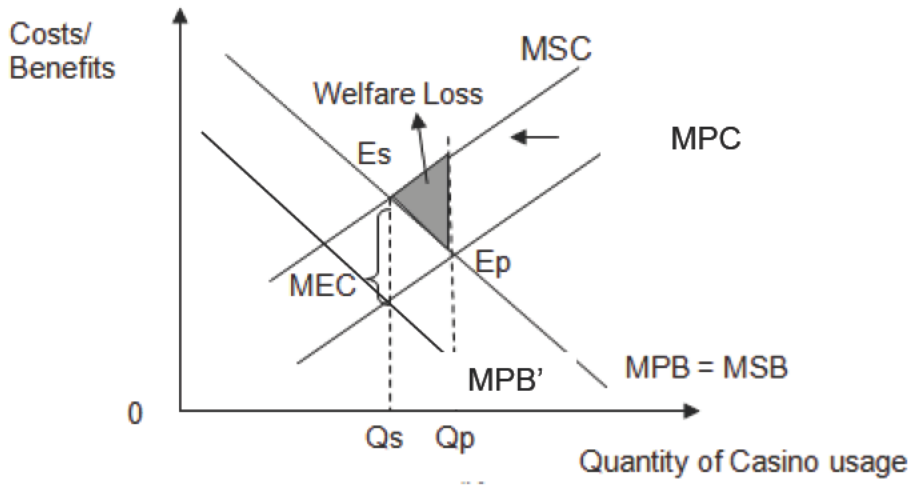


Figure 1: Market Failure due to Negative Externalities

The benefit of this entry levy is that it forces the consumers to **internalize the negative externalities**. Consumers will take into account the entire cost of their actions. Furthermore, the entry levies collected as tax revenue can be used to run programmes to assist the gamblers to quite gambling.

Limitations of entry levy

However, it is **difficult to calculate the exact amount of MEC** as there are tangible and intangible costs. Some of the external costs, such as social disintegration are difficult to quantify in monetary terms. Hence it is difficult to calculate the exact amount of entry levy to charge to reduce the negative externalities. On one hand, too low an entry levy will be ineffective in curbing overconsumption. On the other hand, too high an entry levy will still result in an inefficient allocation of resources as the society's welfare is not maximised.

Another limitation is that the entry levy is imposed only on Singaporeans and Permanent residents. However, the foreign workers are also using the casino. As a result, there could be **lower productivity** in the workforce if foreign workers continue to use the casino excessively.

Furthermore, there is **high monitoring and enforcement cost** involved to collect the $100 entry levy as well as to ensure that the users do not over-stay without a valid entry levy in the casinos. For example, surveillance tapes would have to be checked to catch offenders who enter or exit without the proper identification.

Policy 2: Casino Exclusions on Casino Patrons

There are three types of casino exclusion. First, self-exclusion means that the casino patrons can exclude themselves from entering the casino. The second type is the family exclusion, whereby family members can exclude their relatives with potential problem of gambling. The third type of exclusion will be for those who are legally bankrupt. Such exclusions will deny individuals entry to the casinos and minimise the risk of problem gambling from the group that is most likely to be in danger. This form of legisalation will **reduce the over-usage of the casino and reduce the welfare loss.**

The advantage of the exclusion is that it is **easy to implement**. In the event of a violation of the law, offenders will face the necessary penalties.

Limitations of Casino Exclusions

However, it is **administrative costly** to implement the scheme as there is a need to check the identities and financial status of each casino patron. Furthermore, the target group is rather small and is also dependent on whether the individuals or family members choose to surface and include their names on the exclusion list, otherwise the law will be ineffective in correcting the market failure.

Policy 3: Education for Singapore Citizens

The government can also help to promote public awareness on problem gambling to reduce the demand for casino entries. In Singapore, the National Council on Problem Gambling is set up to educate and disseminate information to Singaporeans so as to increase the awareness on the impact of problem gambling. Such information is disseminated through drama serials, advertisements and workshops conducted by various welfare organisations. This will **reduce the imperfect information** on gambling as Singaporeans have a greater sense of awareness about the external cost of gambling. As such, **the MPB curve will shift to the left to MPB'**, correcting the market failure as consumption reduces from Qp to **the socially optimal level at Qs**.

Limitations of Education

However, the effectiveness of the policy depends on the **receptiveness of the citizens** towards the usage of casinos. The public can be aware and educated, but unwilling to exercise self-restraint towards casino usage. Secondly, such a policy **takes time** and is deemed as a long term approach that will only correct the market failure in the long run. .

Furthermore, there is **opportunity cost** incurred in the funds used to run these programmes. The tax revenue used to fund these campaigns can be used in other important sectors such as education and healthcare in Singapore.

Conclusion

The entry levy is one of the most direct and effective methods to help reduce the over-usage of casino and hence improve on the allocation of society's resources as it forces the consumers to internalise the external cost. However, it **is not the best method** to tackle the problem of over-usage of casino in Singapore as there are limitations to it. Therefore, there is a need for a combination of policies to tackle the problem

Evaluation 1: Combination of policies

In the short run, the imposition of entry levy and casino exclusions should be implemented to reduce the over-usage of casino. In the long run, there is a need to reduce the imperfect information and educate the public to correct market failure. As such, these policies need to work in tandem with one another so as to achieve an efficient allocation of resources.

Evaluation 2: Government failure

Despite the government's attempt to correct the market failure, there may also be **government failure** in terms of bureaucracy, efficiency and lack of public support for government policies. Although the socially optimal level of output may not be attained due to the limitations of the measures, **government intervention usually ensures a better allocation of resources and results in an output level that is closer to the socially optimal level.**

Question 4

Higher oil prices in 2011 have led to inflation, a slowdown in Singapore's economic growth and a weakening of the currency.

a Explain how higher oil prices led to the above problems in Singapore. [10]

b Discuss the measures that the Singapore government can adopt to solve the macroeconomic problems mentioned. [15]

Level	Knowledge, Application Understanding and Analysis	Marks
L3	Well-developed explanation of how higher oil prices result in all the 3 problems. Max 8 marks with no application to the Singapore economy.	7-10
L2	Under-developed explanation of how higher oil prices result in all the 3 problems.	4-6
L1	Smattering of valid points.	1-3

Level	Knowledge, Application Understanding and Analysis	Marks
L3	Well-developed explanation of both demand management and supply-side policies (3 policies) that the Singapore government can adopt to solve the 3 macroeconomic problems and their limitations/effectiveness.	9-11
L2	Under-developed explanation of both demand management and supply-side policies that the Singapore government can adopt to solve the 3 macroeconomic problems and their limitations/effectiveness. Max 6m for a well-developed one-sided explanation on either the demand management (affect AD) or supply-side policies (affect SRAS and/or LRAS) that the Singapore government can adopt to solve the 3 macroeconomic problems and their limitations/effectiveness.	6-8
L1	Descriptive knowledge on the policies that the Singapore government can adopt to solve the 3 macroeconomic problems.	1-5
E2	Reasoned assessment on the effectiveness of using both demand management and supply-side policies to solve the 3 macroeconomic problems in Singapore. (E.g. combination of policies and the reliance on oil as a main factor input)	3-4
E1	Unreasoned assessment on the effectiveness of using both demand management and supply-side policies to solve the 3 macroeconomic problems in Singapore.	1-2

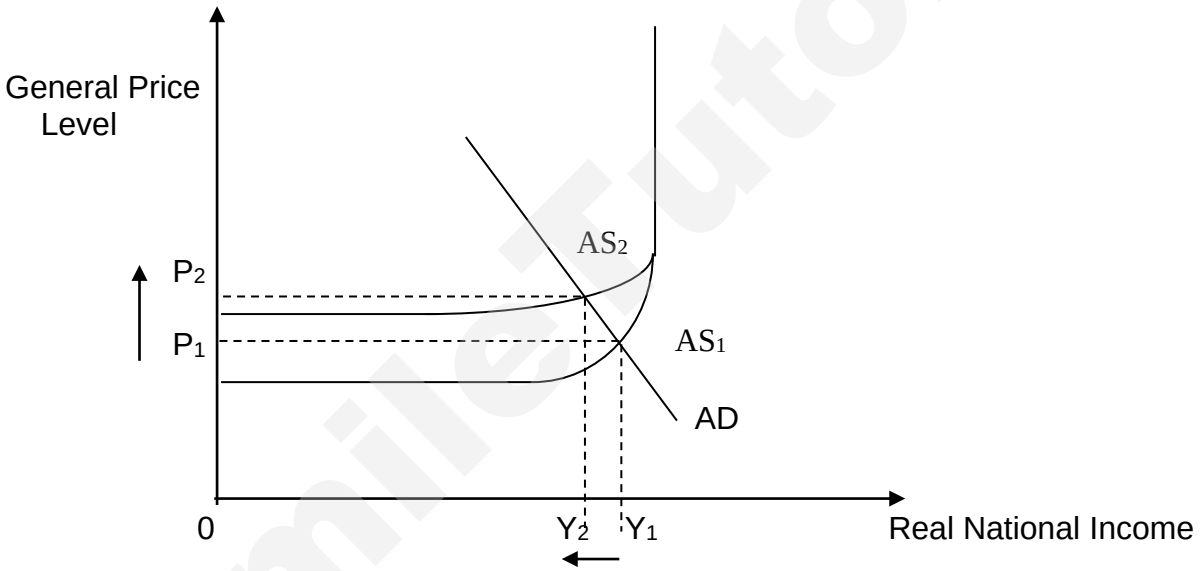
a) Explain how higher oil prices led to the above problems in Singapore. [10]

Introduction

Singapore is a small and open economy that lacks natural resources. Hence, she is highly reliant on imports for raw materials and basic necessities. External shocks such as rising prices of imported factor inputs like crude oil can lead to cost-push inflation, weakening of the Singapore Dollar (SGD) and a slowdown in economic growth in Singapore.

Explain how rising crude oil prices result in Cost-Push Inflation

Crude oil is an important factor input for production. The rise in global oil prices, which is largely due to the increase in demand from the booming Chinese economy, has resulted in higher energy and transportation cost in Singapore. This will result in an increase in cost of production. This will hurt the firms' profit margins and they will have less incentive to supply. They will in turn pass on these increased costs to consumers, causing the short run aggregate supply (AS) to decrease and shift up and to the left from AS_1 to AS_2 as illustrated in Figure 1 below. The general price level (GPL) rises from $0P_1$ to $0P_2$, resulting in cost-push inflation. NY falls from Y_1 to Y_2. This will mitigate the increase in NY caused by a rise in AD, resulting in the slowdown in actual growth.



Explain how rising crude oil prices affect Singapore's Economic Growth

When inflation is due to escalating costs of production, the reduction in profit margins will also discourage domestic and foreign investors from further investments. With a fall in FDI for example, there will be less capital stock coming into the economy. This will result in a lower productive capacity and hence hinder potential growth. As such, this is detrimental to the economy as it will impede potential growth.

Explain how rising crude oil prices result in the weakening of SGD

As the demand for oil is price inelastic as it is a necessity, a rise in the price of imported oil will lead to a less than proportionate decrease in quantity demanded for imports. Therefore, there will be a rise in import expenditure. As expenditure on imported oil is a significant component of our current account due to our heavy reliance on oil, the supply of currency will increase by a significant amount as more SGD has to be sold to get foreign currencies to purchase the imports. This will result in a depreciation of the currency.

As a result of cost-push inflation, assuming that her inflation rate is higher than her trading partners, Singapore's exports will be more expensive compared to foreign goods. Assuming that the demand for her exports is price elastic due to the availability and closeness of substitutes, there will be a more than proportionate fall in the quantity demanded for exports. This will result in

a fall in export earnings. On the other hand, imports appear relatively cheaper compared to locally produced goods. Import expenditure will rise as demand for imports increases due to the relatively cheaper imports. The fall in export earnings and rise in import expenditure will lead to a fall in net exports. This will mitigate the increase in AD caused by a rise in the other components of AD, thus NY will increase by a smaller extent, resulting in the slowdown in actual growth.

In the foreign exchange market, the demand for SGD falls due to the fall in export earnings as foreigners would need to convert less of their currencies to SGD. On the other hand, the supply of SGD increases as more of SGD has to be sold to get more foreign currencies to pay for the imported goods. With the fall in the demand for SGD and an increase in the supply of SGD, SGD will depreciate.

Conclusion

In conclusion, higher oil prices may lead to adverse consequences, such as cost-push inflation, slow growth and depreciation of the SGD. However, the extent of the above economic problems faced by the Singapore economy depends on the extent of the crude oil price increase. If this is substantial, the impact can be great. As such, there is a need for the government to implement policies to solve the macroeconomic problems.

b) Discuss the measures that the Singapore government can adopt to solve the macroeconomic problems mentioned. [15]

The macroeconomic problems faced by Singapore as a result of higher oil prices are **cost-push inflation**, **weakening of SGD** and a **slowdown in economic growth.** These problems can be solved through demand-management and supply-side policies.

Explain how managing the Exchange Rate can solve the problems

As Singapore lacks natural resources, factor inputs and necessities have to be imported. Since the source of the cost-push inflation is due to the rising price of imported oil, it is appropriate to use the exchange rate. Singapore has always relied on her exchange rate to fight imported inflation as she has limited monetary tools.

As such, Singapore can adopt a gradual and modest **appreciation** of the SGD under a regime of the managed float system. Under the managed float, the demand for and supply of SGD determine the equilibrium ER. The ER is allowed to fluctuate around the equilibrium rate within a "spread" which lies between the upper support limit and the lower support limit. The government would occasionally intervene to stabilise the rate around a desired level. To appreciate the currency, the government will use its foreign reserves to buy SGD to increase the demand for it.

By allowing the SGD to appreciate gradually, imported commodities like oil become cheaper in terms of local currency since a lesser amount of SGD is needed to exchange for the same amount of foreign currencies, thus reducing imported inflation. As prices of the imported factor inputs decrease, cost of production will fall. This will result in the SRAS curve shifting down and to the right from $SRAS_2$ to $SRAS_1$, as seen in Figure 1, hence helping to curb cost-push inflation and maintain price stability. Output will also increase from Y_2 to Y_1, promoting growth.

Limitations of managing the Exchange Rate

1. Depletion of foreign reserves

Intervention is only possible if there are adequate foreign reserves to intervene in the forex market as frequent buying to prop up the value of SGD may deplete the foreign reserves. Thus, such a measure is only feasible when it is supported by strong economic fundamentals that lead to an increase in the demand for the local currency; otherwise intervention to prop up the local currency is not sustainable in the long run.

2. Extent of intervention

Managing the exchange rate has some challenges. The government needs to know when to intervene, what exchange rate they should aim to maintain, and how persistently they should try to

maintain that rate. This would require the accurate analysis of the level of world inflation and likely movements of other exchange rates. However, they may not have up-to-the-minute reliable information about the state of the global economy and the various interactions in the forex market. Moreover, too high an appreciation would result in more expensive exports and decrease our export competitiveness.

Explain how Fiscal Policy works to stimulate growth

Fiscal policy refers to the deliberate attempt by the government to adjust macroeconomic variables by adjusting government expenditure and tax rates. In solving slow growth, an expansionary fiscal policy can be used. This involves increasing government expenditure on public projects such as building new expressways to increase AD. The Singapore government can also decrease personal income and corporate tax. A decrease in personal income tax helps to increase the disposable income and purchasing power, causing consumers to spend more. A decrease in corporate tax increases after-tax profit, hence encouraging firms to invest. The increase in G, C and I will increase AD from AD_1 to AD_2 and thus increase NY by multiple times from OY_0 to OY_1 as seen in Figure 2, solving the slowdown in growth.

Limitations of EFP

1. Size of multiplier

However, the effectiveness of EFP in stimulating growth depends on the size of the multiplier (k). An EFP or pump-priming the Singapore economy will be ineffective to stimulate growth and employment due to Singapore's small fiscal multiplier effect. The final increase in NY and hence the increase in production and employment is limited. Singapore's fiscal multiplier effect tends to be small due to a high marginal propensity to save (MPS) arising from her compulsory savings scheme, the Central Provident Fund (CPF), and a high mpm due to Singapore's lack of natural resources and her consequent import-dependence for both finished goods and raw materials.

1. Responsiveness of tax cuts

Furthermore, the response of households and firms to tax cuts is unpredictable and corporate tax rates in many economies are already very competitive to attract investors. Investment decisions also depend on other crucial factors such as productivity of labour and the infrastructure of the economy.

2. Policy conflicts

While using an expansionary fiscal policy can lead to an increase in AD and NY and hence stimulate growth, it will worsen the problem of demand-pull inflation especially when Singapore is at or near full employment. As seen in figure 2, the rise in AD will cause the general price level to increase from P_0 to P_1. Thus, fiscal policy alone cannot overcome inflation and slow growth.

Explain how supply-side policies can achieve potential growth and long-term price stability

Hence to bring about **potential growth and long-term price stability**, it is more appropriate to use supply-side policies.

The Singapore government has placed much emphasis on interventionist supply-side policies as seen from the high amount of spending on the education sector throughout the years. In order to increase the pool of highly skilled workers to be equipped for a knowledge based economy, a fourth university has been set up so that 30% of each cohort of students can get into publicly funded universities by 2015. In addition, there is continual investment on retraining of workers. S$2.5 billion is set aside in Budget 2010 for training and skills upgrading. This includes programmes such as Workforce Skills Qualification (WSQ). The Workfare Training Support (WTS) Scheme was also introduced to encourage low-wage workers to upgrade their skills through training, so that they can improve their employability and stay in the workforce for a longer period of time. The WTS Scheme was extended to reach a wider range of workers as announced in Budget 2013. Such policies would be able to increase efficiency and productivity resulting in a reduction of cost of production. At the same time, the productive capacity of the economy can be increased.

In figure 2, an increase in the quality of factors of production like labour would shift the long run aggregate supply curve of an economy rightwards, from AS_1 to AS_2. Besides increasing the long term growth of the economy and increasing NY from Y_1 to Y_2, this has the effect of reducing the general price level from P_1 to P_2, hence achieving long-term price stability.

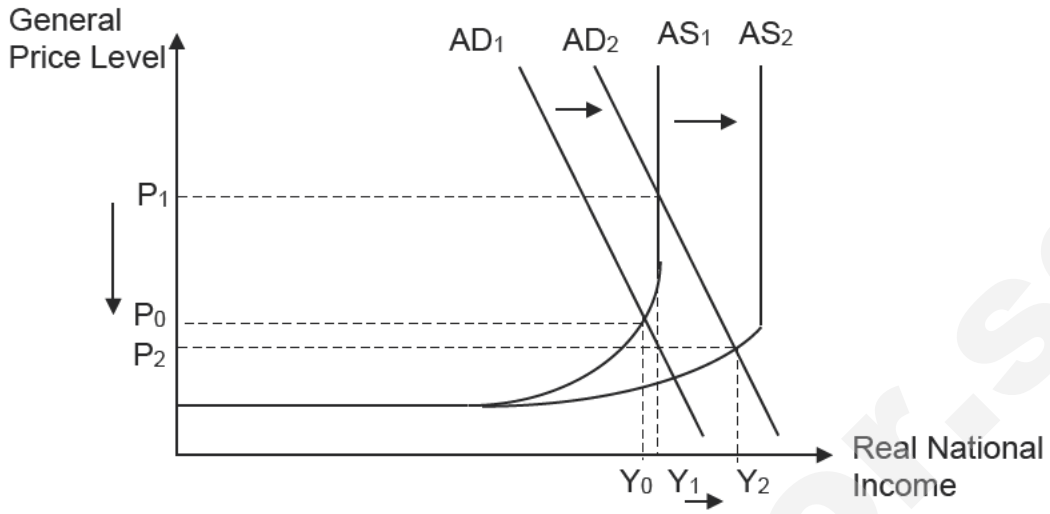


Figure 2: Effects of Supply side policies

The sustained non-inflationary economic growth in Singapore is very attractive to FDI who seek to invest in a country that offers them a low cost and positive investment climate. The inflow of long term capital will in turn create a strong demand for SGD which will prop up the value of SGD in the foreign exchange market.

Limitations of using Supply-side Policy

1. Receptiveness of the Workforce to Skills Retraining (Attitude & Ability Problem)

However, the success of skills retraining or knowledge upgrading depends on the level of education, age and personal inclination. The less educated or older workers may not have the ability to learn new skills or they may not be receptive towards the need for re-training. Some may just be resistant to the idea of a job change. A change in attitude is required for supply-side policies to be effective.

2. Lack of Funding for Skills Retraining (Funding Problem)

The re-training of skills and upgrading of knowledge is costly, which gives rise to funding problems. Even as the training of workers yields considerable external benefits, employers are reluctant to foot the bills because of the fear of losing workers after retraining or upgrading when workers job hop. The situation is worse for the unemployed who cannot afford the fees.

3. Long term measure

Although the Singapore Government has been inclined towards supply-side policies, they are long-term measures whose non-inflationary effects can only be felt in the long run. Supply-side measures are not a short-term strategy to solve short term fluctuations in economic activity.

Conclusion:

The Singapore government should adopt a combination of both demand management and supply-side policies to solve inflation, slow economic growth and a weakening of SGD as each policy has its limitations.

Evaluation 1: Combination of policies

For example, a strengthening of the exchange rate and an expansionary fiscal policy will help to stimulate growth and prevent the weakening of SGD in the short run. However, due to the policy

conflicts, there is a need to adopt supply-side policy. Supply-side policies can also bring about potential growth while keeping inflation at bay in the long run.

Evaluation 2: Root Cause

Most importantly the root cause of the problem must be addressed, which in this context is the higher oil prices. Since Singapore is heavily dependent on imported oil, it is likely that the higher oil prices can have a large impact on the economy unless producers can be more efficient in their usage of oil or even switch to alternative energy sources. In the short run, the appreciation of the SGD can help to mitigate the rise in oil prices. However, in the long run, the government might want to invest in R&D to explore alternative energy sources, such as natural gas, to reduce Singapore's dependence on crude oil and vulnerability to external shocks.

JURONG JUNIOR COLLEGE
PRELIMINARY EXAMINATION 2013

ECONOMICS

Higher 2 **9732/01**

Paper 1

2 September 2013

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 questions 1 and 2 on a new piece of paper.

At the end of the examination, tie 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 **8** printed pages.

Answer **all** questions.

Question 1

Issues on fuels

Extract 1: Biofuels or food?

"This is the craziest thing we're doing," says Peter Brabeck, the chairmen of Nestle. He is talking about government biofuels targets which require a certain proportion of national energy needs to be met from renewable fuels, most of them biofuels (i.e., ethyl alcohol made from crops, usually maize or sugar).

The targets are ambitious. Brazil, Japan, Indonesia and the European Union all say biofuels must supply 10% of energy demand for transport by 2020. China's target for that date is 5%. America aspires to meet 30% of such needs from biofuels by 2030.

Because the energy market is worth vastly more than the market for food, even relatively small targets translate into huge demand for crops. Ethanol currently accounts for just 8% of America's fuel for vehicles, but it consumes almost 40% of America's enormous maize crop. World ethanol production increased fivefold between 2000 and 2010 but would have to rise a lot further to meet all the targets. The Food and Agriculture Organisation reckons that if this were to happen (which seems unlikely), it would divert a tenth of the world's cereal output from food to fuels. Alternatively, if food-crop production were to remain stable, a huge amount of extra land would be needed, or food prices would rise by anything from 15 – 40%, which would have dreadful consequences. If governments attempt to introduce price ceiling on food in response to the rising food prices, there will be food shortages which may give rise to illegal trading.

Not all ethanols are the same. Brazil, the world's second-largest producer, makes its fuel mainly from sugar. Processing plants can go back and forth between ethanol and crystallised sugar at the flick of a switch, depending on prices. On the other hand, American ethanol is made from maize. American farmers say that government demand for ethanol is starting to abate, so the impact on maize supplies and prices is more modest now.

All the same, one of the simplest steps to help ensure that the world has enough to eat in 2050 would be to scrap every biofuel target. If all the American maize that goes into ethanol were instead used as food, global edible maize supplies would increase by 14%. But that is not going to happen. Biofuels have not only diverted crops to fuel but have also diverted public subsidies to farmers without provoking too many objections.

Source: Adapted from *The Economist*, 24 February 2011

Extract 2: Fuel duty rises

Looming fuel duty and value-added tax (VAT) rises are to push record fuel prices higher. On New Year's Day, a government fuel duty increase will add another 0.76p to the prices of both petrol and diesel. On 4 January, the rise in VAT from 17.5% to 20% will mean another price rise. The Automobile Association (AA) estimates that the two increases will add around 3.5p to the cost of a litre of both petrol and diesel.

The AA estimated that in total, motorists are spending almost £10m more a day on petrol than this time a year ago and the Royal Automobile Club Foundation pointed out that fuel tax would rise even further in April. "Given that each penny increase in fuel duty raises about an extra £500 million in tax revenue, it is easy to see why the government is tempted to hike rates," said the foundation's director, Professor

Stephen Glaister. "But if the nation's 34 million motorists are pushed too far, they will switch to public transport."

The Freight Transport Association (FTA) said lorry drivers in 2010 had been paying an average of £3,800 more on fuel than in 2009. It said the 1 January rise alone would add another £1,200 to annual fuel bills. "Diesel is not an optional extra for industry. It is essential to keep shops stocked and businesses supplied with materials," said Simon Chapman, the FTA's chief economist.

Meanwhile, many people have had their income stability threatened or reduced by the recession. Few have managed to get away without at least a little belt-tightening in recent months.

Source: Adapted from *BBC News*, 1 January 2011

Extract 3: Fuel subsidies in Indonesia

Politicians anywhere, but perhaps especially in Indonesia, raise petrol prices at their peril. On June 17th the House of Representatives approved a government budget that assumes that the price of a litre of petrol will increase by 44% to 6,500 rupiah and that of diesel by 22% to 5,500 rupiah. Outside parliament, police and protesters clashed and more violence is likely. Yet the president, Susilo Bambang Yudhoyono, is expected to reduce fuel subsidies and implement the price rises this month.

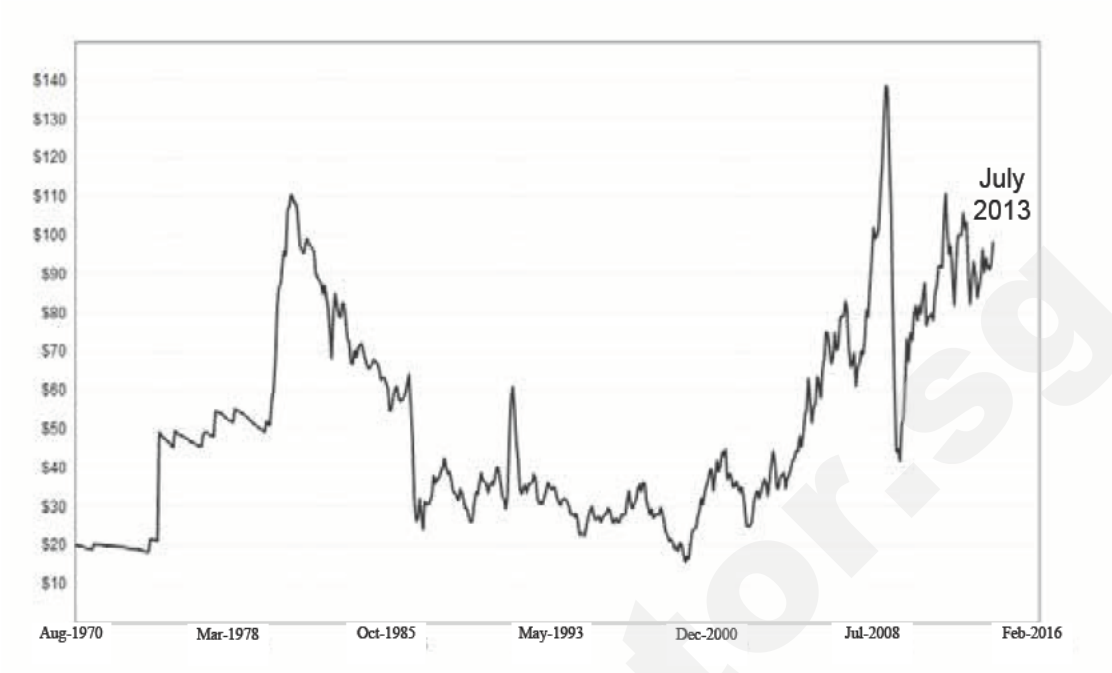
The legislature approved 9.3 trillion rupiah in compensatory cash handouts for 15.5m poorer households, to be paid in four monthly installments of 150,000 rupiah. But the price rises will hurt everybody. The government expects them to drive consumer-price inflation up to 7.2% this year – the highest since 2006. Meanwhile the government has cut its GDP growth forecast for 2013 from 6.8% to 6.3%.

Leaving fuel subsidies unchanged would be worse, however. The price of a barrel of oil sold in global markets has increased from $45 in January 2009 to about $100 a barrel now. In the interim, fuel consumption has soared as more Indonesians can afford cars and motorcycles, thus contributing to traffic congestion. The finance minister, Chatib Basri, had warned that the government's budget deficit could swell to 3.8% of GDP this year if nothing is done to curb subsidies. Even after the price rises, the deficit is still expected to reach 2.4% of GDP, up from 1.8% in 2012. Fuel subsidies are expected to cost 199.9 trillion rupiah, or 13.3% of revenue.

More worrying still is the impact of oil imports on the balance of payments. Since Indonesia became a net oil importer in the mid-2000s, its oil bill has risen almost fourfold, to $39 billion. That was a lot even when exports were booming, but now Indonesia's commodity exports are depressed. Last year saw Indonesia's first current account deficit since 1997. Foreign reserves have decreased by almost $20 billion in the past two years. The rupiah has plunged by 15% against the dollar since mid-2011, forcing the central bank to raise interest rates this month for the first time in 16 months.

Source: Adapted from *The Economist*, 22 June 2013

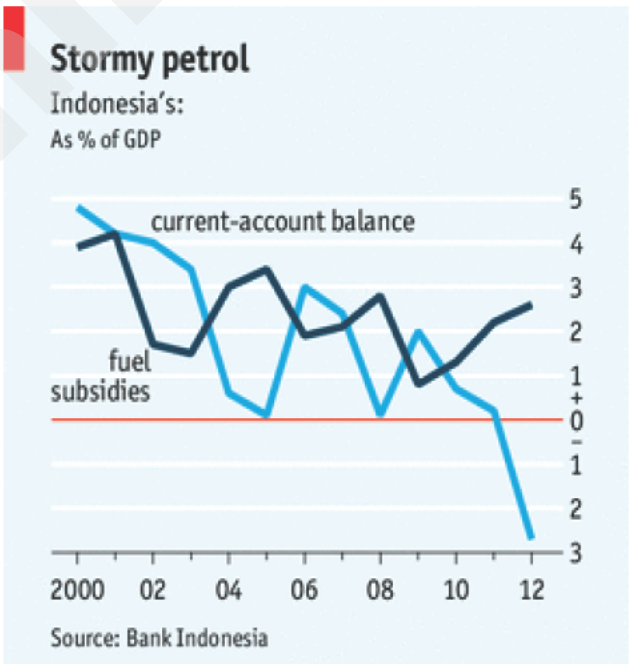
Crude oil prices



Source: Energy Information Administration

Figure 1

Fuel subsidies and current account balance (as % of GDP)



Source: The Economist

Figure 2

Questions

(a) Describe the trend in the crude oil prices between December 2000 and July 2013. [2]

(b) With the use of diagrams, explain how the allocation of resources between biofuels and food may be affected by the government biofuels targets as described in Extract 1. [4]

(c) If 'food prices would rise by anything from 15 – 40%', explain the impact of a price ceiling on food on both the consumers and producers of food. [6]

(d) With reference to the data where appropriate, discuss the possible effects of an increase in fuel duty and a recession on the total expenditure by motorists on fuels. [8]

(e) Discuss the view that the Indonesian government should reduce fuel subsidies. [10]

[Total: 30 marks]

Question 2

China's economic slowdown

Extract 4: Slowdown of China's economy is pushing world toward another economic crisis

As we mark the fourth anniversary of the financial hurricane that nearly wrecked the world economy, dark clouds are gathering once again. As Europe is seized with renewed fear of a Eurozone collapse, and as the US recovery continues to stall, the Chinese economy has slowed down. China's plight also drives the final nail into the coffin of the once fashionable theory of "decoupling," which argued that economies have developed to the point that they no longer depend on the world for growth.

Given the extent to which global demand has contracted, China's main avenue to avoid a hard landing is by engaging in a domestic decoupling of sorts – by moving away from export-driven growth to consumption-driven growth. In the past five years, China has introduced pension and health insurance in a bid to encourage greater domestic consumption. Worried about medical burden and old age, the Chinese have traditionally saved more than they consume. However, persistently high private saving rates suggest limited success in changing economic gears.

A hard landing in China could dash hopes of a global recovery and expose a large number of countries to unforeseen consequences. China's export engine consumed about 20 percent of the world's non-renewable energy, 23 percent of major agricultural crops, and 40 percent of base metals. Not surprisingly, the Chinese slowdown has hurt Australia, Brazil, and African countries, which have been feeding China's export engine with raw materials like metals, agricultural commodities, and petrochemicals.

On the other hand, as its manufacturing sector stalls, the resulting lower global commodity prices could provide a silver lining to countries not endowed with these resources. Weak demand from China could also lower the price of oil and divert some Foreign Direct Investment (FDI) flow away from China.

Source: Adapted from *The Christian Science Monitor,* 8 October 2012

Extract 5: The slow boat in China is good for the region

China's economic growth on the demand side is known to be mainly investment driven due to the export growth. Currently, investment constitutes about half of GDP. As a result, the economy has become one of over-investment and under-consumption. High investment will fall in future, particularly since many large industries are suffering from excess capacity. For more stable long-term growth, domestic consumption must be boosted. Currently, China's consumption level is just too low, at about 40 per cent of GDP compared with 55 per cent for India and 70 per cent for the US.

Even more crucial for China's rebalancing effort is the need to reduce its dependence on exports. This is because China's comparative advantage has been seriously eroded by increasing costs and rising wages. Industrial wages went up 14 per cent last year. The gradual appreciation of the Yuan has put additional pressures on China's export competitiveness. It will be hard for China's exports to grow at double-digit rates from now on.

China's growth pattern actually started to shift last year. But economic restructuring is a slow process that threatens to increase job losses and bring about social unrest. Nonetheless, Beijing will continue to embrace slower growth along with macroeconomic rebalancing. Lower growth means less pressure on the environment and society. It also helps make growth more stable and sustainable.

In addition, 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 South-East Asia.

Source: Adapted from *The Straits Times*, 1 June 2013

Extract 6: Don't blame China's currency for US trade deficit

America's trade deficit with China hit a record $295 billion last year, in part, due to the slowdown of the China economy. Growing trade deficits in manufactured products have eliminated millions of US manufacturing jobs in the past decade. For example, the rise in the US trade deficit with China between 2001 and 2011 alone eliminated 2.7 million US jobs, over 2.1 million (76.9 percent) of which were in manufacturing.

Protectionist sentiments are running high, with recent US complaints filed with the World Trade Organisation. Such measures have been accompanied by a familiar chorus calling for a major revaluation of the Yuan to counteract China's alleged currency manipulation intended to keep its exports cheap.

From China's perspective, admonitions that the Yuan is substantially undervalued seem illogical. China's current account surplus has declined steadily from 10 percent of GDP five years ago to less than 3 percent last year and is projected by some to decline even further. Moreover, officials in Beijing are perplexed that after they allowed the Yuan to appreciate by almost 40 percent since 2005, critics still say the currency is undervalued, as if nothing had happened.

Indeed, rather than complaining about China's exports of relatively labor-intensive products, Americans should ask themselves why their country isn't able to produce the high-tech, capital-intensive components coming to the US. These activities would command the skills and salaries more appropriate for American workers.

Source: Adapted from *Bloomberg,* 19 April 2012

Table 1: Key economic indicators in selected economies

	2008	2009	2010	2011	2012*
US					
Growth in GDP at constant prices (%)	-0.3	-3.1	2.4	1.8	2.2
Inflation rate (%)	3.8	-0.3	1.6	3.2	2.0
Unemployment (%)	5.8	9.3	9.6	9.0	8.2
Current Account Balance (% of GDP)	-4.7	-2.7	-3.0	-3.1	-3.1
China					
Growth in GDP at constant prices (%)	9.6	9.2	10.4	9.2	7.8
Inflation rate (%)	5.9	-0.7	3.3	5.4	3.0
Unemployment (%)	4.2	4.3	4.1	4.1	4.1
Current Account Balance (% of GDP)	9.1	5.2	4.0	2.8	2.3
Singapore					
Growth in GDP at constant prices (%)	1.7	-1.0	14.8	4.9	2.1
Inflation rate (%)	6.6	0.6	2.8	5.2	4.5
Unemployment (%)	2.2	3.0	2.2	2.0	2.1
Current Account Balance (% of GDP)	13.9	16.2	24.4	21.9	21.0

* Forecast

Source: *IMF World Economic Outlook*

Questions

(a) Compare the change in US's real GDP with that of China between 2008 and 2012. [2]

(b) **(i)** Explain how the evidence from Table 1 would suggest that the Chinese economy's fortune is not decoupled from the US. [2]

(ii) State two factors that determine the extent of the impact on national income of decreased export earnings. [2]

(c) With reference to the data where appropriate, analyse the impact on the Singapore economy due to a 'hard landing in China'. [6]

(d) Discuss the policy options available to deal with the trade deficit in the US. [8]

(e) Extract 4 describes China's rebalancing as moving away from export-driven growth to consumption-driven growth. Discuss if China should rebalance the economy. [10]

[Total: 30 marks]

JURONG JUNIOR COLLEGE
PRELIMINARY EXAMINATION 2013

ECONOMICS

Higher 2 **9732/02**

Paper 2

16 September 2013

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.

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 **(a)** Explain the likely combined effect of a decrease in indirect tax and an increase in income on the price and quantity of different types of goods and services. [12]

(b) Discuss what determines whether consumers or producers are more likely to bear the cost of an increase in indirect tax in the markets for goods and services. [13]

2 According to the Compulsory Education Act, a child between the age of 6 and 15 years has to attend a national primary school as a pupil regularly, unless he/she has been exempted from compulsory education.

Adapted from: MOE Website

Discuss whether the Compulsory Education Act is the most appropriate policy adopted by the Singapore government to achieve an efficient allocation of resources in the education market. [25]

3 **(a)** Explain why prices might fluctuate less in an oligopolistic market than in a perfectly competitive market. [10]

(b) Discuss whether monopolistic competition is more likely to be beneficial to consumers than oligopoly. [15]

Section B

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

4 Discuss the relative importance of the multiplier, the price elasticities of demand for imports and exports, and interest elasticity in determining the effectiveness of macroeconomic policies in Singapore and the USA. [25]

5 Singapore's unemployment rate rose to 2.1% in April to June 2011, up from the 3-year low of 1.9% recorded in January to March 2011.

Ministry of Manpower, Singapore, 2011

(a) Explain why a government would want to reduce unemployment in an economy. [10]

(b) Discuss the extent to which demand-side factors are likely to account for the rise in unemployment in Singapore. [15]

6 Discuss whether a small economy, like Singapore, should embrace globalisation to a larger extent compared to a large economy, like China. [25]

JURONG JUNIOR COLLEGE

2013 JC2 ECONOMICS 9732 (H2)

PRELIMINARY EXAMINATION

ANSWER BOOKLET

Question 1

(a) Describe the trend in the crude oil prices between December 2000 and July 2013. [2]

The crude oil prices increased generally between December 2000 and July 2013 [1]. The prices decreased sharply around July 2008 [1].

(b) With the use of diagrams, explain how the allocation of resources between biofuels and food may be affected by the government biofuels targets as described in Extract 1. [4]

The government biofuels targets require biofuels, made from food crops, to meet a certain proportion of the country's energy needs. For instance, biofuels must supply 10% of energy demand for transport by 2020 in Brazil, Japan, Indonesia and European Union. Therefore, **more resources** like land and manpower have to be allocated to the production of biofuels to meet the targets. The supply of biofuels increases, shifting the supply curve to the right from S_1 to S_2 as shown in figure 1 below, increasing the equilibrium output of biofuels from OQ_1 to OQ_2.

As food crops such as maize and sugar are used as input to produce biofuels, there will be less land available to grow crops for food. This will draw resources away from the production of crops for food as crops for food and crops for conversion into biofuels are in competitive supply. The supply of food decreases, shifting the supply curve to the left from S_3 to S_4 as shown in figure 2 below, reducing the equilibrium output of food from OQ_3 to OQ_4.

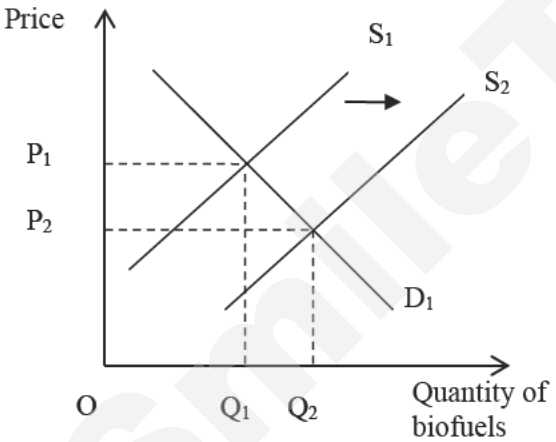


Figure 1

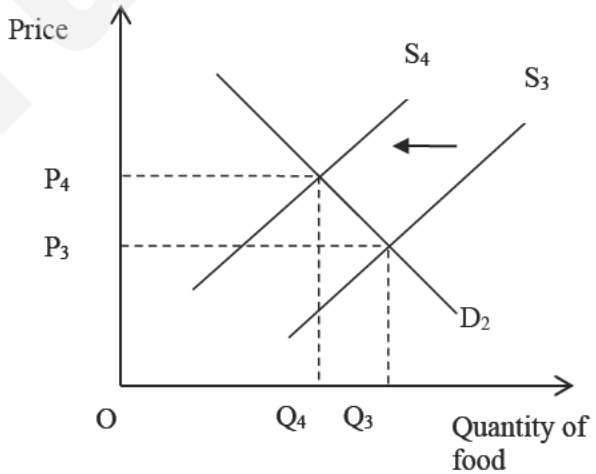


Figure 2

Up to 3 M for explaining more resources are allocated for producing biofuels, increasing supply and fewer resources are available for producing food, decreasing supply. **Plus additional 1 M** for correct diagram (either figure).
Max 2 M for an explanation on either biofuels (with or without a diagram) or food (with or without a diagram).
Max 2 M for an explanation on changes in supply without explaining how resource allocation is affected.

(c) If 'food prices would rise by anything from 15 – 40%', explain the impact of a price ceiling on food on both the consumers and producers of food. [6]

The introduction of a price ceiling on food by governments is to keep food prices down. This will stipulate the highest permissible price that sellers can legally charge. This means that food prices are not allowed to rise above the level set but is allowed to fall below it. In order for a price ceiling to be effective, it must be set below the equilibrium price.

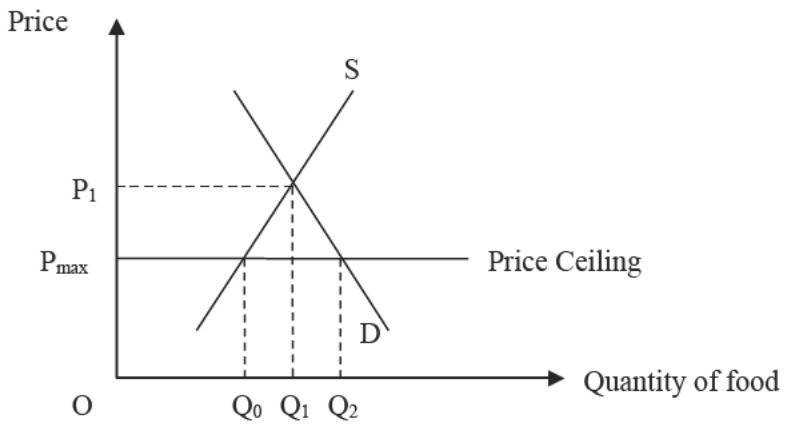


Figure 3

Figure 3 above illustrates the effects of a price ceiling on food to address the problem of rising prices. Without the price ceiling, equilibrium quantity is OQ_1 and the equilibrium price OP_1 is too high. With the price ceiling set at OP_{max}, producers produce food at a lower quantity OQ_0 while consumers are willing and able to purchase a larger quantity of OQ_2. In other words, at the price ceiling OP_{max}, quantity demanded exceeds quantity supplied of food, resulting in a shortage of Q_0Q_2.

Consumers who are able to buy food at the lower price of OP_{max} are better off. However, not all consumers are able to buy food at the price ceiling due to the shortage. Consumers (Q_0Q_1) who are unable to buy food at price OP_{max} but were willing and able to pay the higher price of OP_1 are worse off.

The problem of food shortages at the price OP_{max} may give rise to illegal trading in a black market as stated in Extract 1. Some consumers who are unable to buy at price OP_{max} will be prepared to break the law and pay a price considerably above OP_{max} to get hold of the food, thus worsening the well-being of consumers.

Since quantity supplied is OQ_0 at price OP_{max}, producers sell less food and at a lower price than before the introduction of a price ceiling. Therefore, producers of food are worse off as total revenue earned is lower.

2 M for an explanation of the food shortage.
2 M for an explanation of the impact on consumers.
2 M for an explanation of the impact on producers.
Max 5 M if illegal trading in a black market is not explained.

(d) With reference to the data where appropriate, discuss the possible effects of an increase in fuel duty and a recession on the total expenditure by motorists on fuels. [8]

Fuel duty is an indirect tax on fuels such as petrol and diesel. An increase in fuel duty will effectively add to the costs of production of firms. The increased costs of production will reduce the profits of producers, leading to a fall in the supply of fuels, hence resulting in a leftward shift of the supply curve.

The demand for fuels by motorists tends to be price inelastic with no close substitutes. An increase in indirect tax on fuels will reduce the supply of fuels and raise the price. The increase in the equilibrium price of fuels will result in a less than proportionate decrease in the quantity demanded. Thus, **total expenditure by motorists on fuels increases** as the indirect tax is imposed on fuels with price-inelastic demand. After the increase in fuel duty, the total expenditure by motorists increased by about £10m a day on petrol as indicated in Extract 2. To the lorry drivers, there are no close substitutes to diesel so demand for diesel tends to be price

inelastic. After the rise in fuel duty on 1 January 2011, the annual total expenditure by lorry drivers on diesel increased by £1,200.

On the other hand, there is a fall in income during a recession. As purchasing power falls, the demand for a normal good like cars would fall, hence reducing the demand for fuel. As cars are luxury goods with income elasticity value greater than 1, the demand for cars would fall more than proportionately. Moreover, as fuels are basic necessities to motorists, a fall in income will reduce the demand for a normal good like fuels and **decrease the total expenditure by motorists on fuels.** As mentioned in Extract 2, people reduce their spending during a recession and this may include a cut in spending on normal goods like cars and fuels.

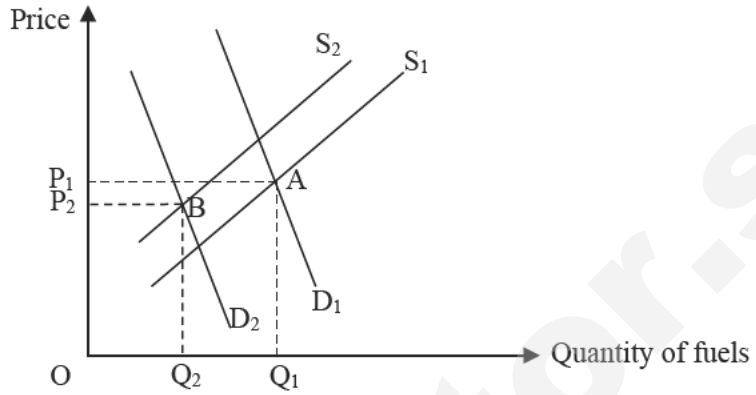


Figure 4

The combined effect of the increase in fuel duty and recession on the total expenditure by motorists on fuels depends on the extent of the fall in demand relative to the reduction in supply of fuels. The fall in demand is likely to be relatively greater than the fall in supply of fuel as more and more motorists might switch to public transport if the fuel duty continues to increase and the economy continues to be in recession. Moreover, as cars are a luxury good, the demand for cars would fall more than proportionately during a recession, hence the resulting fall in demand for fuels would be significant. This leads to a fall in equilibrium price of fuels from P_1 to P_2 and equilibrium output from Q_1 to Q_2. As illustrated by figure 4 above, **total expenditure reduces** from an amount shown by area OP_1AQ_1 to an amount given by area OP_2BQ_2.

L2	**7 – 8 M**: Well-developed explanation of the possible increase and decrease in total expenditure by motorists due to the increase in fuel duty and recession with strong use of case study evidence and appropriate elasticity concepts. **4 – 6 M**: Under-developed explanation of the possible increase and decrease in total expenditure by motorists due to the increase in fuel duty and recession with some use of case study evidence. **Max 4 M** for an explanation of only an increase or decrease in total expenditure **OR** for an explanation of possible increase and decrease in total expenditure but without the combined effect of the increase in fuel duty and recession **OR** for an explanation of possible increase and decrease in total expenditure but without reference to case study evidence	4 – 8
L1	Smattering of valid points.	1 – 3

(e) Discuss the view that the Indonesian government should reduce fuel subsidies. [10]

<u>Arguments for reducing fuel subsidies</u>

The price of crude oil increased from $45 in January 2009 to about $100 a barrel in June 2013 as stated in Extract 3. Rising oil prices will cause higher fuel prices. This means that the fuel subsidies provided by the Indonesian government have to be increased in order to reduce

inflationary pressures in the domestic economy. In addition, fuel subsidies keep cost of fuels low and tend to encourage more car usage. This implies a further increase in the demand for fuels and a greater amount of fuel subsidies is required. The increase in fuel subsidies will raise government expenditure and may contribute to the worsening budget deficit of 3.8% of GDP if the subsidies are not reduced. Extract 3 also shows that fuel subsidies are expected to cost 199.9 trillion rupiah or 13.3% of the Indonesian government's revenue.

Indonesia has become a net importer of oil since mid-2000s. The higher consumption of fuels due to fuel subsidies led to the expenditure on imported oil to increase to $39 billion. If the subsidies are not reduced, consumption of fuel and expenditure on imported oil will continue to rise. Extract 3 also indicates that the value of exports has fallen at the same time. This contributed to the current account deficit in 2012 and a depletion of foreign reserves. Figure 2 shows that while the fuel subsidies were around 2.5% of Indonesia's GDP in recent years, current account balance tends to worsen and was in deficit recently. Moreover, the increase in the value of imports and fall in the value of exports will increase the supply and reduce the demand for Indonesian rupiah respectively in the foreign exchange market. The depreciation of the rupiah by 15% against the dollar since mid-2011 may also invite imported inflation as imports will become more expensive in rupiah.

The use of fuel subsidies has encouraged the use of fuels and this has worsened the problem of traffic congestion as mentioned in Extract 3, resulting in market failure. The reduction of fuel subsidies will bring about a better allocation of resources. Consumers will then have to pay a higher price for fuels, therefore discouraging over-consumption of fuels that are subsidised by the government and reducing over-usage of cars, thus reducing the congestion problem.

<u>Arguments against reducing fuel subsidies</u>

Fuel subsidies are used to reduce the cost of living of the low-income earners as part of the redistribution policy to attain the objective of equity. A reduction in fuel subsidies will increase the price of fuels and the poor may not be able to afford the basic necessities. This may lead to protests and social unrest (Extract 3) which is detrimental to economic growth. Despite the compensatory cash handouts to be given to 15.5m poorer households as stated in Extract 3, middle-income households are not eligible but they are also affected adversely by the increase in prices of fuels.

A reduction of fuel subsidies is likely to cause inflation to increase to 7.2% in 2013, and this will reduce profitability of firms and investment tends to fall. Economic growth will then be affected adversely.

<u>Conclusion</u>

In conclusion, the Indonesian government **<u>should reduce fuel subsidies</u>** as providing fuel subsidies requires huge amount of government expenditure on subsidies and is not sustainable. It is a short-term measure to keep prices of fuels down that does not tackle the root causes of the problem. People also tend to over-consume fuels without realising the actual cost. To reduce the budget deficit, the Indonesian government may need to raise tax rates but this would have disincentive effect on work effort. In addition, there is opportunity cost for providing fuel subsidies as the resources can be used for alternative projects such as education and infrastructure that are important to a developing country. Potential economic growth of the Indonesian economy may be hindered as a result of a lack in spending to enhance the productive capacity of the economy.

While fuel subsidies are to be reduced, the Indonesian government still needs to provide targeted fuel subsidies for the poor to ensure equity is attained. However, it is difficult to determine which are the poor households who need the fuel subsidies.

Although the reduction of fuel subsidies helps to attain a better allocation of resources, it is not sufficient to attain an efficient allocation of resources. Due to the presence of negative

externalities while using fuels, additional measures need to be implemented to make consumers internalise the external costs generated.

L2	Well-developed explanation of whether the government should or should not reduce fuel subsidies with strong use of case study evidence.	4 – 6
L1	Under-developed explanation of whether the government should or should not reduce fuel subsidies. OR Well-developed one-sided explanation of whether the government should or should not reduce fuel subsidies.	1 – 3

E2	Will apply relevant economic concepts to make a judgement based on the root causes of the problems, effects in short run and long run, additional measures required etc.	3 - 4
E1	Will make a judgement but the application of economic concepts will be superficial.	1 – 2

Suggested Answers for CSQ2

(a) Compare the change in US's real GDP with that of China between 2008 and 2012. [2]

Similarity: Both countries' real GDP increased between 2008 and 2012. (1)
Difference: China's real GDP increased faster than that of the US. (1)
Or
US's real GDP fell from 2008-2009, then increased from 2010-2012, while China's real GDP increased throughout. (1)

(b) (i) Explain how the evidence from Table 1 would suggest that the Chinese economy's fortune is not decoupled from the US. [2]

As the US economy suffered a fall in national income in 2009, the fall in purchasing power and consumption will cause a fall in demand for imports. (1) This will cause a fall in the demand for China's exports and thus the export revenue of China falls, resulting in a worsening current account surplus as a percentage of GDP for China from 2008-2009. (1)

(ii) State two factors that determine the extent of the impact on national income of decreased export earnings. [2]

The size of the fall in export earnings (1) and the size of the multiplier (1). The size of the multiplier depends on the size of marginal propensity to import, tax and save.

1 M *if MPM, MPT or MPS are stated as factors with no reference to the multiplier.*
2M *if MPM, MPT or MPS are stated as factors with reference to the size of the multiplier.*

(c) With reference to the data where appropriate, analyse the impact on the Singapore economy due to a 'hard landing in China'. [6]

<u>Negative impact</u>
A hard landing in China will lead to undesirable impact on the macroeconomic variables of Singapore. As it dashes hopes of a global recovery, this will lead to a fall in confidence of consumers and investors in China. A lower expected income will lead to a fall in consumption and a fall in expected profits will lead to a fall investment. The fall in consumption and investment will cause a fall in AD and NY will fall by a multiple due to the multiplier. The fall in purchasing power will cause a fall in consumption and thus a fall in the demand for imports. This will cause a fall in the demand for Singapore's exports and thus the export revenue of Singapore falls. Ceteris paribus, a fall in net exports will worsen Singapore's <u>current account</u>.

Moreover, China is a major importer of raw materials, thus Singapore may suffer from a fall in export of petrochemicals to China. (Extract 4)

A fall in net exports will result in a fall in aggregate demand (AD) and a multiplied fall in national income via the multiplier, causing a fall in <u>actual growth which dampens Singapore's growth</u>. As seen in table 1, a slowdown in the China's economy has led to a slowdown in Singapore's real GDP growth between 2010 to 2012. A fall in production will lead to a rise in <u>cyclical unemployment</u> as the demand for factors of production such as labour decreases.

The extent of the impact can be significant given that the current account (% of GDP) is a large component of GDP in Singapore, as shown in table 1.

<u>Positive impact</u>
However, Singapore may not suffer from China's hard landing. As seen in Extract 4, resource poor countries such as Singapore can benefit from the lower commodity prices due to the lower demand for raw materials in China. As Singapore imports most of her raw materials, imported inflation will fall. Lower commodity prices will lead to a fall in cost of production. This increases the SRAS, thus reducing <u>cost-push inflation</u> and increasing <u>actual growth</u>.

In addition, weak demand in China can divert some foreign direct investment (FDI) to Singapore, thus improving the capital account. Increase in FDI also leads to a rise in AD and a multiplied increase in national income, hence increasing actual growth. In the long term, an increase in investment will increase the capital stock and enhance Singapore's productive capacity and potential growth.

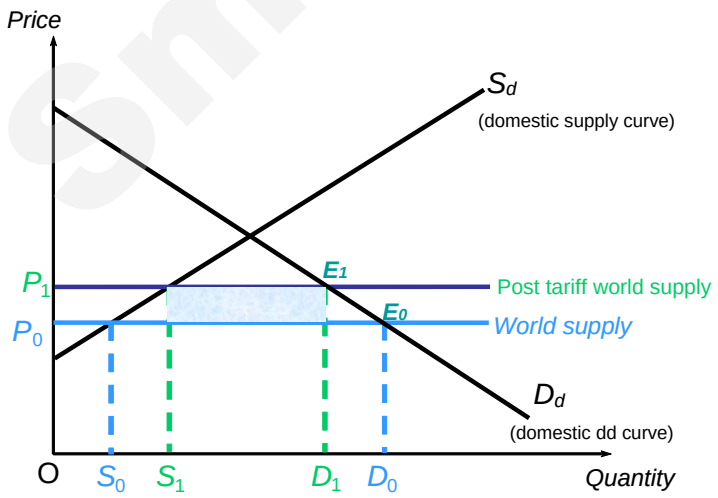
Level	Description	Marks
L2	Well-developed explanation of the positive and negative macroeconomic impact with strong use of case study evidence.	**5-6**
	Under-developed explanation of the positive and negative macroeconomic impact with some use of case study evidence. Or Well-developed explanation of the negative **or** positive macroeconomic impact with some use of case study evidence.	**3 - 4**
L1	Smattering of valid points.	**1 – 2**

(d) Discuss the policy options available to deal with the trade deficit in the US. [8]

Protectionism

One of the policies that can be implemented is protectionist measures, such as a tax on imports. It increases the price of imports. The figure below shows that 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. Assuming that the demand for imports is price elastic, an increase in the price of imports would lead to a more than proportionate fall in the quantity demanded for imports, leading to a fall in import expenditure, thus helping to reduce the trade deficit.

However, consumers do lose in a big way as they are getting less of the product and have to pay a higher price. Their loss, in fact, more than offsets the gain to producers and the government, leading to a welfare loss to the society. Besides, protectionist measures will make US's trading partners poorer, hence reducing their purchasing power for US exports and worsening US trade deficit in the long run.



Supply-side policies

Extract 6 states that US should ask themselves why their country isn't able to produce the high-tech, capital-intensive components that are being imported. The root cause of the trade deficit might be due to the loss of comparative advantage in such goods. The high salaries of the US workers might have increased cost of production and eroded the comparative advantage. Instead of reducing

China's imports, US should work on increasing the competitiveness of its exports. This can be achieved through supply side policies (SSP). SSP can be implemented to educate and train workers, so as to increase the productivity of the workforce. At the same time, research grants can be given to create new technology or invent better production processes. All these will lower the average cost of production, hence making the exports price competitive.

However SSP is a long term policy and it requires the receptiveness of workers. Receptiveness of the workers depends on interest, inclination and age. Besides, employers may not be willing to foot the bill for fear of workers job hopping.

In addition, it requires huge funding which might worsen the US budget deficit.

Trade Policy
A Free Trade Agreement (FTA) is a legally binding agreement between 2 or more countries to enjoy a myriad of benefits such as tariff concessions, preferential access to certain sectors, easing investment rules, faster entry into markets and Intellectual Property protection. The US government can sign FTAs with more countries to enlarge their export markets.

In addition, there could be more aggressive marketing of US exports through trade fairs and advertisements. This will increase the demand for US exports.

While FTAs bring about trade creation, it also causes trade diversion, where trade is diverted from a more price competitive partner to a less price competitive partner. This goes against the theory of comparative advantage. In addition, aggressive marketing would incur greater expenditure, which is a strain on the fiscal balance.

Judgment
The US needs to implement a combination of policies like signing more FTAs and SSP to solve the trade deficit due to the limitations of each policy. It is unlikely that the root cause of the problem is due to China's under-valued currency, as revaluation of the Yuan by almost 40% since 2005 did not seem to improve US's trade deficit. In fact, China's current account (% of GDP) surplus has declined to less than 3% in 2012 (Extract 6 & Table 1).

The root cause of the problem is most likely due to a loss of comparative advantage. Hence supply side policies would be best to solve the trade deficit. Nonetheless, it depends on the efficiency of the government and whether there are enough funds in the US to do so.

Level	Description	Marks
L2	Well-developed explanation and limitations of 2 policies that the US government can use to solve the trade deficit. To obtain **top L2 (7-8),** there should be a reasoned assessment (evaluation) on the policies that US should pursue. Max 4m if only 1 policy is well explained and evaluated.	**4 - 8**
L1	Under-developed explanation of the policies that the US government can use to solve the trade deficit.	**1 – 3**

(e) Extract 4 describes China's rebalancing as moving away from export-driven growth to consumption-driven growth. Discuss if China should rebalance the economy. [10]

Thesis: China should rebalance the economy

In view of the slowing global economy (Extract 4), China should mitigate the fall in national income by reducing the reliance on exports and encouraging domestic consumption. This ensures that

China will be less vulnerable to external shocks, thus preventing large fluctuations in national income.

For more stable long-term growth, domestic consumption must be boosted to increase the utilisation of the capital goods. Extract 5 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 bring about actual growth and stimulate investment spending.

In addition, net exports are expected to slow down. This is because China's comparative advantage has been seriously eroded by increasing costs due to rising wages, translating to increased prices of exports. The gradual appreciation of the Yuan further increases the price of China exports in foreign currencies, as more foreign currencies have to be exchanged for the Yuan. Assuming a price elastic demand for exports, quantity demanded will fall more than proportionately, leading to a fall in export revenue. The appreciation of the Yuan will also cause imports to be cheaper in Yuan. Assuming a price elastic demand for imports, quantity demanded will increase more than proportionately, leading to a rise in import expenditure. A fall in export revenue and rise in import expenditure will cause net exports to fall, hence the need for China to move from export-driven growth to consumption-driven growth.
Increasing domestic consumption increases current standard of living (SOL). As seen in Extract 4, the government has increased the pensions and health insurance of the population. This increases the purchasing power to consume more goods and services, thus increasing the quantitative aspect of SOL. In addition, as the health of the population increases due to greater affordability of healthcare services, they have longer life expectancy, hence enhancing the qualitative aspect of life.

Moreover, rebalancing slows down the economic growth, which slows down production and leads to less environmental degradation (Extract 5). This may improve the quality of air as less air pollutants are emitted, hence improving the qualitative aspect of SOL.

Anti-Thesis: China should not rebalance the economy

Extract 4 suggests that persistently high savings rate means that domestic consumption has not increased to a large extent. Thus rebalancing has limited success.

In addition, increased pension payments from the government will increase fiscal cost, which may worsen the budget balance. There is also opportunity cost of funds used as the funds could be channelled to more productive spending such as education and healthcare.

Extract 5 mentions that economic restructuring is a slow process, suggesting that there is a lack of available skilled labour to produce the type of goods required for domestic consumption. As displaced workers cannot find jobs in the sunrise industries due to a mismatch of skills, structural unemployment increases. As mentioned, high unemployment may also lead to social unrest.

Judgment
Overall, China should rebalance the economy as it helps to sustain growth and reduce short term vulnerability. It seems that the Chinese government is committed to rebalancing as it is prepared to accept lower growth with rebalancing, as stated in Extract 5. Moreover, it helps improve relationship with the global economy as this would improve the external balances of trading partners such as the US. Thus, there will be better global economic outlook, which in turn benefits China. Hence in the long term, rebalancing is likely to be beneficial.

Level	Description	Marks
L2	Well-developed explanation of the reasons for or against rebalancing, with strong use of case study evidence.	**7 - 8**
	Under-developed explanation of the reasons for or against rebalancing with some use of case study evidence.	**4 - 6**

	Max 4m for a one-sided well-developed explanation of whether China should or should not rebalance the economy. Max 4m for answers without reference to case study evidence.	
L1	Smattering of valid points.	**1 – 3**
E1	A well-reasoned assessment (evaluation) on whether China should rebalance the economy.	**1 - 2**

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1 (a) Explain the likely combined effect of a decrease in indirect tax and an increase in income on the price and quantity of different types of goods and services. [12]

(b) Discuss what determines whether consumers or producers are more likely to bear the cost of an increase in indirect tax in the markets for goods and services. [13]

Part (a)

Knowledge, Application, Understanding and Analysis		
L3	Well-developed analysis of the combined effect of a decrease in indirect tax and an increase in income on the price and quantity of different types of goods and services. Top L3 marks (11-12m) awarded to candidates with appropriate use of different examples.	**9 - 12**
L2	Under-developed explanation of the combined effect of a decrease in indirect tax and an increase in income on the price and quantity of different types of goods and services.	**6 - 8**
L1	Smattering of valid points	**1 - 5**

Part (b)

Knowledge, Application, Understanding and Analysis		
L3	Well-developed analysis of what determines whether consumers or producers are more likely to bear the cost of an increase in indirect tax on a good or service	**7 - 9**
L2	Under-developed explanation of what determines whether consumers or producers are more likely to bear the cost of an increase in indirect tax on a good or service.	**5 - 6**
L1	Descriptive knowledge of what determines whether consumers or producers are more likely to bear the cost of an increase in indirect tax on a good or service	**1 - 4**
Evaluation		
E2	For an evaluative assessment based on economic analysis, e.g. depends on relative price elasticity 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**

1 (a) Explain the likely combined effect of a decrease in indirect tax and an increase in income on the price and quantity of different types of goods and services. [12]

Introduction

A decrease in indirect tax and an increase in income will affect the supply and demand for a good or service respectively. The combined effect of a decrease in indirect tax and a rise in income inadvertently increases equilibrium quantity of all normal goods and services but the effect on equilibrium price will depend on the income elasticity of demand (YED) of the good or service.

Body

An indirect tax is a tax on goods and services. A decrease in indirect taxation will effectively reduce the costs of production of firms. The decreased costs of production will increase the firms' profit margins and they will have more incentive to supply, leading to an increase in the supply of the good. This causes a rightward shift of the supply curve from S_1 to S_2.

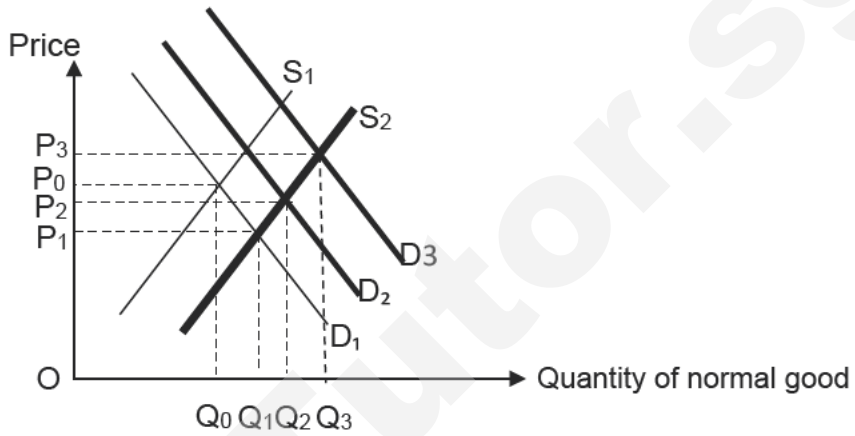


Figure 1

An increase in income will increase consumers' purchasing power and their ability to spend, thus increasing the demand for normal goods and services, leading to a rightward shift of the demand curve, causing both equilibrium price and quantity to increase, assuming supply remains unchanged. The extent of this increase in demand depends on the income elasticity of demand of the good, as the income elasticity of demand measures the degree of responsiveness of the demand for a good to a given change in the level of income, ceteris paribus. The demand for normal goods has a positive relationship with income. When income rises, the demand for normal goods will increase and vice versa.

For a luxury good such as travel packages which takes up a large proportion of income earned, the demand is income elastic (YED > 1) and the increase in demand due to the rise in income will likely be more than proportionate. Using figure 1, the demand curve will shift rightward by a large extent from D_1 to D_3.

In contrast, for a necessity such as basic healthcare services, the demand is income inelastic (YED < 1) and the increase in demand due to the rise in income will likely be less than proportionate. As such, the increase in demand would be to a lesser extent compared to a luxury good, hence the demand curve shifts from D_1 to D_2.

From the above, the combined effect of a decrease in indirect tax and an increase in income will thus cause the equilibrium quantity to increase but an indeterminate equilibrium price as it may reduce, remain unchanged or increase, depending on the relative shifts of the demand and supply curves.

Using the example of a luxury good when the increase in demand outweighs the increase in supply, as seen in figure 1, the combined effect will thus result in the equilibrium price to increase from P_0 to P_3 and equilibrium quantity to increase from Q_0 to Q_3.

On the other hand, in the case of a necessity, the increase in supply outweighs the increase in demand. Hence, the combined effect will thus result in the equilibrium price to decrease from P_0 to P_2 and the equilibrium quantity to increase from Q_0 to Q_2.

In addition, there is also a need to consider inferior goods whose demand has a negative relationship with income. A rise in income will cause a fall in demand for inferior goods and vice versa. For example, the demand for supermarket house brand products will be affected negatively by the increase in income as consumers would choose to buy better quality products. In this case, the increase in income will cause the demand for it to fall. Using figure 2, a decrease in demand will cause a leftward shift of the demand curve from D_1 to D_2 .

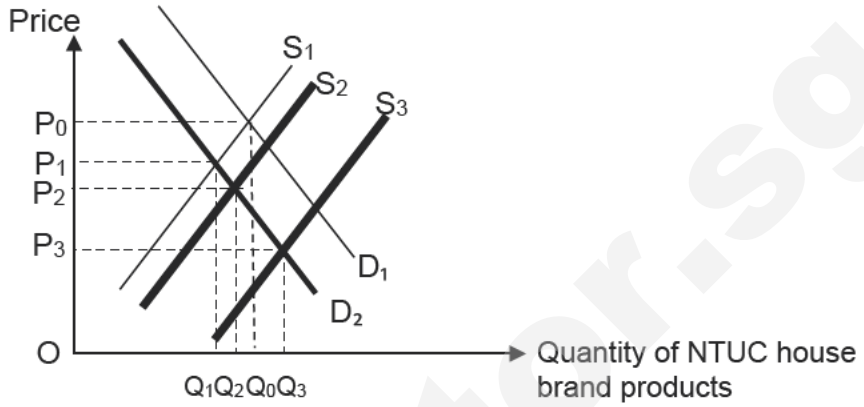


Figure 2

In this case of an inferior good, the combined effect of a decrease in indirect tax and an increase in income will thus cause the equilibrium price to fall but an indeterminate equilibrium quantity as it may reduce, remain unchanged or increase, depending on the relative shifts of the demand and supply curves.

Using figure 2, if the decrease in demand outweighs the increase in supply (S_1 to S_2), the combined effect will thus result in the equilibrium price to decrease from P_0 to P_2 and the equilibrium quantity to decrease from Q_0 to Q_2. If the increase in supply (S_1 to S_3) outweighs the decrease in demand instead, the combined effect will thus result in the equilibrium price to decrease from P_0 to P_3 and the equilibrium quantity to increase from Q_0 to Q_3.

Conclusion

From the above analysis, the quantities of different types of goods and services sold in the market would increase for any normal good but its prices would differ given the combined effects of the rise in income and the decrease in indirect tax. An inferior good will however have indeterminate quantities but a definite decrease in price given the same combined effects of the rise in income and the decrease in indirect tax. The eventual effects on different types of goods and services largely depend on which change in demand or supply dominates, as well as the income elasticity of demand.

(b) Discuss what determines whether consumers or producers are more likely to bear the cost of an increase in indirect tax in the markets for goods and services. [13]

Introduction

Indirect taxes are imposed by the government on producers as explained in part (a). Indirect taxes are taxes imposed by the government on the consumption of goods and services. However, instead of the consumers paying the taxes to the government directly, producers are responsible for the collection and payment of such taxes. Producers are hence usually (but not always) in the position to pass on the taxes to consumers. Consumers hence end up paying for the taxes indirectly in the form of higher prices. The burden of the tax can be passed onto consumers depending on the price elasticity of demand and price elasticity of supply for the product. In most cases, consumers end up paying some (or all) of any indirect tax imposed on the good or service.

Common examples of indirect taxes are taxes on cigarettes and liquor, or sales tax in the form of the Goods and Services Tax (GST) in Singapore, which is imposed on all goods and services consumed by the public in Singapore.

Body

The burden of a tax - its incidence - tends to fall more heavily on whichever side of the market which is less sensitive to price changes. The steepness of the supply and demand curves reflects the degree of responsiveness of quantity to a price change.

The burden of an indirect tax can be passed onto the consumer by the producer - but not all of it. When demand is price inelastic, most of the tax is passed onto the consumer. When demand is price elastic, the producer must carry most of the burden of the tax as they risk suffering a huge fall in quantity demanded if they pass the tax onto the consumer in the form of higher prices.

An increase in indirect taxation will effectively add on to the costs of production of firms. The increased costs of production will reduce the firms' profit margins and they will have less incentive to supply, leading to a fall in the supply of the good, hence resulting in a leftward shift of the supply curve from S_1 to S_2 as seen in figure 3.

For example, if the good has a highly price inelastic demand, such as cigarettes, given that it is a habitually consumed good, but has a relative price elastic supply as it is a manufactured good, the producer is able to pass on most of the tax to the consumer by raising price from P_1 to P_2 (figure 3) without a huge fall in quantity demanded as quantity demanded will decrease less than proportionately from Q_1 to Q_2. The whole incidence of tax amounting to area $BCEP_2$ (total tax revenue = per unit tax x quantity) is borne by both consumers and producers. Thus consumer bears most of the cost of an increase in indirect tax of a larger area BFP_1P_2, in contrast to the remaining taxes amounting to the smaller area $FCEP_1$ which is borne by the producers.

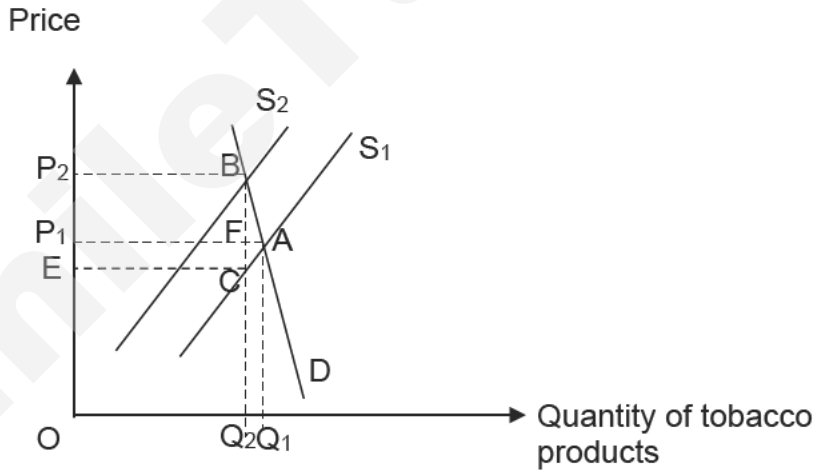


Figure 3

However, if the demand is relative more price elastic than its supply, the producer must absorb and bear most of the tax and accept a lower profit margin on each unit as quantity demanded will fall by a more than proportionate amount when the price increases in this case. When demand is price elastic, the effect of a tax is to raise the price from P_1 to P_2 and a more than proportionate fall in quantity demand from Q_1 to Q_2 (figure 4).

The whole incidence of tax amounting to area $BCEP_2$ (total tax revenue = per unit tax x quantity) is borne by both consumers and producers. The consumers will bear part of the incidence of tax amounting to area BFP_1P_2. The remaining taxes amounting to area $FCEP_1$ is borne by the producers. As such the producer bears a higher tax burden for a good whose demand is relatively more price elastic than its supply. For example, although a certain brand of shoes is a manufactured good that has a price elastic supply, its demand will however be relatively more price elastic given many other available substitutes.

Price

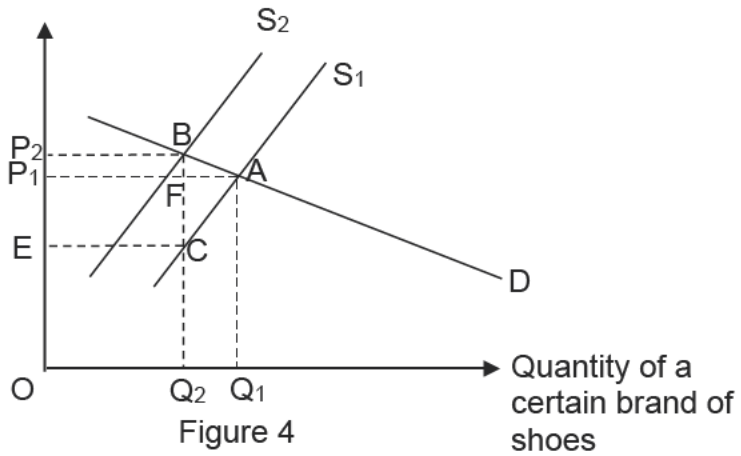


Figure 4

Figure 5 below shows a supply curve which is relatively more price elastic compared to the demand curve. For example, the supply of manufactured goods like electronics which can respond readily to a change in price, due to the stocks held in inventories, is highly price elastic. Thus consumers bear a greater incidence of tax of area $ABP_0\ P_1$ compared to that of area BCP_2P_0 for producers.

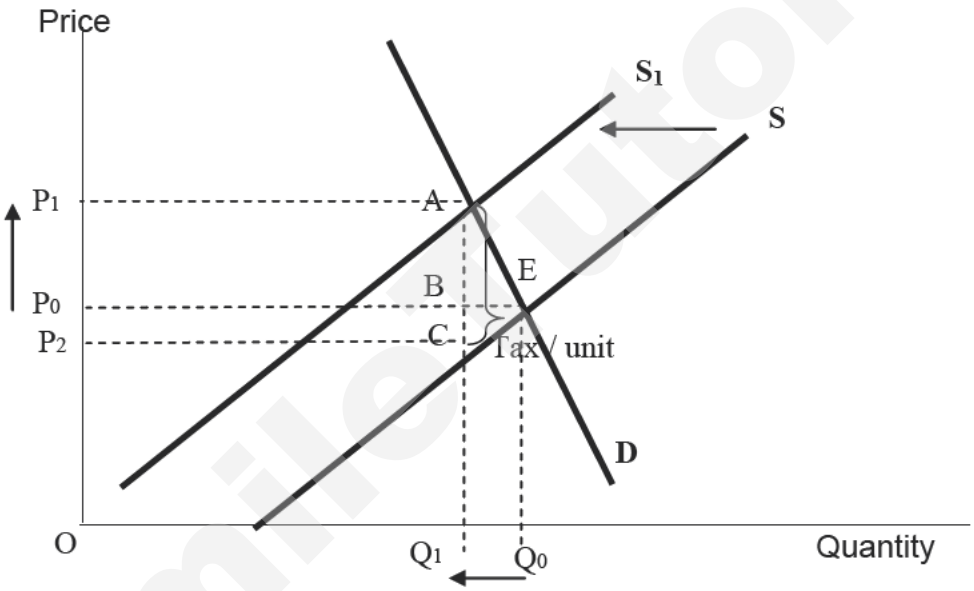
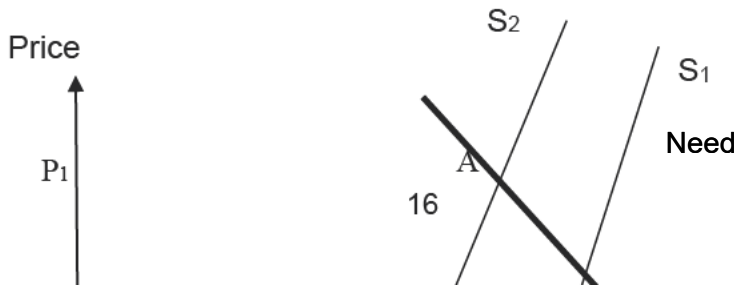


Figure 5

Figure 6 shows a supply curve which is relatively more price inelastic compared to the demand curve. For example, the supply of healthcare services as hospitals take time to build and doctors take time to be trained. Hence the supply of healthcare services cannot respond readily to a change in price and is highly price inelastic. In this case, the producer will bear most of the tax burden. As shown in Figure 6, the consumers will bear part of the incidence of tax amounting to area ABP_0P_1. The remaining taxes amounting to area BCP_2P_0 is borne by the producers. As such the producer bears a higher tax burden for a good whose supply is relatively price inelastic compared to its demand.



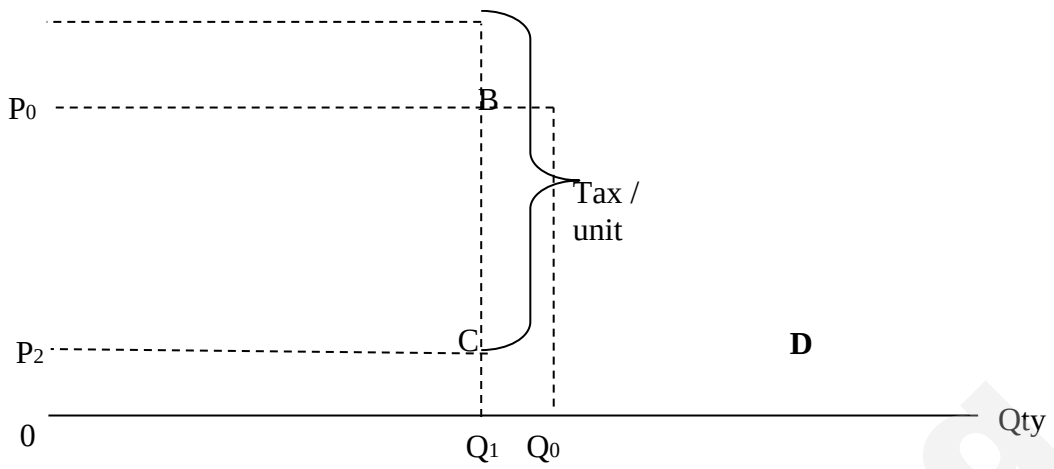


Figure 6

Conclusion

In conclusion, the relative share of the tax burden between consumers and producers is dependent on the relative price elasticities of demand and supply which depends on the nature of the good. The burden of a tax tends to fall more heavily on whichever side of the market whose demand or supply is relatively more price inelastic. Moreover, the price elasticity analysis is done under ceteris paribus condition, in reality, there might be other factors happening concurrently which would affect the tax burden.

Besides the relative price elasticities of demand and supply, the different market structure which the good and service belongs to (perfect competition market, monopolist competition, oligopoly, monopoly), state of economy (crisis, economic boom) and time period (short run versus long run) all affect the extent and whether consumers or producers bears a greater incidence of the tax as these mentioned factors change the PED and PES values.

For example, the degree of competition between producers varies accordingly in different market structures. In some monopolistic competitive industries, the intense price competition between producers may limit the extent to which a firm is prepared to pass on any extra taxes to consumers.

2 According to the Compulsory Education Act, a child between the age of 6 and 15 years has to attend a national primary school as a pupil regularly, unless he/she has been exempted from compulsory education.

Adapted from: MOE Website

Discuss whether the Compulsory Education Act is the most appropriate policy adopted by the Singapore government to achieve an efficient allocation of resources in the education market. [25]

Knowledge, Application, Understanding and Analysis		
L3	Well-developed explanation of why market failure occurs in the education market **+** Well-developed explanation and evaluation of the Act and other policies implemented to help achieve an efficient allocation of resources in the education market. Explanation of policies includes references to the diagram. **Top L3 (18-21m) for answers which are well illustrated with appropriate examples.**	15-21
L2	Well-developed explanation of why market failure occurs in the education market **+** Under-developed explanation of how the Act and other policies help to achieve an efficient allocation of resources. Answer shows little evaluation of the policies.	9-14
L1	For an answer that shows a smattering of valid points. Or Well-developed explanation of why market failure occurs in the education market.	1-8
Evaluation		
E2	For an evaluative assessment based on economic analysis (e.g. combination of policies, relevance of Act).	3-4
E1	For an unexplained assessment or one that is not supported by economic analysis.	1-2

Introduction

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. It 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, resources are allocated efficiently, thus allowing the welfare of the society to be maximized.

Market failure occurs when the free operation of the price mechanism fails to allocate resources optimally. Government intervention is needed in the case of education, which is a merit good, to achieve an efficient allocation of resources.

Body

Part 1: Market failure in the education market

Merit goods are goods that are deemed intrinsically desirable by the government. All merit goods have positive externalities (external benefits) in addition to the private benefits. The government would want the people to consume more of such a good. Positive externalities are benefits to third parties who are not directly involved in the production or consumption of a good. It is not reflected in

the price of the good and there is no compensation paid to third parties. However due to the positive externalities that it has, it will be under-consumed if it is left solely to the free market.

Market failure occurs in the education market due to under-consumption and the government will intervene to ensure more of it is being consumed so as to achieve the socially optimal level of output where society's welfare is maximised.

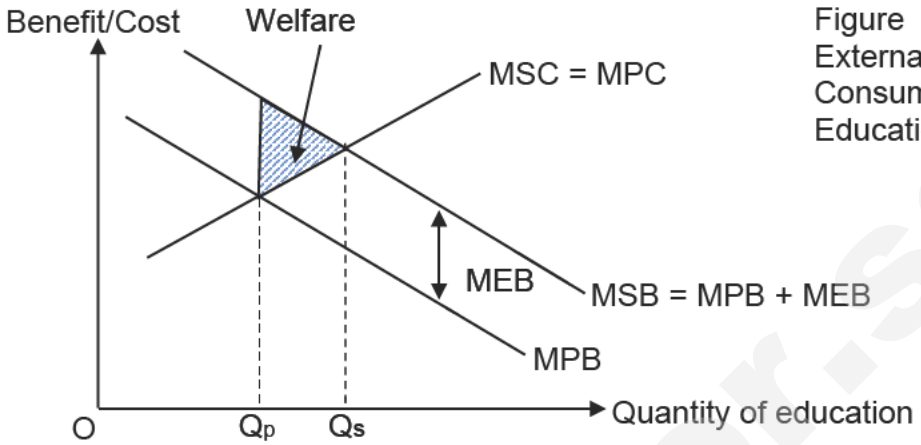


Figure 1: Positive Externality in Consumption of Education

Figure 1 illustrates the situation when the consumption of education leads to third party benefits.

Marginal private benefit (MPB) to an individual would be the higher future earning power for an additional unit of education consumed. The marginal private cost (MPC) would be the education cost incurred such as school fees and the cost of textbooks for an additional unit of education. Marginal social benefit (MSB) is the additional social benefit from the last unit of a good consumed, MSB = MPB + MEB where MEB are the external benefits.

External benefits from education are that it increases productivity and efficiency which results in a better quality workforce and hence contributes to higher national economic growth. Education also causes citizens to be more civic-minded and socially responsible thus leading to less social problems such as crimes.

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 benefits 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 Qp, where MPB = MPC. However, the socially optimal level of output occurs at Qs, where MSB = MSC. Since Qp is less than Qs, it means that the price mechanism is unable to achieve an optimal allocation of resources on its own. There is an under-consumption of education.

Between Qp and Qs, the social benefit of an additional unit of education consumed is higher than the social costs, resulting in welfare loss equivalent to the shaded area. Hence, market failure occurs in the consumption of education and government intervention is required to bring about an efficient allocation of resources.

Part 2: How Compulsory Education Act corrects market failure in the education market

The Compulsory Education Act is a form of legislation implemented by the Singapore government which aims to increase the consumption of primary education. Under the Act, it is mandatory that all children must go through primary education before the age of 15. This is to ensure that the common core of knowledge will provide a strong foundation for further education and training to prepare the

students for a knowledge-based economy. This form of legislation will increase the consumption of education and move it closer to the socially optimal level at Qs.

The law will be effective in ensuring that students go through primary education as penalties are imposed on parents who fail to enrol their child at a designated school. However, the cost of intervention can be high due to the administrative and enforcement cost as the status of all the Singaporean students needs to be checked. Also, the Compulsory Education Act will penalise the very low income group who is unable to afford education. Hence, it should be used together with other policies.

Part 3: Other policies that can correct market failure in the education market

Subsidies

The Singapore government can also subsidise the cost of the different levels of education to ensure that it remains affordable to Singaporean students. For example, primary education in Singapore is fully subsidised by the government and parents only need to pay the miscellaneous fees.

The government can give subsidies per unit, equivalent to the marginal external benefits at Qs, to education providers such as universities so that tertiary education is available to the students at a much lower cost.

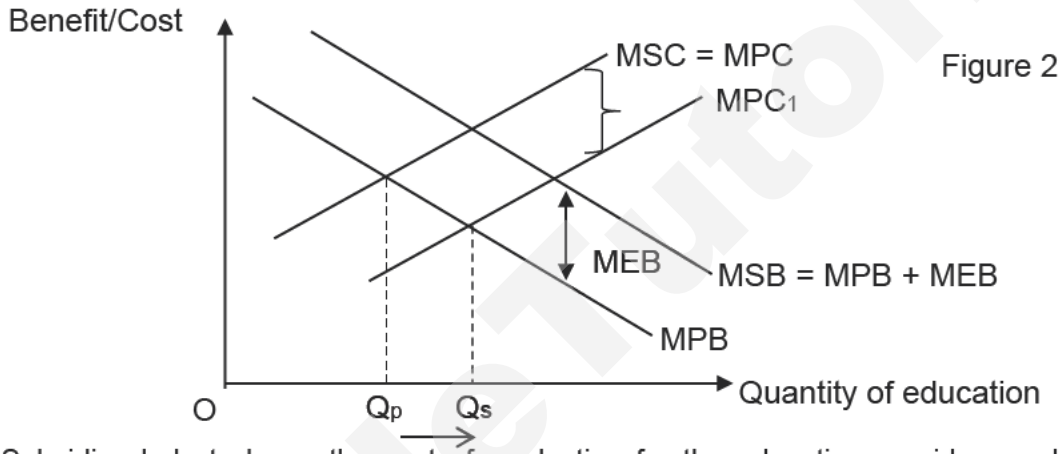


Figure 2: Subsidy

Subsidies help to lower the cost of production for the education providers and this will lead to a lower cost of education. In figure 2, the marginal private cost (MPC) will fall and shift to the right to MPC_1. The level of consumption of education will increase from Qp to Qs, which is the socially optimal level of consumption.

Subsidies is a more flexible policy as the government can adjust the level of subsidies according to the different levels of education or MEB unlike the Act which is a relatively blunt weapon that is restricted to primary education.

Cash grants

To encourage the consumption of goods with positive externalities, the government can also intervene by offering cash grants per unit amounting to MEB at Qs. For example, the Singapore government started the Edusave Scheme where all students from primary and secondary schools, junior colleges, centralised institute, Institutes of Technical Education and special education schools receive annual Edusave funds which can be used for enrichment programmes. Any remaining balance in the Edusave account will be transferred to the Post Secondary Education Account (PSEA) when the student is 16 years old or when he leaves Secondary School/Junior College/Centralised Institute or Government-supported Special Education (SPED) schools, whichever occurs later. The money can then be used by the student for his tertiary education in institutions that are approved by the government.

The cash grant must be spent on education only and this policy will have the effect of shifting the MPB curve to the right to MSB as consumers are more aware of the benefits of pursuing higher education. The level of consumption will increase from Qp to Qs, where is the socially optimal level of output.

However, for subsidies and cash grants, it is hard to measure many of the external effects because of tangible and intangible benefits like a more productive workforce. Hence it is difficult and impossible to find the 'right' amount of subsidy to give to the tertiary education providers and allocate to the Edusave accounts to ensure that the market consumes education at the socially optimal level. If the government underestimates the external benefits, the subsidies or cash grants may be insufficient and ineffective as the market failure will not be corrected. In this case, there will still be a situation of under-consumption of education and welfare loss. If the government overestimates the third party benefits, resource allocation will still be inefficient as there might be substantial wastages due to additional intervention cost, resulting in welfare loss due to overconsumption of education.

Subsidies and cash grant are costly and incurs a burden on the government budget. Moreover, opportunity cost is incurred in the use of government funds as resources are limited and are needed for other essential services like defence and healthcare.

Conclusion and Evaluation

The compulsory education act is an appropriate policy because it will help to improve resource allocation in the education market. However, it is not the most appropriate due to its limitations. Hence it should be used with the other policies like subsidies and cash grants. Moreover, as education can be said to be an essential good with substantial private and external benefits, policies like subsidies and cash grants help to ensure that every household including the lower income group has access to it.

While the Compulsory Education Act is appropriate in enforcing enrolment and participation in primary schools, the Act might be of little relevance in today's context. With greater affluence and parents being more aware of the benefits of consuming education, most Singapore parents now aim for their children to pursue tertiary education. The Act only applies to a very small minority of the Singapore parents who are unable or unwilling to send their child for primary education. In addition, as the Singapore economy move towards a knowledge based economy, there might be a need to refine the Act by extending it to secondary education for instance to help our students better meet the needs of the Singapore economy.

3 (a) Explain why prices might fluctuate less in an oligopolistic market than in a perfectly competitive market. [10]

(b) Discuss whether monopolistic competition is more likely to be beneficial to consumers than oligopoly. [15]

Part (a)

Knowledge, Application, Understanding and Analysis		
L3	Well-developed analysis of why prices might fluctuate less in an oligopolistic market than in a perfectly competitive market. Top L3 marks (9-10m) awarded to candidates with appropriate use of examples.	**7 - 10**
L2	Under-developed explanation of why prices might fluctuate less in an oligopolistic market than in a perfectly competitive market.	**4 - 6**
L1	Smattering of valid points	**1 - 3**

Part (b)

Knowledge, Application, Understanding and Analysis		
L3	Well-developed analysis of whether monopolistic competition is more likely to be beneficial to consumers than oligopoly.	**9 - 11**
L2	Under-developed explanation of whether monopolistic competition is more likely to be beneficial to consumers than oligopoly. **Max 6 marks** for a well-developed one-sided explanation (whether **or** not monopolistic competition is more likely to be beneficial to consumers than oligopoly).	**6 - 8**
L1	Descriptive knowledge of how monopolistic competition is more likely to be beneficial to consumers than oligopoly.	**1 - 5**
Evaluation		
E2	For an evaluative assessment based on economic analysis, e.g., depends on government intervention, the type and nature of each industry.	**3 - 4**
E1	For an unexplained assessment or one that is not supported by economic analysis.	**1 – 2**

3 (a) Explain why prices might fluctuate less in an oligopolistic market than in a perfectly competitive market. [10]

Introduction

Perfectly competitive market and oligopolistic market differ in various features such as the number of sellers, the level of barriers to entry to which firms can enter the industry and the way they behave, thus affecting price stability.

Body

Prices in a perfectly competitive firm

Perfect competition (PC) is a market structure that is characterised by many buyers and sellers such that each seller supplies only a small proportion of the total market supply. As such individual sellers cannot influence price by changing the quantity supplied. Thus, they are price takers who accept the market price. Each firm then faces a perfectly elastic demand curve as seen in Figure 1a.

An example of a market that comes close to the perfectly competitive model is that of agricultural goods. In the market for wheat, each farmer produces an insignificant amount of the market supply such that any changes in his output have no impact on the market price at all. How much the farmer sells his wheat for will depend on the prevailing price of wheat in the market.

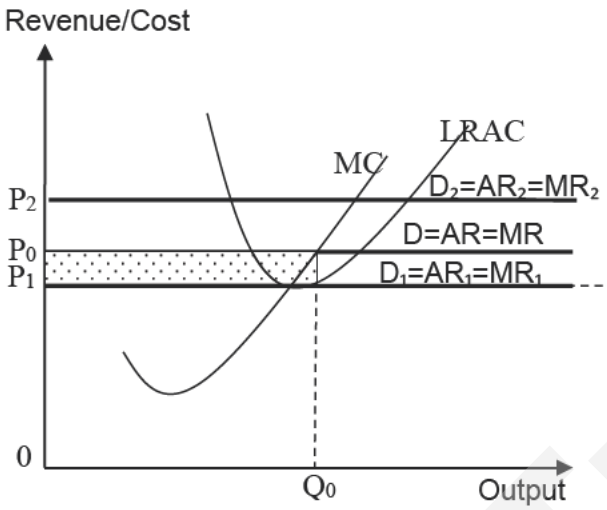


Figure 1a:
Equilibrium of a perfectly competitive firm

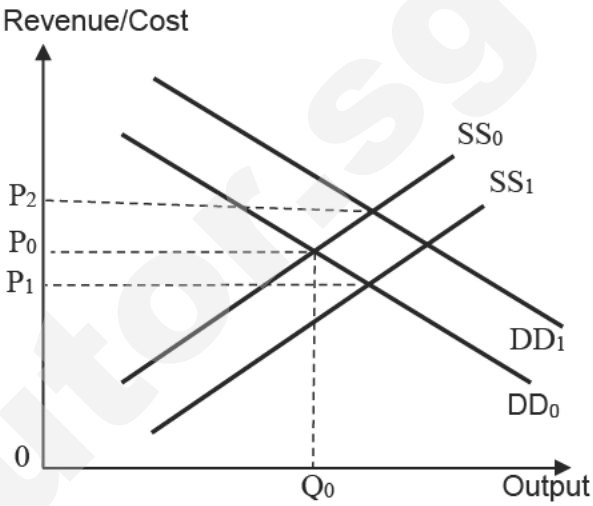


Figure 1b:
Equilibrium of a perfectly competitive market

As shown in figure 1a, each firm is a price taker and accepts the market price of P_0. It can sell as much or as little it wants at that price.

The market for agriculture goods has low barriers to entry. Relatively low capital is required to start growing wheat. Referring to figure 1a, if the perfectly competitive firm is earning supernormal profits in the short run represented by the shaded area, the ease of entry will incentivise other firms to enter the industry and compete with the existing producers. In the long run, the entrance of more firms will result in an increase in market supply. This shifts the market supply curve rightwards from SSo to SS_1 as seen in Figure 1b, causing the market price to fall from P_0 to P_1. Likewise, an increase in market demand from DD_0 to DD_1 will raise the market price from Po to P2. For the perfectly competitive firm which is a price taker, it will take the higher market price as given and also increase its output to the profit-maximizing level. Hence, in a PC market, any change in demand or supply will cause a change in the market price, thus prices tend to fluctuate.

Prices in an oligopolistic firm

Prices fluctuate less in an oligopolistic market than in a perfectly competitive market due to the varying degree of barriers to entry in the respective market. In an oligopoly, there are high barriers to entry. The large scale of Ford Motors enables it to enjoy internal economies of scale and together with the established name and high start-up costs to purchase machineries and engage in R&D, it is hard for new firms to break into the market despite large supernormal profits being earned by oligopolistic firms in the short run. As such, the number of sellers in an oligopoly will not vary much and thus the market share and price for each oligopolistic firm does not change readily.

As an oligopoly is characterised by the dominance of few big firms, an oligopolistic firm produces a significant amount of the total market output. The seller can either influence the price or output. It can sell more by lowering price or increase price but sell less. There is high degree of mutual

interdependence between firms due to the dominance of the few large firms in the industry. Any decision made by one firm will cause strong reactions from the other firms.

The auto industry is representative of an oligopoly. There are only a few large car manufacturers in the US such as Chrysler, General Motors (GM) and Ford Motors. If Ford Motors wants to increase the quantity sold, it can lower the price of its cars so that some buyers will switch from either Chrysler or General Motors.

Suppose the firm is presently charging at the equilibrium price P_0, as illustrated in Figure 2. If it raises the price above P_0, its rivals would not follow by raising their prices. The firm which has raised its price will suffer a more than proportionate fall in its quantity demanded because most of his customers will buy from its competitors who did not raise their prices. Therefore, the portion of the demand curve above P_0 will be price elastic and total revenue would fall if the firm increases its price above P_0. If it lowers its price below P_0, it can expect its rivals to follow suit. The increase in output as a result of the reduction in price will be less than proportionate. Thus, the demand curve below OP_0 will be price inelastic and total revenue would fall if the firm decreases its price below P_0. Thus the firm has no incentive to deviate from the equilibrium price, giving rise to a kinked demand curve as seen in Figure 2 and price rigidity. Hence, prices tend to fluctuate less in oligopoly compared to PC.

The profit maximization oligopolistic firm will produce at the equilibrium output when MC_1 intersects MR_1 along the discontinuous vertical portion at E_1, giving rise to the price rigidity at P_0.

In addition, in the kinked demand curve model, if Ford Motors experiences an increase in the marginal cost from MC_1 to MC_2, the MC still cuts the MR at the discontinuity, and thus the equilibrium price remains unchanged at P_0. The kinked demand model predicts that price is rigid in an oligopolistic market. Likewise, when there is an increase in demand for an oligopolistic firm, the demand curve will shift to the right from AR_1 to AR_2, as shown in figure 2. Assuming that costs remain the same at MC_1, the equilibrium price remains at OP_1.

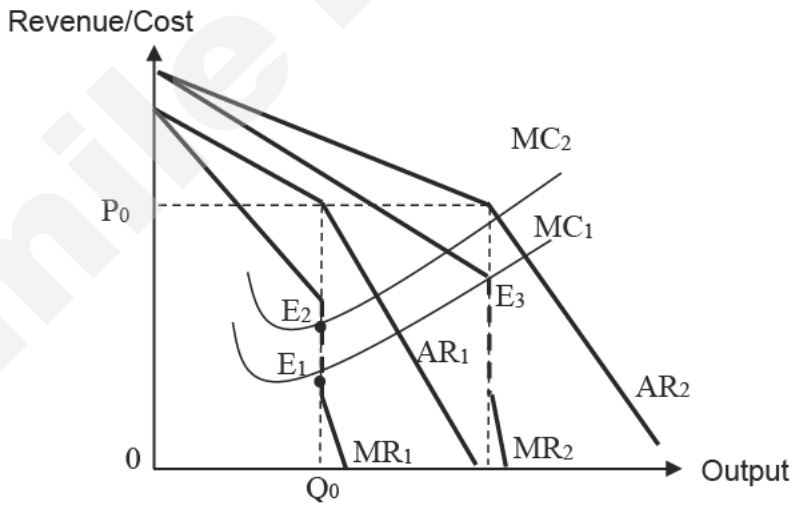


Figure 2: Equilibrium of a competitive oligopolistic firm and price rigidity

Conclusion

Hence, the above explains that due to the different features and behavior of a perfectly competitive and an oligopolistic firm, prices might fluctuate less in an oligopolistic market than in a perfectly competitive market.

(b) Discuss whether monopolistic competition is more likely to be beneficial to consumers than oligopoly. [15]

Introduction
Consumer benefits revolve around prices, quantity, variety and quality of the goods and services consumed. Monopolistic competition and oligopoly differ in various features such as the degree of competition, freedom with which firms can enter the industry and the nature of the products produced, thus affecting consumer welfare differently.

Part (a) explained the features of an oligopolistic firm. Hawker stalls in Singapore on the other hand operate in monopolistic competition where there are many small firms, with each hawker stall producing an insignificant amount of the entire market supply of food. Hawker stall market has low barriers to entry since relatively low capital is required to set-up a hawker stall. Each hawker stall sells a differentiated good, though each stall's food is a close substitute to the other stalls selling similar types of food.

Thesis: Monopolistic competition is more beneficial to consumers than oligopoly
According to the features mentioned above, hawker stalls face a downward sloping, relatively elastic demand curve due to the presence of many close rivals. A profit-maximizing hawker stall produces where marginal cost (MC) equals marginal revenue (MR).

Referring to figure 3, assuming constant-cost condition, a monopolistic competitive firm produces at output Q_0 at price P_0 to maximize its profit at MC=MR, achieving normal profits in the long run.

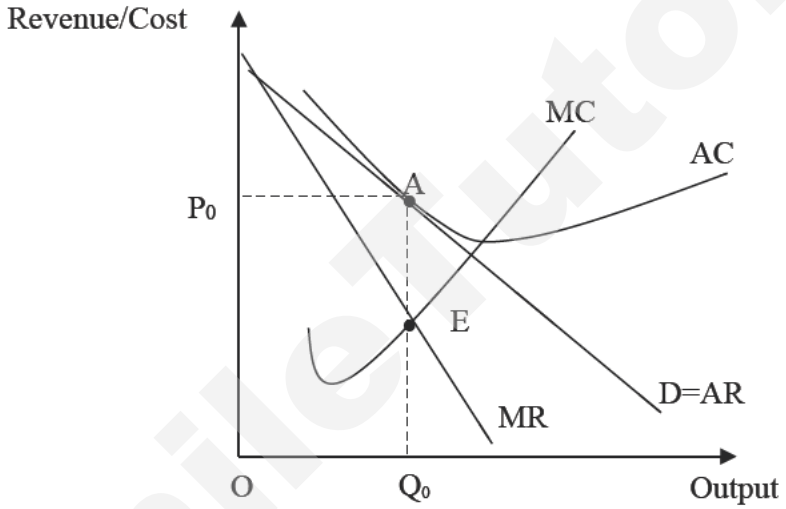


Figure 3: A Monopolistically Competitive Firm Making Normal Profits

Comparing figures 2 and 3, both the hawker stall and Ford Motors are allocative inefficient which refers to the situation where consumer's welfare is not maximised as price is greater than its marginal cost. This means that consumer's valuation of the last unit of the good is greater than the opportunity cost of producing that unit of good. Hence, firms in both market structures are producing less than the socially optimal level of output and charging higher prices.

However, as a monopolistic competitive firm has many competitors in the market, they tend to participate in pricing competition. Given that a hawker stall has some influence on the price of the food they are selling, they can choose to lower their prices to capture a larger market share as quantity demanded will increase more than proportionately due to their price elastic demand. This will be beneficial to consumers in terms of lower prices. Oligopolistic firms on the other hand will not engage in a price war due to the price rigidity as they have little to gain as explained in part (a). Hence prices tend to be lower in monopolistic competition which is more beneficial to consumers.

A monopolistic competitive firm earns only normal profits in the long run as seen in figure 3 as any supernormal profits earned in the short run will be eroded due to the ease of entry which will incentivise other firms to enter the industry and compete with the existing producers. An oligopolistic firm on the other hand will earn supernormal profits due to their high barriers to entry. Given their ability to earn supernormal profits in the long run, an oligopolistic firm like Courts tends to engage in

non-pricing competition such as extensive persuasive advertising, which is a waste of resources and distorts information for consumer choice. This adds to the allocative inefficiency.

Furthermore, if competitive oligopolistic firms turn into collusive oligopolistic firms, they will act like a monopoly and jointly restrict output or raise prices. This worsens efficiency as allocative inefficiency will be even larger than in a non-collusive outcome.

As an oligopolistic firm can make supernormal profits in the long run due to the strong barriers to entry, profits will be not be equally distributed in this market but concentrated in the hands of a few large producers as new entrants are unable to compete for a share of the profitable market. Thus, oligopolies tend to increase the concentration of wealth and income causing inequity in society which reduces consumer welfare. Since monopolistic competitive firms earn only normal profits in the long run due to low barriers to entry, they do not contribute to income inequity

In addition, monopolistic competitive market structure offers more variety than an oligopoly due to the large number of sellers in the market. In monopolistic competition, each firm will try to differentiate their goods from one another so that the demand for their good would be more price inelastic. Therefore consumers have a variety and range of choices of products to choose from. For example, the different hawker stalls in Singapore sell a variety of different cuisine and food.

Hence, the above summarises why a monopolistic competitive firm is more beneficial to consumers.

Anti-Thesis: Oligopolistic firm is more beneficial to consumers than monopolistic competition

Besides engaging in pricing competition, firms also engage in non-pricing competition through product development and differentiation and other strategies so as to increase their profits. Product differentiation as a non-pricing strategy makes the demand for the firm's product more price inelastic. Differentiation can come in the form of physical differences and different marketing and product image. The key is that consumers have different tastes or preferences and hence desire variety.

Although both a monopolistic competitive firm and an oligopolistic firm engage in non-pricing competition, oligopolistic firms have more ability to do so. This is because Courts is likely to have the funds, due to its ability to earn supernormal profits in the long run, to invest in large-scale research and development (R&D) programmes for their products or adopt different marketing strategies. For example, Courts may engage in some form of product differentiation through product promotion, such as 0% interest credit card installment, with the objective of winning over more customers to increase the demand for its products as well as to make the demand more price inelastic. Consumers thus benefit from more options of payment which will increase their satisfaction.

Secondly, there is always the threat of other large firms competing for the market power by the invention of new products or new production techniques, i.e. creative destruction in an oligopoly. Hence to consistently maintain the high barriers to entry, the substantial supernormal profit that can be earned in the long run gives the incentive and ability to the oligopolistic firm to engage in R&D for cost efficient methods of production or significant technological innovation. Monopolistic competitive firms in contrast have no such ability to invest in R&D and no need to maintain any high barriers to entry.

In this case, oligopolistic firms may develop cost saving processes to further ensure that their supernormal profits are not eroded. Therefore, oligopolistic firms tend to be a prime source of innovations especially those that promote technological advances and dynamic efficiency. The technological advancement as embodied in product or service innovation gives consumers a more preferred mix of goods and services and of better quality.

Next, given that oligopolistic firms are large, in their pursuit of profits through large scale production, they are able to reap internal economies of scales which leads to lower average cost of production. For example, Courts is able to reap marketing economies of scale from bulk discounts when it orders a larger number of electronics and electrical devices. In addition, having a large customer

base will enable Courts to spread their advertising cost, lowering their unit cost of production. As such, they benefit from becoming more cost-efficient. Thus, these oligopolistic firms can pass on the cost savings to consumers in terms of lower prices, thus benefitting the consumers.

Since oligopolistic firms are more likely to develop innovations that advance the level of technology and expand production capabilities, they eventually promote economic growth, employment and lead to higher living standards. The creation of such wealth and jobs opportunities can be largely beneficial to consumers.

Conclusion and Evaluation

All in all, the criteria to judge whether monopolistic competition is more likely to be beneficial to consumers than oligopoly depends on the type and nature of each industry and the ability of the government to prevent consumers from being exploited.

For industries which rely on technological advancement like the smartphone markets, oligopoly is more beneficial as it has enabled consumers to enjoy more choices and better quality products. Only oligopolistic firms with sufficient capital can tap on this technology and bring about product development to raise consumer welfare. Conversely, for an industry which does not require the use of technological advancement such as hair dressing, having a monopolistic competitive market structure will be more beneficial to consumers in terms of pricing competition and the differentiated services provided by the different salons.

Moreover, if consumers can avoid most of the costs of oligopoly due to government intervention in the form of anti-monopoly laws to ensure that consumers are not exploited, oligopoly can be more beneficial to consumers.

In a nutshell, a number of key variables are critical to determine whether monopolistic competition is more likely to be beneficial to consumers than oligopoly. The degree of benefits also varies across industries due to the characteristics of the industry.

4 Discuss the relative importance of the multiplier, the price elasticities of demand for imports and exports, and interest elasticity in determining the effectiveness of macroeconomic policies in Singapore and the USA. [25]

Knowledge, Application, Understanding and Analysis		
L3	Well-developed explanation (all 3 concepts) of the importance of the multiplier, the price elasticities of demand for imports and exports, and interest elasticity in determining the effectiveness of macroeconomic policies with strong application to and comparison of	**15 – 21**

	Singapore and the USA.	
L2	Under-developed explanation of the importance of the multiplier, the price elasticities of demand for imports and exports, and interest elasticity in determining the effectiveness of macroeconomic policies with little application to and comparison of Singapore and the USA.	**9 - 14**
L1	For an answer that shows a descriptive knowledge of the multiplier, the price elasticities of demand for imports and exports, and interest elasticity.	**1 – 8**
Evaluation		
E2	For an evaluative assessment based on economic analysis, e.g., nature of the economy which affects the importance of the concepts in determining the effectiveness of macroeconomic policies or other factors which affect the effectiveness of macroeconomic policies.	**3 - 4**
E1	For an unexplained assessment or one that is not supported by economic analysis.	**1 – 2**

Introduction

Macroeconomic policies are implemented by governments to achieve specific macroeconomic goals, namely full employment, price stability, sustained economic growth, exchange rate stability, and a healthy balance of payments (BOP). The various macroeconomic policies include discretionary fiscal policy, monetary policy, supply side policy and wage and incomes policy. The effectiveness of these policies can be affected by the size of the multiplier, the price elasticities of demand for imports and exports and interest elasticity and can vary between countries due to the different characteristics and nature of the economy.

Body: Importance of the multiplier

The multiplier, k, is a measure of the magnitude of change in national income (NY) given a change in autonomous expenditure, e.g. investment (I). The multiplier is shown by the formula:

$$\text{Multiplier (k)} = \frac{1}{\text{mps} + \text{mpt} + \text{mpm}}$$

The marginal propensity to withdraw (mpw) is made up of marginal propensity to save (mps), marginal propensity to tax (mpt) and marginal propensity to import (mpm). The mps measures how much savings change for every additional dollar of income earned, mpt measures how much taxes will change for every additional dollar of income earned and mpm measures how much import expenditure will change for every additional dollar of income earned.

The multiplier is important for government policy decision making when they are considering employing discretionary fiscal (FP) and monetary policies (MP) to achieve full employment and economic growth. FP and MP are demand-side policies which affect the level of aggregate demand (AD) in the economy through influencing the components of AD, namely Consumption (C), Investment (I), Government Expenditure (G), and Net Exports (X-M).

FP is the deliberate attempt by the government to change tax rates or the level of government expenditure in order to influence the level of AD. It can be either expansionary (involves the government raising expenditure and/or reducing taxes) or contractionary (involves government cutting expenditure and/or raising taxes).

To show how the multiplier affects the effectiveness of these demand-management measures, we take the example of an expansionary fiscal policy carried out during an economic downturn, where AD has fallen. The government can spend on infrastructure projects such as building new expressways. A reduction in income tax would stimulate consumer spending through an increase in personal disposable income. As such, purchasing power increases, which will result in an increase in consumption. A cut in corporate tax will increase after-tax profits and thus encourage investment. The increase in G, C and I will increase AD. NY will increase by a multiple times due to the multiplier effect and thus helps the economy to recover from the recession.

Body: Multiplier Effect on NY

Assumptions

- Assuming an economy is below full employment initially.
- A four-sector economy with a mpw of 0.4.

Multiplier Process:

a. Assuming G, I and C increases by $100m, this will lead to an increase in the production of output and income by $100m in time period 1 because an equivalent amount will be paid to the owners of the factors of production in the form of wages, interest, rent and profits.
b. As mpw = 0.4, out of this increase in income, $40m will be saved, taxed and spent on imports. Households will spend 60% of the additional income on consumer goods in time period 2. They will spend a total of $60m and the consumer goods industry would experience an increase in demand, so they too have to expand production.
c. Additional factors of production will have to be employed. They are in turn paid a total of $60m in terms of wages, rent, interest and profits. Resource owners will spend $36m, with the rest being withdrawn from the circular flow of income.
d. This process of alternating spending and income generation would go on until there is no more additional spending. When the process comes to an end, the increase in income is $250m as the multiplier k is 2.5 (k = 1/mpw). $\Delta Y = k\Delta I$ ($250m = 2.5 x $100m). Thus, the initial increase in AD of $100m will result in a multiple increase in NY by $250m via the multiplier process. The larger the mpw, the smaller the size of k, and the smaller is the increase in income given an increase in AD.

Singapore tends to have a small k due to the high mpm and mps. In Singapore, the mpm tends to be relatively high as it is highly dependent on imports for raw materials, machinery and finished goods due to the lack of natural resources. Moreover, due to the Central Provident Fund (CPF), a compulsory savings scheme in Singapore, it has a relatively high mps. Due to the small k, an increase in government spending may not have a significant impact on NY and employment. Therefore, the **effectiveness of fiscal policy is limited.** In contrast, in the case of USA which has a smaller mpm due to her lower dependence on imports as well as a lower mps due to the tendency for US consumers to spend, the k is bigger and hence **the effect on NY and N will be more significant.** Hence fiscal and monetary policies would be **more effective in USA than Singapore, all things being constant.** Thus, the multiplier is relatively more important in determining the effectiveness of FP and MP in USA than Singapore.

Importance of the price elasticities of demand for imports and exports

Price elasticities of demand for imports and exports refer to the extent to which quantity demanded for imports and exports will vary given a change in their prices, c.p.. It varies depending on factors such as the number and closeness of substitutes available, as well as the import dependence of a country.

Price elasticities of demand for imports and exports is most important when the government is considering employing exchange rate changes, such as depreciation/devaluation of a currency or appreciation/revaluation of exchange rates, which can affect the prices of imports in terms of local currency and the prices of exports in terms of foreign currency. This is frequently carried out as a policy to improve a country's balance of payments (BOP) position, i.e. when the country encounters a persistent BOP deficit due to a balance of trade (BOT) deficit.

For example, through a depreciation, a government hopes that export revenue can be increased

through a lowering of exports' prices (in terms of foreign currency) while import expenditure can be reduced through increasing the prices of imports (in terms of local currency). With a rise in export revenue and a fall in import expenditure, BOT will improve and in turn, improve BOP c.p..

However, for a depreciation to be effective at improving BOT, it must satisfy the Marshall-Lerner (M-L) condition which states that if the sum of the price elasticities of demand for exports and imports is greater than one, depreciation will cause X-M to increase. Therefore, in assessing the effectiveness of depreciation, consideration must be given to the price elasticity of demand for both exports and imports.

Both Singapore and USA are likely to fulfill the M-L condition as the price elasticity of demand for their exports is likely to be elastic due to the availability of substitutes. However, the extent of the effectiveness will differ due to their different values for the PED for imports. Singapore's lack of natural resources means that we have to import most of our foodstuffs for domestic consumption and raw materials, machinery and fuel for domestic industrial production. Import content is also a very high proportion of final expenditure. In fact, for every dollar spent in Singapore, 54 cents are leaked out of the country as imports. Hence, the PED for our imports is inelastic. A rise in the price of imports due to the depreciation will result in imported inflation. As such, Singapore cannot afford to let her currency depreciate by too much. USA on the other hand is likely to have a price elastic demand for her imports due to her endowment of natural resources, hence she can afford to let her currency depreciate by a greater extent without suffering the adverse effects of imported inflation. **As such, depreciation is likely to have a larger impact on BOP and thus more effective in improving the BOP in the USA compared to Singapore**. Hence, the price elasticities of demand for imports and exports is relatively more important in determining the effectiveness of the use of the exchange rate tool in USA than Singapore.

Importance of interest elasticity

Besides using FP to manage the AD of the economy, expansionary and contractionary monetary policy can also be used. MP refers to changes in money supply and interest rates to affect C and I. The inverse relationship between the interest rate and the level of investment is shown by the marginal efficiency of investment (MEI) schedule, which is downward sloping from left to right. Interest elasticity measures the responsiveness of investment to changes in the interest rates, ceteris paribus. It will be an important concept in the use of MP. For example, to stimulate the economy, an EMP can be carried out where interest rate is reduced. A decrease in interest rates will result in a lower opportunity cost of consumption, giving consumers a greater incentive to spend rather than save causing consumption to increase. In addition, lower interest rates result in lower costs of borrowing, causing consumers to increase their more expensive purchases. The lower cost of borrowing also means that it is now more profitable to undertake investment projects that were unprofitable at higher interest rates, hence investment will increase. The aim is to increase AD through C and I, thereby increasing the NY of the economy and promoting growth.

However, because of Singapore's role as an international financial centre, the Singapore 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 or interest rates in Singapore especially with her being small and open. Singapore is hence a price taker in terms of interest rates. Hence, **MP using interest rates is not effective in Singapore.**

In addition, a decrease in interest rate may not increase investment significantly. Referring to figure 1, a fall in interest rate from Or_2 to Or_1 will cause a more than proportionate rise in investment from OI_3 to OI_1 if the marginal efficiency of investment (MEI) curve is interest elastic as shown by MEI_e. The increase in AD and thus NY will be more significant so MP using interest rates tends to be more effective if MEI curve is interest elastic. However, as FDI makes up a large proportion of investment in Singapore, they have parent companies in their own countries to give them the financial support, hence they are largely unaffected by domestic interest rates. Thus MEI curve is interest inelastic for Singapore. As such, any fall in interest rates will lead to a less than proportionate increase in investment from OI_3 to OI_2, given the interest-inelastic MEI_i curve.

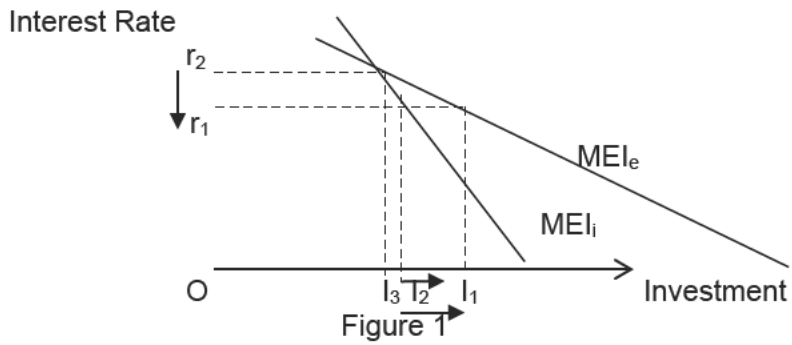


Figure 1

In the USA, the MEI curve is likely to be interest elastic due to the huge proportion of domestic investment which would respond to interest rate changes. The increase in AD and thus NY will be more significant so **MP using interest rates tends to be more effective in USA than Singapore due to its interest elastic MEI.** Thus, the interest elasticity is relatively more important in determining the effectiveness of MP in USA than Singapore.

Evaluation and Conclusion

In conclusion, factors such as the nature of the economy and other government policies in place can affect the importance of the multiplier, the price elasticities of demand for imports and exports, and interest elasticity in determining the effectiveness of macroeconomic policies. In the case of Singapore, these demand management tools are relatively less important in determining the effectiveness of macroeconomic policies compared to USA as they tend to have a limited impact on the economy.

In Singapore, interest elasticity is the least important as Singapore is not able to use the interest rate tool due to her small and open nature. In USA, the multiplier is likely to be the most important due to the large multiplier value. Hence, the US government tends to inject a huge amount of government spending into the economy whenever it is in a recession.

Inspite of the lack of effectiveness in using such demand-management policies to manage the Singapore economy, the government could still implement FP and adjust the exchange rate in the short run to mitigate any changes in AD. However, the government would need to complement them with supply-side policies to manage the economy more effectively.

Besides the multiplier, the price elasticities of demand for imports and exports, and interest elasticity, there are also other important factors like the confidence level which would determine the effectiveness of macroeconomic policies. For example, a tax cut employed in an EFP may not affect consumption and investment much if overall 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 despite the tax cuts.

5 Singapore's unemployment rate rose to 2.1% in April to June 2011, up from the 3-year low of 1.9% recorded in January to March 2011.

Ministry of Manpower, Singapore, 2011

(a) Explain why a government would want to reduce unemployment in an economy. [10]

(b) Discuss the extent to which demand-side factors are likely to account for the rise in unemployment in Singapore. [15]

Part (a)

Knowledge, Application, Understanding and Analysis		
L3	Well-developed explanation of the costs (3 factors) of high unemployment/benefits of low unemployment. Max 8m if no application to any economy is made.	**7-10**
L2	Under-developed explanation of the costs of high unemployment/benefits of low unemployment.	**4-6**
L1	Smattering of valid points.	**1 – 3**

Part (b)

Knowledge, Application, Understanding and Analysis		
L3	Well-developed explanation of the demand-side and other factors (e.g. supply-side) which accounts for the rise in unemployment in Singapore with strong application to the Singapore economy.	**9-11**
L2	Under-developed explanation of the demand-side and other factors (e.g. supply-side) which accounts for the rise in unemployment in Singapore with weak application to the Singapore economy.	**6-8**
L1	For an answer that shows descriptive knowledge of the causes of unemployment.	**1-5**
Evaluation		
E2	Substantiated judgement on whether demand-side or other factors are likely to account for the rise in unemployment in Singapore. (e.g. importance of factors might change in the LR)	**3-4**
E1	Unexplained judgement on whether demand-side factors are likely to account for the rise in unemployment in Singapore.	**1-2**

(a)

Introduction

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. Unemployment rate is measured as the percentage of the labour force that is unemployed. There are three types of unemployment: cyclical, structural and frictional. Achieving full employment is one of the macro-objectives of the government. High levels of unemployment are costly not only to the individuals and families directly affected, but also to the economy as a whole. This is why a government would want to reduce unemployment in the economy.

Body

Loss in total output

Unemployment leads to wastage of scarce economic resources. An economy with high unemployment is producing **below its productive capacity**. It incurs an economic cost in terms of the **forgone output** that could have been produced if these resources are gainfully employed. This would mean that the maximum possible output that the economy could produce, given resources are fully and efficiently utilized, is not attained. Hence, a government would want to reduce unemployment to minimise the loss in total output.

Fall in consumption and investment

The loss of income when individuals become unemployed will result in **falling levels of consumption** in the economy. This is worsened by the fact that if unemployment rate in the

economy continues to rise or is high, **consumer confidence will be shaken** and households may hold back from spending, even if they are still employed. With a continuous fall in consumer demand, business expectations are affected and firms may hold back from making investments. Firms suffer from lower profits as they lost sales that could have been made had there been full employment. Hence, firms begin to **cut down on investment** and employment. Thus, a government would want to reduce unemployment to stimulate C and I which can help boost economic growth.

Fiscal Costs to the government

An increase in unemployment results in **higher benefit payments** in terms of unemployment benefits and welfare payouts in countries such as the US and UK. The government also **loses tax revenue** since the unemployed do not pay income tax. Moreover, when the unemployed cut their spending, they contribute less to the government in terms of indirect taxes such as goods and services tax. The fall in tax revenue would mean that the government would have **fewer funds available** for infrastructural development which would **hinder economic growth**. Less funds spent on public projects and merit goods would also decrease the standard of living of its citizens. If the government is already running a budget deficit like in the European countries, the loss in tax revenue could possibly lead to a cut in budget spending which in turn exert a contractionary impact on the economy, further worsening unemployment.

Even if the country does not give out unemployment benefits, for example Singapore, increasing unemployment would inevitably entail more government spending to help those who are affected. For example, during the 2009 recession when unemployment was high, the Singapore government increased its expenditure on schemes like the Jobs Credit Scheme which focused on saving jobs, and training programmes for workers.

Loss of investment in human capital

Unemployment wastes scarce resources used in training workers, especially in Singapore where the government invests heavily on the retraining of workers due to the importance of our human capital as we lack natural resources. Workers who are unemployed for long periods become de-skilled as their skills become increasingly outdated in a rapidly changing job market. This reduces their chances of gaining employment in future, which in turn increases the economic burden on the government and society.

Social problems

A person who is unemployed incurs a loss in his income. There is also a possible loss of up-to-date skills. An unemployed person may also suffer from a loss of self-esteem and depression resulting in a decline in health. This can lead to social problems such as rising crime rates and an increase in divorce rates. A high number of people who are unemployed can also lead to social unrest such as those seen in developed countries such as France and Spain during the Eurozone crisis.

Conclusion

A high or increasing level of unemployment would have adverse effects on the individuals affected as well as the economy, hence a government would want to reduce unemployment in an economy. However, some degree of unemployment will still exist in the economy due to structural and frictional factors.

(b) Discuss the extent to which demand-side factors are likely to account for the rise in unemployment in Singapore. [15]

Introduction

There are many causes of unemployment and these can be grouped according to demand or supply-side factors. According to the preamble, the unemployment rate in Singapore has inched up slightly in 2011. This could be due to a combination of demand-side and supply-side factors.

Body: Demand-side factors

Demand-side factors refer to factors that cause a deficiency in AD which leads to cyclical unemployment. It occurs during the downturn of a trade cycle when the AD and AS curves of an economy intersect at a point that gives rise to a level of output and employment below full

employment. During the downswing of a trade cycle, AD decreases. Firms find that 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 reducing workers, leading to an increase in cyclical unemployment.

Factors that lead to a fall in AD are seen by the reduction in any components of AD, such as the decrease in consumption, investment and net exports in Singapore. For example, the US subprime crisis in 2009 and Eurozone crisis in 2011 caused a recession in our trading countries like US and Europe. The fall in their purchasing power cause them to cut back on consumption and thus demand for imports. This is turn leads to a fall in our export demand, thus reducing our export revenue. Ceteris paribus, X-M will fall, causing a fall in AD. NY will thus fall by a multiple times due to the multiplier. The fall in production reduces the demand for labour, thus increasing cyclical unemployment.

Extent

Singapore is largely dependent on exports for its growth. Hence, the fall in demand for exports would contribute significantly to the rise in unemployment in recent times.

Fall in C and I

The US and Eurozone crisis will also cause a fall in confidence of consumers and investors in Singapore due to the weak global economic outlook. Consumers would be hesitant to spend, thus reducing C. Investors would also be more cautious and hold back on their investments due to the pessimistic outlook. C and I will fall, causing a fall in AD. NY will thus fall by a multiple times due to the multiplier. The fall in production reduces the demand for labour, thus increasing cyclical unemployment.

SS-side factors

Rise in COP

Besides demand-side factors, supply-side factors may also be at play. Supply-side factors either refer to a fall in AS or structural rigidities and labour immobility that prevent the economy from reaching full-employment. SRAS might fall due to a rise in cost of production. For example, when the price of oil increased (due to rise in demand from booming economies), COP would rise as oil is an important factor input. The fall in SRAS in Singapore in recent years can be attributed to a fall in labour productivity and rise in wages. Wages have been rising as the government has curbed the inflow of foreign workers by raising foreign workers levy. This has been coupled by a fall in labour productivity over the years. Hence, there is a rise in unit labour costs. Firms that experienced a fall in profit margin may cut back on production leading to a fall in SRAS. Real national income falls and the economy is operating below full employment with workers retrenched as production is reduced.

Extent

If the government continues to impose measures to curb the flow of foreign workers and increase the cost of hiring them, COP would continue to increase in the future, resulting in higher unemployment.

Immobility of labour

Structural rigidities and immobility of labour is another supply-side factor. Immobility can be due to factors such as a lack of relevant skills or education. For example, as a result of globalisation, international firms in Singapore **relocate** labour intensive operations **to low cost countries** such as China and India, transferring many blue collar jobs from Singapore to these developing countries in the process. Examples include textile, furniture and consumer electronics industries. This process is made worse as the new supply of scientific talents emerges in these developing countries, causing international firms to **outsource** and transfer even more jobs to these countries. One example is India's rapid rise to be a call centre hub for many international firms. However, it is not just basic data processing and call centres that are being outsourced to these low-wage countries, but also software programming, medical diagnostics, engineering design, law, accounting, finance and business consulting. As a result, there is structural unemployment in Singapore which occurs when there is a mismatch of available skills by the unemployed and the skills required by the labour market. Those who are retrenched are unable to find employment in sunrise industries due to their

lack of relevant skills. This is especially evident in Singapore in recent years and the unemployed is usually among the older and low-educated workers.

Due to greater competition faced by Singapore in the global arena, the government is continuously trying to restructure the economy to move towards a knowledge-based and high valued-added economy. Some of the sunrise industries that the government is developing include green energy, aerospace and data analytics. Hence there is an increasing demand for high-skilled workers and those who are not able to acquire new skills will lose their jobs permanently. Workers who are retrenched from sunset industries would not have the skills to work in these upcoming industries, thus giving rise to structural unemployment.

Extent
The rise of globalisation and Singapore's push to move up the value-chain would imply that structural unemployment would continue to rise if the government does not refine the education system and implement more retraining programmes to equip our workforce.

Other factors - frictional unemployment
Besides cyclical and structural unemployment, factors affecting frictional unemployment might also be involved. Frictional unemployment refers to the unemployment of job-leavers and school-leavers during the interim when they are taking time to find new jobs or suitable employment respectively. It occurs as a result of imperfect information in the labour market. Employers are not fully informed about what labour is available and workers are not fully informed about what jobs are available and what they entail. Both employers and workers therefore have to search. In recent years, as the aspirations of Singaporeans get higher, they might tend to search longer for a well-paying job or job that would suit their interests, hence resulting in a rise in frictional unemployment.

Extent
The rise in frictional unemployment is likely to be small since it involves a shorter duration. A limited amount of frictional unemployment may be a good thing as workers take the time to find jobs that are well-matched to their skills, eventually raising the productivity of the economy.

Conclusion
To a **large extent, in recent times**, demand-side factors causing the fall in AD are more likely to account for the rise in unemployment in Singapore. The world economic recession has resulted in loss of jobs for Singapore due to the fall in demand for manufactured exports. Structural unemployment however, has always existed as Singapore continues to restructure its economy and increase its export competitiveness.

However as the US and Eurozone economies show signs of recovery and growth, the demand for our exports will increase and demand-side factors will not be that important in accounting for the rise in unemployment. With increasing globalisation and as the economy continues to restructure, immobility of labour and rise in COP would increasingly account for the rise in unemployment if the government does not implement appropriate policies to prepare our workforce for the future or mitigate the rise in COP.

6 Discuss whether a small economy, like Singapore, should embrace globalisation to a larger extent compared to a large economy, like China. [25]

Knowledge, Application, Understanding and Analysis		
L3	Well-developed explanation of the benefits and costs of globalisation to a small economy like Singapore with strong comparison with a large economy like China.	15-21

L2	Under-developed explanation of the benefits and costs of globalisation to a small economy like Singapore with a limited attempt to compare the effects with a large economy like China. Max 12m for a well-developed explanation of the benefits and costs of globalisation to a country.	9-14
L1	For an answer that shows a smattering of valid points.	1-8
	Evaluation	
E2	For an evaluative assessment based on economic analysis (e.g. impact of globalisation depends on government policies, other factors etc.).	3-4
E1	For an unexplained assessment or one that is not supported by economic analysis.	1-2

Introduction

Globalisation is often used to refer to economic globalisation, that is, the increased integration of national economies into the international economy through trade, foreign direct investment, capital flows, migration, and the spread of technology. This results in countries becoming increasingly dependent upon one another. Singapore is an example of a small economy with little natural resources while China is currently the world's second largest economy with abundant resources like land and labour. Hence, they will be affected by globalisation in different ways.

Part 1: Small economies should embrace globalisation to a larger extent than big economies

Increase in trade

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. 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. 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 and higher SOL can be enjoyed.

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. This in turn helps to maintain export competitiveness as the imported raw materials are needed to produce the exports. There is also an increase in consumer welfare as consumers can obtain lower priced goods because trading partners can produce them more efficiently due to their comparative advantage (more cost efficient).

Comparison with a large economy

For a big and resource rich country like China or the US, the gains in these aspects may not be as significant. Due to their large population, their domestic demand might be large enough to drive their economy. In a large economy, the consumption component tends to take up a larger proportion of their aggregate demand and there is a lesser need for them to depend on the net exports component to stimulate actual growth like in the case for Singapore.

Large countries are also likely to have an absolute advantage in most goods and are able to produce most of the goods themselves. Thus, the gains to their citizens of an increase in variety of imported goods and services are less significant than the gains to Singapore.

Therefore, Singapore, being a small nation with little natural resources, has the most to gain from free trade and globalisation. Globalisation enables its citizens to have access to products that Singapore does not produce and thus enjoy a greater variety of goods and services. Therefore, it will lead to an improvement in the SOL of the citizens. Moreover, the increase in export demand and revenue can help to generate much growth and employment. Hence, Singapore should embrace globalisation to a larger extent compared to China.

Increase in FDI

Globalisation also results in a higher inflow of foreign direct investment. 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 c.p., improves the BOP. In addition, I and thus AD will increase and national income will increase by multiple times, resulting in actual growth. In the long run, there is technology and knowledge transfer from these FDI to the economy as well as 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 there can be continued growth without the economy overheating.

Comparison with a large economy

Small economies like Singapore would benefit more as they would need FDI for their economic growth and job creation as domestic investment might not be adequate to enhance the 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. This is unlike the case for the big economies which can afford to depend more on their large domestic investment for economic growth and job creation. Hence, Singapore should embrace globalisation to a larger extent compared to China.

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. Smaller economies like Singapore with limited manpower are now better able to utilize workers from other economies to fill up the vacancies requiring lower level of skills. 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. 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. This will make small economies like Singapore less attractive to FDI and also affect their export competitiveness due to the higher cost of production.

Comparison with a large economy

This is in contrast to the big economies where factor inputs including labour are in abundance. For example, due to their large populations, China and India have a large supply of readily available workers. Thus, they might not benefit as much from the freer movement in labour compared to Singapore which has a tight labour supply. Hence, Singapore should embrace globalisation to a larger extent compared to China.

Income Inequality

Globalisation is likely to lead to a worsening of income inequality as skilled workers get richer while the unskilled workers get poorer. As labour becomes more mobile, the lower skilled or unskilled workers in a small economy like Singapore have to compete with the abundant supply of cheap foreign workers causing their wages to fall. On the other hand, the supply of skilled workers tends to be more limited in supply. Their wages thus increase with the relatively higher demand for them. This is a problem faced by Singapore in recent years where the Gini coefficient value has been steadily increasing to 0.478 in 2012.

Comparison with a large economy

For a large country like China, globalisation has also caused the income inequality problem to worsen especially between the urban and rural areas as the benefits of globalisation do not trickle down to the rural areas. Due to the large of size of the China economy, there tends to be an uneven pace of economic development among the different regions. As such, the income disparity between different regions like the urban and rural areas could be huge. In comparison, for a small country like Singapore, the income disparity might not be that drastic. Hence a big economy should embrace globalisation to a smaller extent compared to a small economy.

Part 2: Big economies should embrace globalisation to a larger extent than small economies

Increase in FDI

For big economies, they might be better able to attract FDI, compared to small economies, as they are better endowed with natural and human resources. For example, the large and readily available labour force in big economies like China and India gives them a natural comparative advantage in labour intensive industries and many manufacturing industries have relocated to China and India to tap on her cheap labour in recent years. The influx of FDI, especially those from the more advanced countries, brought in their expertise in the various fields and assisted in the transfer of technology, management and marketing skills into China. This helped her to improve on efficiency and the quality of products as well as the quality of her labour force, all of which are important factors towards expanding her productive capacity. These FDI also create the much needed jobs vacancies for China as more and more migrant workers move into the urban provinces to seek employment opportunities. Hence, due to the attractiveness of it being a FDI destination as a result of her large labour force and the significant potential benefits that can be reaped from FDI, China should embrace globalisation to a larger extent compared to Singapore.

Loss of comparative advantage leading to structural unemployment

The increase in competition due to globalisation might cause economies to experience a loss in comparative advantage in certain industries, resulting in the closure of such industries. For example, Singapore workers who lose their jobs due to the relocation of low-end manufacturing firms out of Singapore may not be able to acquire new skills quick enough to find employment in sunrise industries, hence contributing to the structural unemployment due to the mismatch of skills. Hence, Singapore has to undergo restructuring from time to time to ensure that she can maintain her niche expertise. In the short run, the economy restructuring will also contribute to structural unemployment due to factor immobility.

Comparison with a large economy

For big economies, they might be more able to deal with this issue as they are better endowed with both natural resources and human resources due to their large size. This enables them to enjoy more options in the development of their niche or comparative advantage areas. Hence, big economies will suffer less in this area. China should hence embrace globalisation to a larger extent compared to Singapore.

Vulnerability to external shocks

As economies become more interconnected and integrated with one another, this may result in increased threats and vulnerability of countries to external shocks. For example, the US sub-prime crisis has proven the vulnerabilities of economies to external shocks. The US sub-prime financial crisis that has snowballed into a global financial crisis affected many countries leading to recessions in these countries.

Comparison with a large economy

Globalisation threats are especially pertinent to small economies such as Singapore and Hong Kong who have to rely on their trade sector for growth. They will bear the brunt of the shock as when their trading partners suffer from a recession, the corresponding fall in demand for their exports and thus export revenue will adversely affect growth, employment and the BOP. Due to its small size, such economies are limited in their attempts to turn to domestic demand to cushion the impact.

However, for the big economies, they have greater room to rebalance the economy from exports towards domestic consumption and investment when the global economy is not doing well. Hence, big economies are better able to deal with external shocks and should hence embrace globalisation to a larger extent compared to small economies.

Conclusion and evaluation

Globalisation brings both benefits and costs to large and small economies. However, small economies like Singapore should embrace globalisation to a much larger extent than big economies like China because the benefits to her is greater and also because it is needed for her survival. This is unlike the case for big economies like China which can turn to her domestic market for her economic development as evident from China's desire to rebalance her economy in recent years.

Besides the size of the economy, it is also important to look at the ability of the government to implement policies to mitigate the costs of globalisation before deciding if a country should embrace globalisation to a large extent. Singapore is well-positioned to benefit from globalisation due to her strong economic fundamentals such as a stable political environment, her stellar economic track record since her independence, well-developed infrastructure and a well-educated workforce. Coupled with appropriate government policies to mitigate the costs of globalisation such as retraining schemes to reduce structural unemployment, Singapore will be able to benefit greatly from globalisation.

MERIDIAN JUNIOR COLLEGE
JC2 PRELIMINARY EXAMINATION 2013
HIGHER 1

H1 Economics 8819/01

Case Study and Essay Questions **16 September 2013**

3 Hours

Additional Materials: Writing Paper

READ THESE INSTRUCTIONS FIRST

Do not open this booklet until you are told to do so.

Write your name, class and register number in the spaces at the top of the answer sheets.
Write in dark blue or black pen.
Do not use staples, paper clips, highlighters, glue or correction fluid.
You are reminded of the need for good English and clear presentation in your answers.

Section A: Case Study (2 Hours 10 Minutes)

Answer **all** questions.

Section B: Essay (50 Minutes)

Answer **one** question.

Begin each question on a fresh answer paper.
At the end of the examination, fasten all your work securely to the cover sheet with the string provided.
The number of marks is given in brackets [ ] at the end of each question or part of a question.

[Turn Over]

This document consists of **10** printed pages and **3** cover pages.

Section A

Answer **all** the questions in this section.

Question 1

The Next Food Crisis

Table 1: Annual Food Price Index (100=2002-2004)

Date	Food Price Index	Meat Price Index	Dairy Price Index	Cereals Price Index	Oils Price Index	Sugar Price Index
2004	103.7	104.9	113.1	99.1	103.5	93.8
2005	103.3	105.8	119.2	91.2	91.3	123.6
2006	108.2	101.2	109.3	103.9	96.0	179.0
2007	127.7	100.7	170.9	134.3	136.8	115.1
2008	147.6	113.2	162.2	175.6	167.8	134.2
2009	123.9	105.0	111.8	137.2	119.2	203.2
2010	139.4	114.6	150.8	137.4	146.1	227.3
2011	154.0	119.5	149.2	167.1	170.7	249.7
2012	141.6	117.0	126.1	161.3	150.6	204.3

Source: Food and Agriculture Organization

Extract 1: Food Prices

The United States Department of Agriculture (USDA) recently released a report that said global output in several key commodities would fall while demand across a number of sectors would rise. The simple and relatively uncontroversial concept of supply and demand would dictate that food prices would increase. Following this announcement, prices did indeed rise. Corn is up 94 percent, soybeans 51 percent, and wheat 80 percent. Current prices are so high that they exceeded a previous record set in 2008, and the United Nations' Food and Agricultural Organization's (FAO) Food Price Index is at an all-time high.

Specifically, there are a number of causes for this dramatic leap. The USDA cited supply side problems, such as floods of Australia, poor weather in South America, and extremely dry weather in Russia last year. In addition, they expect ethanol producers to use more corn for production of biofuels. In a bigger picture, rising global standards of living are leading to more demand for meat. This leads to raising more livestock, which consume a large amount of grain and adds to more stress on already tight supplies.

There's at least a glimmer of good news on the demand side: World population growth, which peaked at 2 percent per year around 1970, dropped below 1.2 percent per year in 2010. But because the world population has nearly doubled since 1970, we are still adding 80 million people each year.

A recent United Nations report estimates that food prices could go up by 40 percent over the next decade. However, supply could be upped with inducements made to cultivate more land in a sustainable fashion, such as in Africa. Better producing

strains of crops can be developed, such as during India's famous Green Revolution. Demand could be reduced if countries could also work to reduce the amount of food supplies turned into biofuels.

Source: Global Policy, February 2011

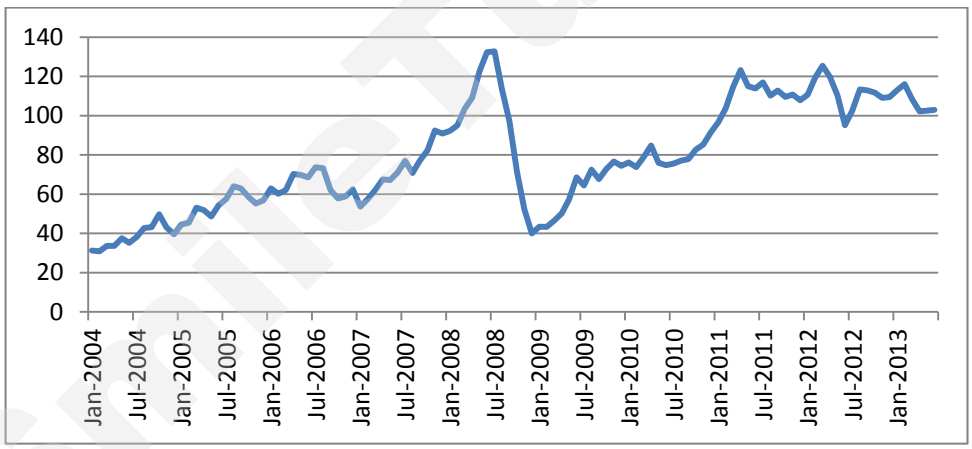
Extract 2: Export bans should be illegal

The environment minister, Caroline Spelman, today risked incurring the wrath of many major food-growing countries by saying it should be illegal to halt food exports even at times of national crisis.

In a clear reference to Russia and the Ukraine, which temporarily halted exports of wheat and other grains in order to protect supplies for their own people during an unprecedented heatwave last year, she said no country should be allowed to interfere with the global food commodity market.

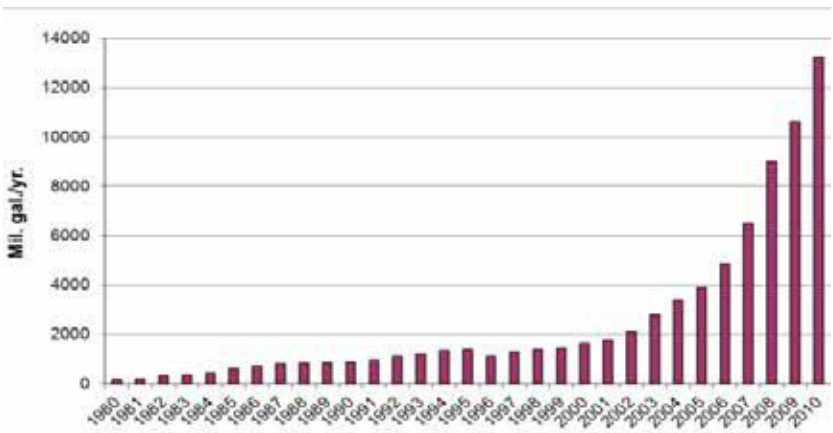
Source: The Guardian, January 2011

Figure 1: Oil Price ($/barrel)



Source: OECD

Figure 2: Ethanol Production (Million Gallons)



Source: FarmFoundation.org

Extract 3: Impact of EU biofuel policies in developing countries

The 2008 decision by EU countries to obtain 10% of all transport fuels from biofuels by 2020 is proving disastrous for poor countries. Developing countries are expected to grow nearly two-thirds of the crops that are mostly used for biofuels.

"To meet the EU 10% target, the total land area directly required to grow industrial biofuels in developing countries could reach 17.5m hectares, over half the size of Italy. Additional land will also be required in developed nations, displacing food and animal feed crops onto land in new areas, often in developing countries," says the report.

Biofuels are estimated by the IMF to have been responsible for 20-30% of the global food price spike in 2008 when 125m tonnes of cereals were diverted into biofuel production. The amount of biofuels in Europe's car fuels is expected to quadruple in the next decade.

The report attributes the massive growth in biofuel production to generous subsidies. It estimates that the EU biofuel industry has already received €4.4bn (£3.82bn) in incentives, subsidies and tax relief and that this could triple to over €13.7bn if the EU meets its 2020 target.

Source: The Guardian, February 2010

Questions

(a) Describe the trend in food prices from 2006 to 2011. [2]

(b) Explain how domestic consumers and producers in Russia and Ukraine are impacted by the halting of food exports in those countries. [3]

(c) **(i)** Describe the relationship between oil price and ethanol production between 2004 and 2010. [1]

(ii) Explain the relationship observed in (c)(i). [2]

(d) **(i)** Using supply and demand diagrams, explain how the use of subsidies to biofuel producers will impact the allocation of resources between biofuel and food. [4]

(ii) Explain one factor that determines the impact of biofuel subsidies on government expenditure. [2]

(e) Assess whether demand or supply factors are more important in explaining the changes in food prices. [8]

(f) Discuss the policy options available to the world's governments to address the rising food prices. [8]

[Total: 30 Marks]

Question 2

Eurozone Crisis

Extract 4: Austerity measures force EU into record recession

Government austerity measures have pushed the Eurozone into the longest recession in European Union (EU) history. Figures released today showed the EU's economy shrank 0.2 % in the first quarter – the sixth quarter in a row of contraction – and there is little indication this will change anytime soon.

In an effort to stem the financial crisis, European nations have raised taxes and cut spending in order to reduce government debt. With private-sector spending also getting cut, so far all these austerity measures have done is lowered economic activity and increased the need for unemployment benefits and other social costs. In response to the measures, protesters across Europe mentioned that "the beatings will continue until the economy improves" against a backdrop of severe unemployment of 4.4 million due to a lack of jobs and an extremely bleak economic outlook.

Howard Archer, IHS Global Insight's chief European economist, wrote today in a note to investors, "the upside for domestic demand in the Eurozone remains constrained by restrictive fiscal policy in many countries, still tight credit conditions, high and rising unemployment, and limited consumer purchasing power despite generally very low inflation".

Thanks to these austerity measures, the economic slowdown that started in Greece three years ago has now spread to France, Italy and Spain, which make up half of the Eurozone's GDP. As recession pushes the EU to reverse back into various protectionist measures, and combined with falling spending power region wide, the effects of the austerity measures are starting to be felt in other parts of the world.

Source: MONEYWATCH, May 2013

Extract 5: Fed's Bullard recommends Eurozone to consider quantitative easing

A top U.S. Federal Reserve official urged the European Central Bank (ECB) on Tuesday to consider employing a U.S.-style quantitative easing (QE) programme to counter slowing inflation and recession in the Eurozone. The Central Bank can implement quantitative easing through the purchase of a predetermined number of bonds or other assets from commercial banks and other private institutions to increase the monetary supply.

With the ECB's main interest rate now at 0.5% and Eurozone inflation at 1.2%, St. Louis Federal Reserve Bank President James Bullard recommended the ECB could consider quantitative easing, or printing money for salvaging the economy. "For the euro area, which has not wanted to do QE, I would say this: as inflation is running pretty low in the euro area, the Governing Council on the ECB may want to consider

a quantitative easing programme," he said in a lecture at Frankfurt's Goethe University.

He also cited Japan's lost-decade of economic stagnation to reinforce his argument that just cutting interest rates was insufficient to ward off a damaging deflationary spiral. "Doing nothing risks the deflationary situation experienced by Japan in recent years," he said.

Sceptics questioned the feasibility given the high leakages as a result of increasing tax rates due to the austerity measures and Eurozone's tradition as the largest world importer of goods and services since its inception, with import of goods and services forecasted at 43% of GDP in 2013.

Source: Adapted from Reuters, May 2013

Extract 6: Eurozone crisis is main risk for Singapore: MAS

The Eurozone crisis is the main risk facing Singapore's economy and financial system, the Central Bank said, warning the nation to brace for "a more adverse turn of events". Ravi Menon, managing director of the Monetary Authority of Singapore, said any sharp deterioration in the Eurozone, one of the city-state's biggest export markets, could hurt economic growth.

"The key risk facing the Singapore economy and financial system is the on-going crisis in the Eurozone," Menon said at a news conference. "While Eurozone governments have taken important steps to deal with the crisis, we must be prepared for a more adverse turn of events."

Singapore, an international financial centre, should brace for "excessive inflows as well as outflows" of capital, which could impact the Singapore dollar. Singapore's economy is on track to expand between 1.0% and 3.0% this year, down from 4.9% growth last year, he said. However, economic growth could dip below 1.0% if the situation in the Eurozone escalates, while China's economy slows down drastically and the United States falls into a recession, he added.

Singapore's trade-driven economy, regarded as a bellwether for Asia, contracted by 1.1% in the second quarter from the previous three-months due to a slowdown in global demand especially from Eurozone, and also other major economies which export aggressively to the EU like China and the US.

Source: AFP, July 2012

Table 2: Economic Indicators of Eurozone*

Year	2007	2008	2009	2010	2011	2012
Change in nominal GDP (%)	5.4	2.4	-3.5	2.8	2.7	0.7
Inflation rate (%)	2.1	3.3	0.3	1.6	2.7	2.5
Unemployment rate (%)	7.6	7.6	9.6	10.1	10.2	11.4

Source: Eurostat 2013

Table 3: Gross Domestic Product (GDP) and its components in selected economies (% of total), 2013 Q1

	EU* (17 countries)	US	Japan
Total GDP (million Euros), current prices	2379167	3130263	976465.3
Composition:	%	%	%
Private consumption of households	57.4	68.8	61.2
External balance of goods and services	3.3	-3.2	-2.5

Source: Eurostat 2013

***EU (17 Countries):**
Belgium, Spain, Austria, Cyprus, France, Portugal, Germany, Italy, Slovenia, Estonia, Luxembourg, Slovakia, Ireland, Malta, Finland, Greece, Netherlands

Questions

(a) **(i)** Explain what is meant by real GDP. [2]

(ii) Using Table 2, describe the trend of real GDP growth rate in Eurozone from 2007 to 2012. [1]

(iii) Explain the link that exists between real GDP and unemployment rate for Eurozone from 2010 to 2012. [2]

(b) "U.S. Federal Reserve official urged the European Central Bank (ECB) on Tuesday to consider employing a U.S.-style quantitative easing programme to counter slowing inflation and recession in the Eurozone.'

(i) Using a diagram, explain how quantitative easing can possibly resolve recession in the Eurozone. [3]

(ii) Using appropriate data, explain the significance of the multiplier in determining whether quantitative easing should be employed by the Eurozone. [6]

(c) Discuss the view expressed by protestors in Extract 4 that EU's standard of living will worsen as a result of the austerity measures. [8]

(d) To what extent does Singapore's approach to international trade require adjustment in response to the Eurozone crisis? [8]

[Total: 30 Marks]

Section B

Answer **one** question from this section.

3 **(a)** Explain the economic justification for government intervention in the markets for [10]
(i) Public goods
(ii) Merit goods

(b) The Health Promotion Board of Singapore has been issuing advisories on the type and frequency of healthcare screenings to go for. They also provide information on healthcare management for individuals.

Discuss the effectiveness of using educational campaigns to encourage greater consumption of healthcare screenings in Singapore. [15]

4 **(a)** Explain the causes of inflation in Singapore. [10]

(b) Discuss if exchange rate policy is the best policy to achieve a low rate of inflation in Singapore. [15]

END OF PAPER

MERIDIAN JUNIOR COLLEGE

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COVER SHEET

H1 ECONOMICS

Section A: Case Study Question 1

Name: _____ Civics Group: _____

Register Number: _____ Tutor: _____

16 September 2013

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At the end of the examination, fasten this cover sheet to your answer scripts for Case Study Question 1 with the string provided before submission.

QUESTIONS ATTEMPTED		MARKS
(a)		
(b)		
(c)	**(i)**	
	(ii)	
(d)	**(i)**	
	(ii)	
(e)		
(f)		
TOTAL		**/30**

MERIDIAN JUNIOR COLLEGE

JC2 PRELIMINARY EXAMINATION 2013

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COVER SHEET

H1 ECONOMICS

Section A: Case Study Question 2

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QUESTIONS ATTEMPTED		MARKS
(a)	(i)	
	(ii)	
	(iii)	
(b)	(i)	
	(ii)	
(c)		
(d)		
TOTAL		/30

MERIDIAN JUNIOR COLLEGE

JC2 PRELIMINARY EXAMINATION 2013

8819/01

COVER SHEET

H1 ECONOMICS

Section B: Essay Question

Name: _____ Civics Group: _____

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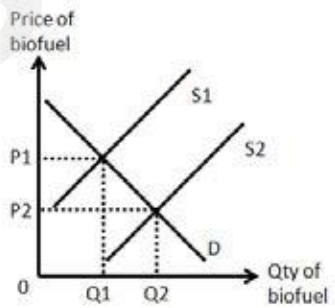
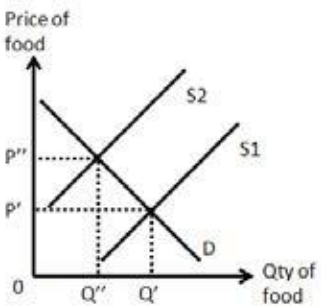
At the end of the examination, fasten this cover sheet to your answer scripts with the string provided before submission.

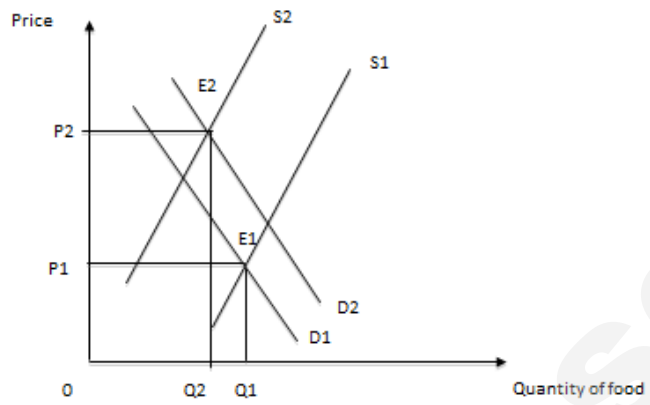
Circle the question number you have attempted.

QUESTION ATTEMPTED		MARKS
Question 3	**(a)**	
	(b)	
Question 4	**(a)**	
	(b)	
Total		**/25**

Answers

(a)		**Describe the trend in the food prices from 2006 to 2011**	**[2]**
		There was an overall increasing trend in the food prices over the period which increased by about 42% Only in 2009 was there a fall in food prices by about 16%	
(b)		**Explain how domestic consumers and producers in Russia and Ukraine are impacted by the halting of food exports in those countries.**	**[3]**
		Increases domestic supply of food à fall in domestic food prices in Russia and Ukraine. Lower domestic prices à improves welfare of consumers (extract 2 "protect supplies for their own people") as food is now more affordable à raises material SOL Increase in SS à fall in price, rise in qty dd à if PED<1 (as food is a necessity), TR will fall à incomes of farmers/producers will be lower	
(c)	**(i)**	**Describe the relationship between oil price and ethanol production between 2004 and 2010.**	**[1]**
		Both oil price and ethanol production have increased between 2004 and 2010, indicating a positive (or direct) relationship.	
	(ii)	**Explain the relationship observed in (c)(i)**	**[2]**
		As oil and ethanol are substitutes *OR they are alternative sources of energy* , the rise in price of oil will cause a fall in quantity demanded of oil and hence, demand for ethanol will increase, thereby causing an increase in equilibrium quantity of ethanol produced, ceteris paribus.	
(d)	**(i)**	**Explain how the use of subsidies to biofuel producers will impact the allocation of resources between biofuel and food.**	**[4]**
		Policies such as subsidies given to biofuel producers will lead to a fall in unit cost of production of biofuel. This leads to an increase in supply of biofuel as producers are willing and able to sell more biofuel at every price level.  Fig 1: Market for Biofuel  Fig 2: Market for Food Crops for biofuel and food crops are in **competitive supply**, i.e. the same land resource can be used to produce either crop (**Evidence:** Extract 3 shows that 125m tonnes of cereals were diverted into biofuel production OR Extract 1 states that ethanol producers are expected to use more corn for the production of	

		biofuels). Assuming that no new land is set aside for biofuel production, hence, with an increase in supply of biofuel from S1 to S2 in Fig 1, less land resource will be allocated to the production of food **,** causing supply of food to fall from S' to S'' (Fig 2). This will lead to an increase in equilibrium price of food (from P' to P'') and fall in equilibrium quantity (Q' to Q''). Thus, there will be an increase in the quantity of resources allocated to the production of biofuel, whereas less resources will be allocated to the production of food.	
	(ii)	**Explain one factor that determines the impact of biofuel subsidies on government expenditure.**	**[2]**
		One factor is the price elasticity of demand. A given per unit subsidy will result in an increase in SS à movement along the demand curve à As the demand for biofuel may be considered a necessity as it is used as a fuel à less than proportionate increase in qty dd à total amount of subsidy (per unit subsidy X new qty) is less than if demand was price elastic à smaller impact on government expenditure.	
(d)		**Assess whether demand or supply factors are more important to explain the changes in the price of food.**	**[8]**
		Identify the change in the food prices. - Based on Table 1 and Extract 1, food prices have been continuously rising until 2011. - This can be explained using demand and supply side factors. Factors affecting the supply of food are: - Floods in Australia, poor weather in South America, and extremely dry weather in Russia last year (Extract 1). - Ethanol producers are using more corn for production of biofuels (Extract 1). This leads to fall in supply of food as food and biofuel crops are in competitive supply (as explained above). - Also, rising oil prices (Figure 1), could further reduce supply of food as oil is an important resource in the production of food. The increase in price of oil will cause an increase in unit cost of production of food, causing a further fall in supply of food. Factors affecting the demand for food are: - Demand has increased due to rising population – the world population has nearly doubled since 1970 (Extract 1). - Rising global standards of living are leading to more demand for meat. This leads to raising more livestock, which consume a large amount of grain and adds to more stress on already tight supplies (Extract 1). Hence, as demand for meat increases, demand for food crop also increases.	



- The fall in supply (S1 to S2 in the figure above) as well as rise in demand (D1 to D2) for food has led to the rising food prices in 2011 as indicated in Table 1 and Extract 1.

The supply of food is relatively price inelastic in the short run (PES<1) as it takes time to grow the food crops and food crops are perishable commodities, making it difficult to maintain stocks of food. Hence, with a rise in demand for food crops from D1 to D2 with supply at S1, the increase in price will be more than proportionate to the increase in equilibrium quantity, causing the 'dramatic leap' in food prices (Extract 1). **OR** The demand for food is relatively price inelastic in the short run (D1) as it is a necessity (PED<1). Hence, with a fall in supply of food crops from S1 to S2 with demand at D1, the increase in price will be more than proportionate to the decrease in equilibrium quantity, causing the 'dramatic leap' in food prices (Extract 1).

Conclusion:

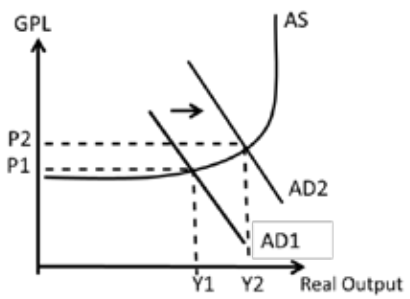
Whether demand or supply factors are more important in determining the changes in the price of food depends on the extent of impact these factors have in explaining the price change. It is likely that the fall in supply of food is likely to outweigh the rise in demand for food as world population growth has been declining (Extract 1), whereas the biofuel subsidies have been responsible for vast quantities of grain being switched into biofuel production instead of food production (Extract 3), causing massive impacts on the supply of food. Also, major producers of food grains such as Australia, South America and Russia have been affected by adverse weather conditions, further exacerbating the problem.

Level	Descriptor	Marks
L3	For an answer that demonstrates analysis, with relevant evidence from the case study, along with evaluation.	7 - 8
L2	For an answer that demonstrates analysis to show how food price may increase in future, with no evaluation or judgement using the evidence from the extracts.	4 - 6
L1	For an inaccurate answer/ an answer with conceptual errors.	1 - 3

(e)		**Discuss the policy options available to the world's governments to address the rising food prices**	**[10]**
		Intro The objective of the policies suggested should aim to moderate or reduce food prices which have been increasing over the past few years (Table 1). This is a problem as rising prices is inequitable and the high prices may mean that not everyone is able to afford the food which is a necessity for survival. Demand Related Policies (1)**Reducing demand for biofuel** (ext 1, 3) à finding/developing alternative renewable energy sources such as solar, hydro à reduce demand for biofuel à more land avail for food production à increase SS of food à lowers prices Evaluation: **(+)** energy is a necessity à should not reduce production of biofuel unless there are alternatives present due to rising oil prices (Fig 1) à if ss of biofuel is reduced à higher price of biofuel à ↑demand for oil (substitute) à ↑price of oil à affect price of many goods and services especially necessities like energy as unit COP rises à impacts equity **(-)** Long term - requires a long time before results may be seen à not effective in SR **(-)** Costly à high opp cost involved, not all countries may have the resources, may require a global initiative to subsidise such R&D à govt will need to ensure that the benefit of lower price of food outweighs the costs of lower spending in other areas such as healthcare, etc… *Note: Students should note that reducing subsidies for biofuel may not be an ideal policy as it may lead to a rise in the price of oil which is also a necessity à creating another inequitable problem.* Supply Related Policies (3) **Export restrictions** (ext 2) à reduce domestic prices Evaluation: (+) subsidies is a ST solution à impact is immediate à addresses the inequity quickly (-) May impact global prices, ext 2 " interfere with the global food commodity market" à may invite retaliation from other countries. (4) **Investment/Subsidies into food production** (ext 1,3) à increases supply of food Evaluation: (+) subsidies is a ST solution à impact is immediate à addresses the inequity quickly (+) As PED<1, a unit subsidy will result in a more than proportionate fall in price compared to increase in qty à can achieve the objective of ↓prices with a smaller subsidy (-) Subsidies is still costly, may be a burden on govt budget à may need to cut down expenditure elsewhere à need to weigh the ↑benefits of using the subsidy versus costs of cutting of expenditure in other areas i.e. education, etc…	

		Conclusion Due to the urgency of the problem, there may need to be short term solutions that are used to address the rising price of food i.e. price controls, export restrictions, subsidies, etc. However, such policies may cause problems such as shortages for price controls and global impact on prices for export bans. It is necessary to also have a long term solution that targets the root cause of the food crisis i.e. increasing food production to increase food supply to ensure sufficient SS even during adverse weather conditions. Alternatively, demand for biofuels should be reduced to their impact on food prices esp in light of the projected increased in biofuel subsidies.	

Level	Descriptor	Marks
L3	For an answer that demonstrates analysis of at least 3 policies spanned over demand and supply management, with relevant evidence from various sources in the case study, along with evaluation. A reasoned judgment is also required.	6 – 8
L2	For an answer that demonstrates analysis of relevant (1-2) policies to address the rising prices, lacking in evaluation or reasoned judgement using limited evidence from the extracts	4 – 5
L1	For an inaccurate answer/ an answer with conceptual errors with no use of case evidence.	1 – 3

(a)	(i)	Explain what is meant by real GDP.	[2]
		Real GDP is the **monetary value** of all **final goods and services** produced **within a country** in a year, **adjusted for inflation.**	
(a)	(ii)	Using Table 1, describe the trend of real GDP growth rate in Eurozone from 2007 to 2012.	[1]
		Real GDP growth rate shows a decreasing trend in Eurozone from the period 2007 to 2012.	
(a)	(iii)	Explain the link that exists between real GDP and unemployment rate for Eurozone between 2010 and 2012.	[2]
		There is an inverse relationship between real GDP and unemployment rate between 2010 and 2012. As real GDP falls, real income of the households and firms in the economy also fall, leading to a **fall in real output in the economy**. As labour is a derived demand, there would be a corresponding fall in the ADL. Given that there are sticky wages in the labour market, this would lead to an increase in demand-deficient unemployment.	
(b)		"U.S. Federal Reserve official urged the European Central Bank (ECB) on Tuesday to consider employing a U.S.-style quantitative easing programme to counter slowing inflation and recession in the euro zone."	
	(i)	Using a diagram, explain how quantitative easing can possibly resolve the recession in the EU.	[3]
		The policy of quantitative easing is designed to inject money into the economy, through the purchase of assets by the Central Bank. Most of the assets purchased are government bonds. There will be an increase in the availability of credit à financial institutions now have more money that can be used to lend out to firms or households on more favourable terms, which increases the amount of investment and domestic consumption in the economy OR An increase in money supply will lead to a fall in interest rates. This will lower the cost of borrowing which then leads to an increase in borrowing by firms and households à increase in Cd and increase in I.  **Link to increase in AD + diagram:** This will lead to an increase in AD from AD1 to AD2 à increase in real output from Y1 to Y2 à actual growth achieved à resolving recession.	

(b)	(ii)	Using appropriate data, explain the significance of the multiplier in determining whether quantitative easing should be employed by the EU.	[6]
		· An increase in AE will lead to a multiplied increase in national income through the multiplier process à ΔNY = k x ΔAE · Hence the size of the multiplier in an economy determines the effectiveness of demand management policies like Quantitative Easing in raising the National income to correct a recession. · The size of multiplier is calculated by K = 1/ MPW **[must include formula]**. Thus, the smaller the MPW, the greater the size of multiplier. · Thus, in the course of policy decision making, the knowledge of the size of multiplier is significant in influencing the government's decision on the magnitude of money supply changes in Quantitative Easing to bring about the desired increase in AD and hence National income in the economy. · Knowing the size of the multiplier will allow EU to decide how much to increase the money supply in order to bring about the desired outcome in the economy. Data from Table 2 does not reveal the actual value of the multiplier. It does give a hint that the multiplier is likely to be small, as the private consumption of households in EU is about 57% of its GDP. This private consumption is inclusive of consumption of imports of goods and services. In Extract 2 it is mentioned that there are high leakages as a result of **increasing tax rates (increase in MRT) due to the austerity measures** and EU's tradition as the largest world importer of goods and services with a **forecast import of goods and services at 43% (high MPM)** of GDP in 2013. This suggests that MPC is only about 0.14. Since MPW is high, this would mean large amounts of leakages with increases in national income. As such, with each increase in national income, there would be lesser money being passed around in the economy in the inner flow. **This would mean that the EU has a small multiplier and thus would require a large increase in money supply in order to attain a large increase in real GDP.** This might not be feasible, as it requires the government to buy large amounts of bonds and financial assets from commercial banks at a time when most of its governments are in budget deficit.	
(c)		Discuss the view expressed by protestors in Extract 4 that EU's standard of living will worsen as a result of the austerity measures.	[8]
		Material SOL: quantity of goods and services enjoyed by an individual Non-material SOL: environmental factors e.g. crime rates, degree of urban crowding; socio-economic factors e.g. life expectancy, infant	

mortality rates, quantity of leisure, etc

Austerity measures imply an increase in taxation and cuts in government spending. This has been implemented in the EU in order to reduce government debt.

Austerity measures adopted by the Eurozone would have both positive and negative impacts on the standard of living in the EU.

Explain how austerity measures will impact AD (either through a fall in G, or increase in T):

With spending cuts (↓G) and raised taxes, AD will fall. With an increase in personal income tax, disposable income of households is reduced à purchasing power falls à Cd falls. An increase in corporate income tax results in a fall in post-tax profits à lower incentive for investments à I falls (leftward shift in the MEI). The fall in AD due to fall in Cd, I, and G will cause a multiplied fall in real national income.

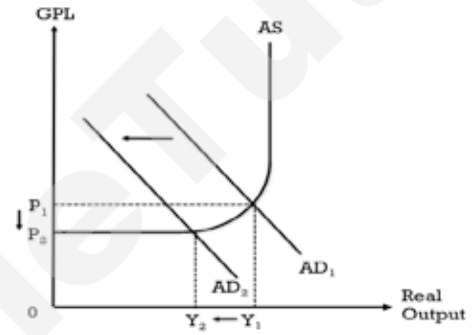


Figure 1: Impact of fall in AD

The fall in real national income/real output i.e. negative economic growth will lead to a fall in the aggregate demand for labour (fall in ADL from ADL1 to ADL2 in Fig. 3) and assuming that wages are sticky downwards, lead to demand-deficient unemployment of N2N1. This is the case in EU as there is "severe unemployment of 4.4 million" due to lack of jobs.

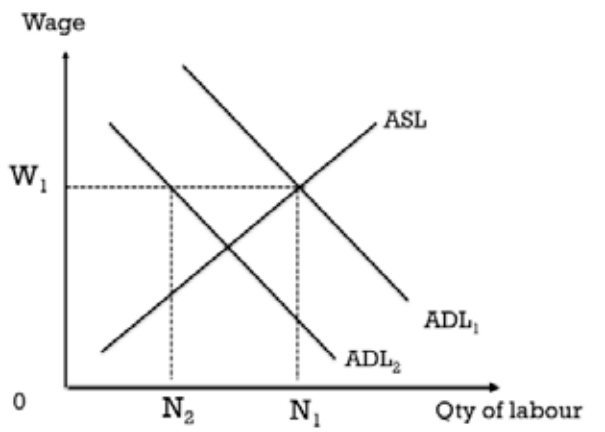


		Figure 3: Labour Market diagram A fall in real NY means a decrease in the amount of goods and services available to the citizens in the country, holding price levels and population size constant à this would mean a fall in material well-being in the country. **Fall in non-material SOL:** As a decrease in the level of national income is often accompanied by a rise in unemployment, this means that there is a lack of job security, decreasing non-material welfare. In addition, decreases in government spending may mean decreased expenditures in education or healthcare sectors which may deprive citizens of better learning facilities or healthcare services hence, leading to a fall in non-material standard of living. The decrease in employment due to the weak economic conditions, along with increase in personal income tax may increase social unrest due to protests in the EU (Extract 4). Disruptions to work due to protests would further affect production levels, hindering economic recovery. If this social and political instability were persistent, this would reduce investor confidence in the economy. There would be a resulting fall in FDI inflow and increase in investments outflow (both local and foreign). AD would fall further due to the fall in investments, further worsening the rate of growth and therefore material SOL. Social unrest due to work protests and possible higher crime rates due to unemployment also lead to higher insecurity and thus a fall in the non-material well-being of citizens in the EU. Explain how the austerity measures may increase AD in the long run: When austerity measures are implemented and are successful à reduce govt budget deficit and reduce debt à credit rating of the country improves à improves investment climate in the country. When the EU adopts austerity measures to generate revenue in order to reduce government debt (Extract 4), this may help to maintain investors' confidence in the economy. This will encourage FDI inflows and hence ensure long-term sustained economic growth of the country. Increases in FDI can lead to increases in both AD and AS as shown below, where real output can increase from Y1 to Y2 with increases in productive capacity as AS increases from Yf to Yf1.	

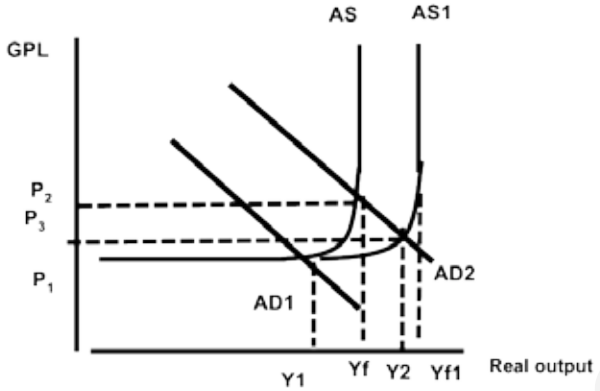


Figure 4: Long-run impact of austerity measures

Employment levels can also increase as demand for labour increases to produce more output. When there is a rise in real output and employment levels, the amount of goods and services available for consumption in the country increases, thereby increasing the material SOL of the EU.

Conclusion

Austerity measures may prove to be more harmful to the Eurozone in the short run given the extent of the various consequences analysed above with the main cost being worsening economic recovery although its benefits are for ensuring long-term economic growth.

The effectiveness of the policy is dependent largely on the appropriateness of fiscal measures selected in minimizing the disincentive effects of increased taxation and reduced government spending.

Level	Knowledge, Comprehension, Application and Analysis	Marks
L3	A well-developed answer, with clear arguments on both sides, how EU's SOL will or will not worsen due to austerity measures, with reasoned judgement	7-8
L2	A one-sided answer, explaining either only how EU's SOL will worsen or how EU's SOL will not worsen. OR An underdeveloped answer, explaining how EU's SOL will worsen and how EU's SOL will not worsen; lacking rigour	4-6
L1	An answer that shows some understanding of the concept of standard of living and how EU's SOL will	1-3

		be affected by austerity measures	

(d)		To what extent does Singapore's approach to international trade require adjustment in response to the Eurozone crisis?	[8]

Introduction

Singapore is a small and open economy, which is highly dependent on exports for her economic growth. External demand is estimated to make up about 75% of Singapore's demand. The trade to GDP ratio is about 300%, which also suggest the importance of trade to the economy.

EU is one of Singapore's top export destinations in 2013. Singapore's trade-driven economy contracted by 1.1% in the second quarter from the previous three-months due to a slowdown in global demand, which stems from the Eurozone crisis. Other major economies like China and the US, which used to export aggressively to the EU also suffered as a result.

1. **EU's response to the crisis: Growth in protectionist measures (Extract 4) to tackle unemployment and recession due to austerity measures**

A growth in protectionism in EU can have a negative impact on Singapore's open economy, as it is one of Singapore's largest export destinations as mentioned in Extract 3. If EU were to increasingly implement protectionist measures against Singapore's exports, this will lead to a large fall in our exports to EU. Using tariffs as an example, once a tariff is implemented, the world price increases to P2. This leads to a fall in the quantity of imports from Q1Q4 to Q2Q3 as seen in Fig 1 à leading to a fall in AD in Singapore à negative economic growth + increasing demand-deficient unemployment.

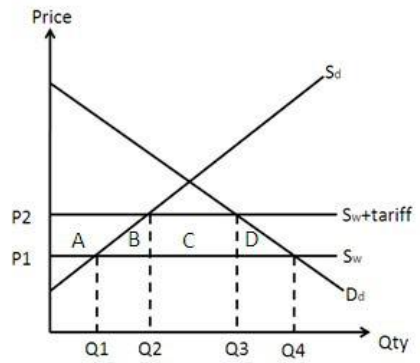


Figure 1: Impact of tariff in EU on Singapore

Evaluation: The extent to which the quantity of imports is reduced depends on the price elasticity of demand and supply. The more price elastic either curves are, the larger the fall in imports.
OR
It also depends on the size of the tariff used. The bigger the tariff, the

greater the fall in imports.

2. Fall in disposable income and recession in EU (Extract 3)

Due to a fall in national income, the EU citizens experience a fall in purchasing power, which reduces their demand for goods and services, including imports. As EU imports less, this will result in a fall in aggregate demand in the Singapore economy. The larger the fall in exports, the larger the leftward shift of the AD, and this reduces real output (Fig 2). This will lead to a fall in employment, as firms lay off workers due to reduced output. National income of the country will also be reduced by a multiplied amount through the multiplier process.

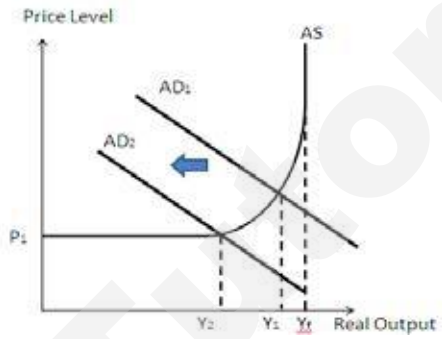


Figure 2: Impact of reduced exports on Singapore

3. Other impacts of Eurozone crisis on SGD: Singapore, an international financial centre, should brace for "excessive inflows as well as outflows" of capital. This would have impacts on the external value of the SGD.

Singapore's approach to int'l trade + assessment of extent to which the approach to trade needs to be adjusted due to Eurozone crisis

Singapore aims to continue to keep its exports competitive through a variety of means: A slight appreciation of the currency, supply side policies and lastly by signing Free Trade Agreements (FTAs). By doing so, it will allow the country to continue to have high growth driven by the country's exports.

1. (Explain reason for gradual appreciation of S$) Singapore continues to strive to achieve price competitiveness of its exports through the slight appreciation of its currency using the managed float exchange rate system. Singapore's currency has been gradually appreciating. This allows the country to curb both domestic inflation and also imported inflation. The latter is important because of Singapore's lack of natural resources and the need to import raw materials for production. An increase in cost of raw materials will reduce the price competiveness of domestically produced goods. However, if the SGD were to appreciate too much, Singapore would also lose its export price competitiveness, as

the price of the exports in foreign currency will be relatively higher to foreign countries.

In light of falling export revenue, SG should consider making adjustments to its current policy of a gradual appreciation of its domestic currency to one of zero appreciation or depreciation of the domestic currency. This is especially so in light of the fact that there are various factors as a result of the Eurozone crisis that threaten the demand for Singapore's exports.

With a policy of depreciation of the SGD, this will allow the price of Singapore's exports to be cheaper in terms of foreign currency. Assuming that the demand for exports is price elastic, this would mean a more than proportionate increase in the quantity of exports, increasing export revenue.

2. Singapore also uses supply side policies to improve price competitiveness and non-price competiveness. Examples of such policies include improving the labour productivity through skills upgrading and retraining. An improvement in labour productivity alongside close monitoring of wage rates has allowed Singapore to have a low Unit Labour Cost (ULC), which will raise the price competitiveness of goods produced in Singapore. There are also policies in place to encourage innovation of newer products. Such policies incentivize firms to innovate so that they can continue to create new and better products and services to ensure that the country maintains its comparative advantage in a variety of high value-added sectors. This is particularly important, as producing affordable and high quality exports would be a priority amidst global recession.

Supply side policies should continue to be of importance to Singapore to maintain its price competitiveness and innovation. However, the cost of such policies will continue to be high, as the government will have to subsidise or provide grants to firms or workers.

3. FTAs are binding agreements between two or more countries to reduce or remove trade barriers, such as tariffs, to facilitate cross border movement of goods and services between territories of the parties involved. Singapore has many FTAs in place already including bilateral FTAs with Japan, Korea and the United States and also regional FTAs between ASEAN and other countries. The benefit of the FTA is through the removal or reduction of tariffs. Referring to Fig 1, the removal of tariffs from trade will lead to a net gain in society's welfare of area B + D for the importing country and for Singapore, it will benefit via increased exports (from Q2Q3 to Q1Q4) when the protectionistic measures implemented by EU are removed.

Success of the FTA depends on the take up rates by firms. If the requirements or paperwork is too tedious or if the information of opportunities is not properly disseminated to firms, then the benefits from

the FTA may not be obtained, as firms make not leverage on the benefits such as tariff-free trade with those countries. Asian FTAs generally have a low take up rate (or utilization rate) among firms, especially SMEs, of about 20%. This may mean that the cost of negotiating such FTAs may be greater than the benefits and thus maybe resources could be better used in other policies benefiting trade. Thus, Singapore will need to ensure that negotiations for FTAs are complemented with the necessary services to help export firms be aware and access the possible gains.

Conclusion:
As a result of recession in EU, EU might further protect their domestic economy; with increasing protectionism, this can have a large impact on Singapore's national income. To counter this phenomenon, Singapore needs to continue in its approach to trade. Though the types of policies that implemented should not change, more resources should be directed towards negotiating FTAs among the countries that Singapore exports to.

In addition, while Singapore should adjust its policies to adapt to changes in the global economy, there also needs to be policies to develop the domestic market, so that we become less dependent on trade with Western economies like the EU and US which are less stable. Singapore also needs to start to develop regional trade and our domestic economy, and shift our focus away from export-led growth to productivity-led growth.

Level	Knowledge, Comprehension, Application and Analysis	Marks
L3	A detailed analysis of the impact of Eurozone Crisis on the Singapore economy and the explanation of Singapore various approaches to trade including recommendation of what may need to be adjusted.	6-8
L2	An answer that either does not provide any recommendations or does not explain either the impact of Eurozone Crisis or Singapore's approaches to trade in detail.	4-5
L1	An answer that shows some knowledge of the impact of Eurozone Crisis or some of Singapore's approaches to trade	1-3

3 (a) Explain the economic justification why governments should intervene in the markets for
i) Public goods
ii) Merit goods [10]

Explain how the market fails in the case of public goods
Public goods are goods that exhibit characteristics of non-excludability and non-rivalry in consumption.

N**on-excludability** à not **economically** feasible to exclude anyone from using a good, once it is provided. E.g. once the traffic light is set up, it is not economically feasible to prevent someone from using by charging a price on it.
à free-rider problem à missing market

N**on-rivalry** à consumption of the good by one user will not diminish another person's ability to consume the **same** good. E.g. The usage of traffic lights by one pedestrian will not affect the other pedestrians or motorists from seeing the signals given from the traffic lights at the same time. à the marginal cost of admitting one more **user** of the good is zero.

Explain how the market fails in the case of merit goods
Merit goods are goods that the government believes consumers will buy too few units if provided by the market because of information failure and positive externalities in consumption.

State implications on the demand curve & make references to diagram .
State & explain socially opt. eqm

Conclusion
In both cases, allocative inefficiency occurs as not the right amount of the right goods is being produced. Thus, the government has to intervene to provide a more economic efficient outcome. However, in reality, the effectiveness of government intervention depends on the government's ability to rightly estimate the extent of the externalities or the demand for the public good.

Level	Knowledge, Application, Understanding and Analysis	Marks
L3	For an answer that clearly explains the case for government intervention in the markets for both goods, with sufficient rigor in economic analysis and with accurate examples	7-10
L2	For an underdeveloped answer that is weak in economic analysis or is lacking in examples	4-6
L1	For an answer that demonstrates a superficial understanding of the characteristics of public and merit goods, with conceptual errors	1-3

1(b) The Health Promotion Board of Singapore has been issuing advisories on the type and frequency of healthcare screenings to go for. They also provide information on healthcare management for individuals.

Discuss the effectiveness of using educational campaigns efforts to encourage consumption of healthcare screenings in the country. [15]

Thesis: Educational campaigns are effective

Educational campaigns:
What is it:
The Health Promotion Board of Singapore has been issuing advisories on the type and frequency of healthcare screenings to go for. They also provide information on healthcare management for individuals.
How does the policy work: It addresses the lack of perfect information as consumers underestimate the importance of managing their own health conditions through going for regular healthcare screenings. With more information, consumers will increase demand of healthcare screenings and this will shift the D1imperfect info curve to D2perfect info. (Fig 1)

Why this policy might be effective:
Campaign efforts by HPB also aims to emphasize that disease prevention is important as healthcare costs are mainly self-financed in Singapore. Early detection of illnesses can lessen the financial costs that one faces and hence, leads to lower cost to the patient in the long run.

Educational campaigns are more effective as it promotes the responsibility of managing and financing one's healthcare individually, which is largely in line with the healthcare system that Singapore adopts where healthcare expenditures are mostly out-of-the-pocket. If subsidies or legislation measures are used, it may create reliance on the government to provide for certain healthcare needs.

Why this policy might not be effective:
The policy also does not address inequity issues, where consumption levels are lower for lower income groups not because they are unaware of the benefits but rather, constrained by their ability to afford these screenings.

There are high opportunity costs faced in financing for these campaigns. Resources could have otherwise been channeled for other government projects such as building better amenities for the elderly citizens.

Anti-thesis: there are other policies which are more effective

Subsidy:
What is it: A subsidy could be given to lower the cost of consuming certain types of healthcare screenings

How the subsidy works:

A subsidy equivalent to the amount of MEB (E2E3) à at each possible price, more units will be supplied à supply curve shifts right from SS to SS' à a fall in equilibrium price from Ps to P2 and a rise in equilibrium quantity from Qm to the socially optimal level, Qs, à eliminating the welfare los. Lower price à reduce the problem of inequity à more affordable for the lower-income group.

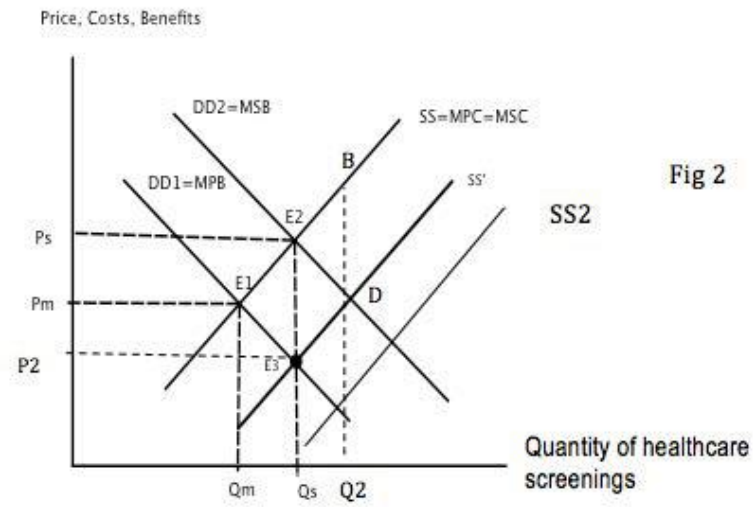


Fig 2

SS2

Limitations
Expenditure spent on these subsidies can be very high(area PsE2E3P2) and hence impose high opportunity cost of allocation of government resources. less resources will then be available for other government projects such as defence or education.

Synthesis/Conclusion:
Whether educational campaigns are the most effective depends on:

1) whether it addresses the root cause of the problem
2) The outcome of the policy
3) Time it takes to solve the problem

Knowledge, Understanding, Application , Analysis		
L3	For an answer using analysis to support the discussion of whether educational campaigns is the most effective rather than any other forms of government intervention and in doing so, analyses the strengths and weaknesses of each policy discussed.	9-11
L2	For an answer that gives descriptive discussion of educational campaigns and alternative policies without relating to the Singapore context Or an answer that only evaluates the policies that the government could adopt without making a judgement	6-8
L1	For an answer that demonstrates conceptual error or lacks analysis Or a one-sided answer which only focuses on how educational campaigns work in correcting the market failure	1-5
Evaluation		
E2	For an evaluative assessment based on economic analysis	3-4
E1	For unexplained judgement or one that is not supported by analysis.	1-2

4(a) Explain the causes of inflation in Singapore. [10]

Introduction

- Define inflation: period of sustained and inordinate increase in the general price level.
- 2 main types of inflation: demand pull and cost-push

Explaining how demand-pull inflation occurs:

- Define: A situation where *AD* is *persistently* higher than *AS*, close to or at full employment ➔ generating a sustained increase in Price
- Explain how AD increases:
  E.g world economy recovery from global recession
  → creates a positive economic outlook → boost consumer confidence → increase in consumption spending given expectation of rising incomes [Autonomous increase in Consumption]
  → increase in national incomes of foreign countries → increase in purchasing power → increase in DD for imports assuming income elasticity of demand for imports is positive (i.e. normal goods) → lead to increases in Sg's export revenue [Autonomous increase in Export spending]
- Draw AD-AS diagram and explain :

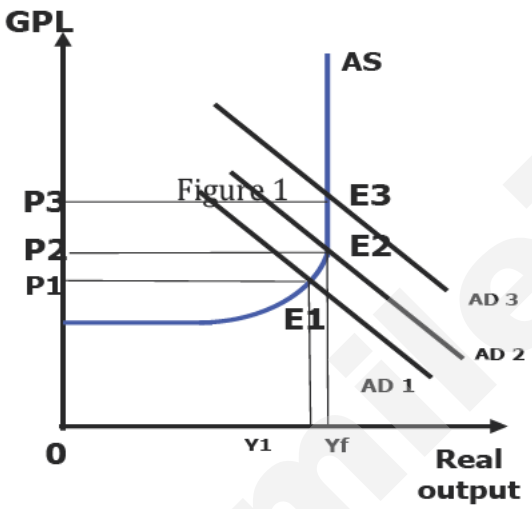


Figure 1

Explaining how cost-push inflation occurs:

- Define: A situation where there is a *sustained increase in the cost of production* independent of changes in AD → generating a sustained increase in the General Price Level (GPL)
- Explain how AS decreases: (explain one source)
  Increases in imported inflation
  Inflation in nations exporting **fuel, food and other primary products** due to **demand or supply factors** will result in increased prices→ A country that imports these fuel and food will then experience **imported inflation** → firms that require imported raw materials will then face an increase unit COP
  EV: extent of sustained increase in GPL: imported inflation will also result in higher prices of final imported goods and services + High MPM → high proportion on import spending on final goods and services → decrease competitive pressure on domestic firms to keep prices of their domestic goods low → increase overall domestic GPL

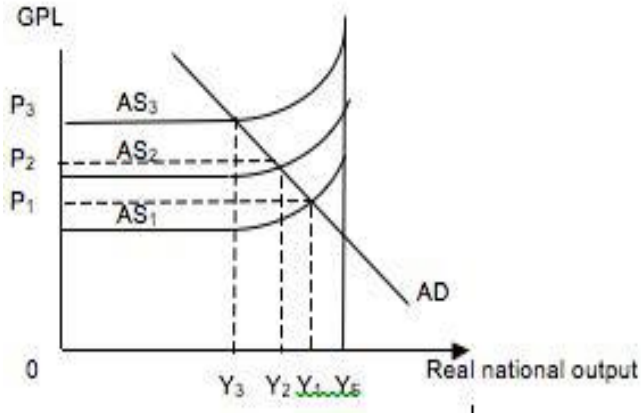


Figure 2

Draw AD-AS diagram and explain diagram:
Due to contributing factors above à **persistent** increases in unit COP à continuous shift in AS to the left à sustained increase in GPL(P0 to P2)

Conclusion:
Imported inflation is a significant cause of inflation in Singapore as being a small country, the lack of natural resources creates a heavy reliance on imported raw materials/intermediate goods. Therefore, Singapore is vulnerable to changes in imported inflation and it is harder to manage than demand-pull inflation as while an appreciated Singapore dollar has been effective in curbing imported inflation, it is unable to match the increase in prices by the same amount given its negative impact on price-competitiveness of exports.

Level	Marks	Knowledge, Application, Understanding & Analysis
L3	7 - 10	For a complete answer that explains both sources of inflation well with the aid of analytical tools and explained in the context of Singapore
L2	4 - 6	For an incomplete answer that either explains the causes of inflation due to demand-pull inflation OR cost-push inflation OR an answer that explain both sources but with incomplete linkages or without the aid of any analytical tool
L1	1 - 3	For a theoretical answer that shows some basic knowledge on causes of inflation with inaccuracies.

4 (b) Discuss if exchange rate policy is the best policy to achieve a low rate of inflation in Singapore. [15]

Introduction:
Briefly explain the benefits of low inflation:

Thesis: Exchange rate policy is the best policy if it addresses the root cause of inflation

Explain how the policy works:
<u>To curb cost-push inflation arising from imported inflation</u>

The most direct channel that exchange rates affect inflation in Sg is through its impact on import prices.
Appreciation of SGD à decreases the price of imports in DC, which counters the higher import prices due to inflation in the exporting nations. The decrease in Pm decreases the costs of imports used as raw materials in production, and this decreases the unit costs of production of a firm. This means that at every price level, firms in the economy are willing and able to supply more quantities of the product, leading to an overall increase in aggregate supply. With a sustained rightward shift of the AS curve from AS3 to AS2 to AS1, imported inflation will be curbed as inflationary pressures are reduced from P2 to P1. (reference to Fig 2 in part a)

The decrease in Pm also decreases the prices of imported final goods and services. It also pressures the prices of domestic goods and services to fall to remain competitive against cheaper imports. Overall, this decreases domestic consumer prices.

<u>To curb demand-pull inflation arising from external demand</u>
- An appreciation of the exchange rates will increase the price of exports in FC, leading to a fall in the demand for exports, and a subsequent fall in export revenue.
- There will also be a fall in the price of imports in DC, leading to an increase in the quantity demanded for imports as Consumers switch from buying domestically-produced gds for cheaper imported gds à decrease domestic consumption
- â X and C à â AD from AD3 to AD1 à ¯GPL, offsets any sustained and inordinate - GPL due to persistent - AD
- *Achieved main aim*: curbing demand-pull inflation by reducing inflationary pressure from P3 to P1(reference to fig 1 in part a)

Evaluate effectiveness of the policy:
- Works to address both sources of inflation
- Works to effectively containing the cost-push inflation caused by rising oil prices à an appreciation of the currency à mitigate the effects of more expensive oil prices in S$ à limiting the rise in prices especially in oil dependent sectors such as transport
- Effective in curbing imported inflation (from more expensive milk, vegetables and fruits)

Evaluate limitations of the policy:
- The rate of appreciation has to match the rate of imported inflation.

If inflation in the exporting nation rises 5%, exchange rate policy will only negate the increased prices fully if the value of the domestic currency appreciates by 5% relative to the exporting nation's currency. This means that if the imported inflation rate is too high, exchange rate policy would not be as effective, because it is very destabilizing on a currency to appreciate too quickly. Governments may have to run down their foreign reserves at a very rapid rate, and this will also promote greater speculation of the currency.
- This will lead to conflict with other macroeconomic goals

Furthermore, if a currency appreciates at a very fast rate, or is very unstable due to large amounts of speculation, a country's export competitiveness will be greatly affected. The fall in export revenue will

worsen the balance of trade, hence worsening balance of payments ceteris paribus. The fall in exports and consumptions will also lead to a fall in real output, leading to a fall in aggregate demand for labour à increase in demand-deficient unemployment (draw ADL-ASL diagram)

Anti-thesis: exchange rate policy is not the best to use depending on the root cause of inflation

(1) if it is due to structural rigidities or other wage-driven causes in the economy à SS-side policies will be more effective

Explain how supply-side policies work:
The SG government also conducts supply-side policies such as education and training of workers. Education and training enhance workers' productivity. Workers will be able to produce more output per man hour resulting in a lower unit cost of production. This increases individual market supply curves. If enough individual market supply curves are impacted, total output that the economy can produce increases. This raises the productive capacity of the economy, causing a rightward shift of the AS curve, further decreasing inflation as GPL falls from P1 to P2 (fig 3).

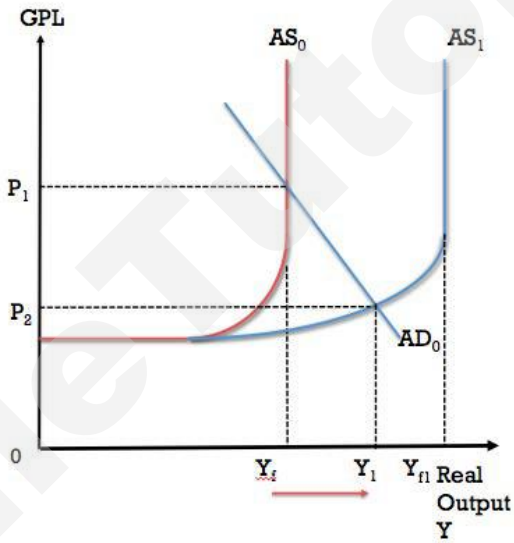


Fig. 3 – Supply-side Policies

Evaluate effectiveness of policy:

(1) Leads to improvement in other macroeconomic goals

- increases in labour productivity à decrease unit COP à increase price-competitiveness of goods and services made in Sg à decrease Px à increase X rev (assuming PEDx<1) and at the same time, lowered prices of domestic goods à switch consumption from relatively more expensive imported goods à increase Cd è increase in AD à increases actual growth and employment
- increases in X and fall in M will also lead to an improvement in balance of trade, hence improving the overall balance of payments, ceteris paribus
- increase in no. of skilled workers able to be employed in expanding industries à reduce structural employment

Evaluate limitations of the policy:

- outcome of the policy is uncertain as the effectiveness of the policy is dependent on the ability of the workers to be re-trained. Also, it depends on the receptivity of employers to send their workers for such courses as it leads to a trade-off of decreased man-hours at work, lowering revenue levels.
- takes a long time to take effect as training takes time

- SS-side policies such as education and training are likely to be costly à imposes high opportunity cost in terms of the allocation of govt resources à lesser resources available to be channelled for other government projects

(2) **if increase in inflation is due to demand-pull arising from domestic factors**

Contractionary fiscal policy
Explain how it works:

- A decrease in government expenditure directly decreases the aggregate demand of the economy.
- An increase in taxes can be examined through changes in the personal and corporate income taxes. An increase in personal income taxes will reduce disposable income, and that leads to a fall in domestic consumption. The increase in corporate taxes will decrease post-tax profits, and that causes firms to decrease investment expenditure. The fall in both consumption and investment expenditure thus leads to a fall in AD.
- The fall in AD leads to a decrease in the general price level, and sustained contractionary fiscal policy will thus offset inflationary pressures. The main objective of the policy is achieved, as demand-pull inflation will be curbed as inflationary pressures are reduced. In this case, the aggregate demand of the economy has been lowered from AD3 to AD1 through contractionary fiscal policy, and this lowers the price level from P3 to P1.(ref to fig 1 in part a)

Evaluate limitations of the policy:

- Households and firms may not be responsive to an increase in taxes, and may continue to spend.
- The decrease in government spending may compromise socio-economic and political goals.
- And again, inflationary pressures need to be pre-empted as fiscal policies, like any other policy, will face time lags in implementation.

Synthesis/ Conclusion:

Exchange rate policy is the best policy to use in Singapore as

1) it is very effective in addressing the main causes of inflation in Singapore – small and open economy à greater significance of export and foreign investment in influencing demand-pull inflation and imported inflation in causing cost-push inflation
2) it is effective in providing a short term and immediate solution in managing inflation – as compared to SS-side policies which will bring about low and stable inflation but only in the long run

Level	Marks	Knowledge, Application, Understanding & Analysis
L3	9 - 11	For a developed balanced argument that considers various policies that the Singapore government can use to achieve a low rate of inflation, aided with analytical tools
L2	5 - 8	An answer that explains the various macroeconomic policies but lacks depth in economic analysis OR An underdeveloped explanation i.e. without the aid of analytical tools or with missing linkages in analysis OR A one-sided answer that only considers the workings of the exchange rate policy
L1	1 - 4	For an answer that shows some knowledge on the benefits of low inflation, with inaccuracies.
Up to 4 additional marks for evaluation		
E2	3 - 4	Reasoned judgement with the usage of appropriate criteria
E1	1 - 2	Mainly unexplained judgement

MERIDIAN JUNIOR COLLEGE
JC2 PRELIMINARY EXAMINATION 2013
HIGHER 2

H2 Economics 9732/01

Paper 1 Case Study Questions **16 September 2013**

2 Hours 15 Minutes

Additional Materials: Writing Paper

READ THESE INSTRUCTIONS FIRST

Do not open this booklet until you are told to do so.

Write your name, class and register number in the spaces at the top of the answer sheets.
Write in dark blue or black pen.
You may use a soft pencil for any diagrams, graphs or rough working.
Do not use staples, paper clips, highlighters, glue or correction fluid.
You are reminded of the need for good English and clear presentation in your answers.

Section A : Case Study (2h 15 min)

Answer **all** questions.

Answer each compulsory case study question on a fresh sheet of paper.
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 of a question.

[Turn Over]

This document consists of 9 printed pages and 2 cover pages.

Answer **all** questions.

Question 1

The Next Food Crisis

Table 1: Annual Food Price Index (100=2002-2004)

Date	Food Price Index	Meat Price Index	Dairy Price Index	Cereals Price Index	Oils Price Index	Sugar Price Index
2004	103.7	104.9	113.1	99.1	103.5	93.8
2005	103.3	105.8	119.2	91.2	91.3	123.6
2006	108.2	101.2	109.3	103.9	96.0	179.0
2007	127.7	100.7	170.9	134.3	136.8	115.1
2008	147.6	113.2	162.2	175.6	167.8	134.2
2009	123.9	105.0	111.8	137.2	119.2	203.2
2010	139.4	114.6	150.8	137.4	146.1	227.3
2011	154.0	119.5	149.2	167.1	170.7	249.7
2012	141.6	117.0	126.1	161.3	150.6	204.3

Source: Food and Agriculture Organization

Extract 1: Food Prices

The United States Department of Agriculture (USDA) recently released a report that said global output in several key commodities would fall while demand across a number of sectors would rise. The simple and relatively uncontroversial concept of supply and demand would dictate that food prices would increase. Following this announcement, prices did indeed rise. Corn is up 94 percent, soybeans 51 percent, and wheat 80 percent. Current prices are so high that they exceeded a previous record set in 2008, and the United Nations' Food and Agricultural Organization's (FAO) Food Price Index is at an all-time high.

Specifically, there are a number of causes for this dramatic leap. The USDA cited supply side problems, such as floods of Australia, poor weather in South America, and extremely dry weather in Russia last year. In addition, they expect ethanol producers to use more corn for production of biofuels. In a bigger picture, rising global standards of living are leading to more demand for meat. This leads to raising more livestock, which consume a large amount of grain and adds to more stress on already tight supplies.

There's at least a glimmer of good news on the demand side: World population growth, which peaked at 2 percent per year around 1970, dropped below 1.2 percent per year in 2010. But because the world population has nearly doubled since 1970, we are still adding 80 million people each year.

A recent United Nations report estimates that food prices could go up by 40 percent over the next decade. However, supply could be upped with inducements made to cultivate more land in a sustainable fashion, such as in Africa. Better producing strains of crops can be developed, such as during India's famous Green Revolution.

Demand could be reduced if countries could also work to reduce the amount of food supplies turned into biofuels.

Source: Global Policy, February 2011

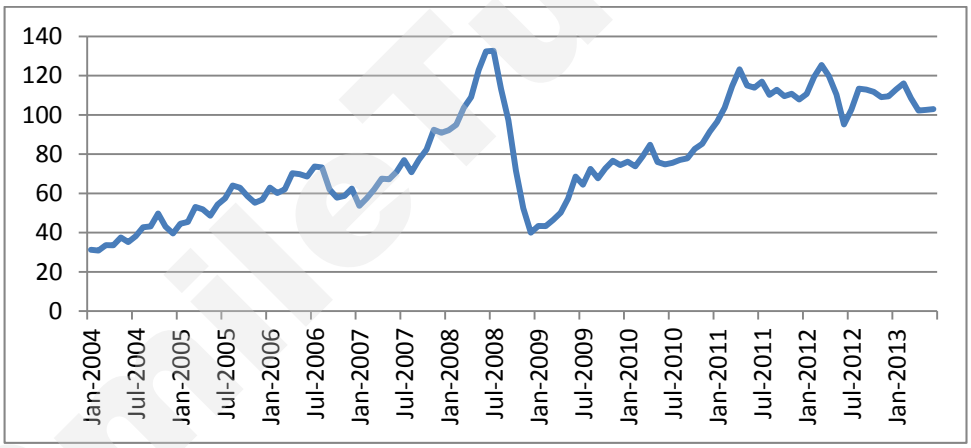
Extract 2: Export bans should be illegal

The environment minister, Caroline Spelman, today risked incurring the wrath of many major food-growing countries by saying it should be illegal to halt food exports even at times of national crisis.

In a clear reference to Russia and the Ukraine, which temporarily halted exports of wheat and other grains in order to protect supplies for their own people during an unprecedented heatwave last year, she said no country should be allowed to interfere with the global food commodity market.

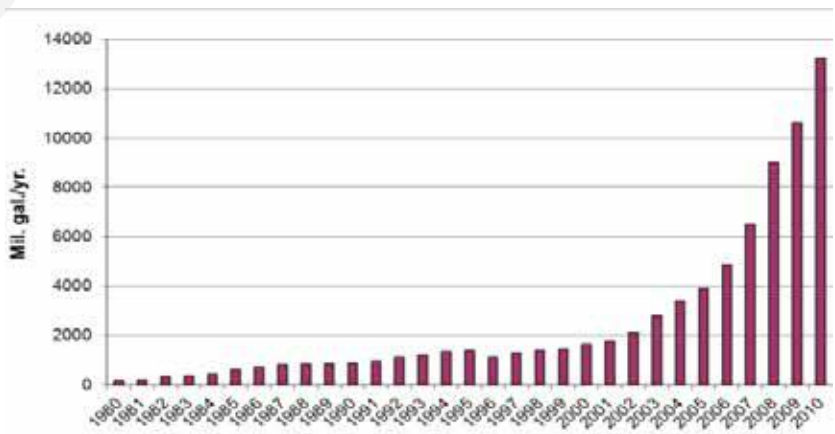
Source: The Guardian, January 2011

Figure 1: Oil Price ($/barrel)



Source: OECD

Figure 2: Ethanol Production (Million Gallons)



Source: FarmFoundation.org

Extract 3: Impact of EU biofuel policies in developing countries

The 2008 decision by EU countries to obtain 10% of all transport fuels from biofuels by 2020 is proving disastrous for poor countries. Developing countries are expected to grow nearly two-thirds of the crops that are mostly used for biofuels.

"To meet the EU 10% target, the total land area directly required to grow industrial biofuels in developing countries could reach 17.5m hectares, over half the size of Italy. Additional land will also be required in developed nations, displacing food and animal feed crops onto land in new areas, often in developing countries," says the report.

Biofuels are estimated by the IMF to have been responsible for 20-30% of the global food price spike in 2008 when 125m tonnes of cereals were diverted into biofuel production. The amount of biofuels in Europe's car fuels is expected to quadruple in the next decade.

The report attributes the massive growth in biofuel production to generous subsidies. It estimates that the EU biofuel industry has already received €4.4bn (£3.82bn) in incentives, subsidies and tax relief and that this could triple to over €13.7bn if the EU meets its 2020 target.

Source: The Guardian, February 2010

Questions

(a) Compare the changes in the price of food from 2006-2008 with that of 2009-2011. [2]

(b) Explain how domestic consumers and producers in Russia and Ukraine are impacted by the halting of food exports in those countries. [3]

(c) **(i)** Describe the relationship between oil price and ethanol production between 2004 and 2010. [1]

(ii) Explain the relationship observed in (c)(i). [2]

(iii) Using supply and demand diagrams, explain how the use of subsidies to biofuel producers will impact the allocation of resources between biofuel and food. [4]

(d) Assess whether demand or supply factors are more important in explaining the changes in food prices. [8]

(e) Discuss the policy options available to the world's governments to address the rising food prices. [10]

[Total: 30 Marks]

Question 2

Eurozone Crisis

Extract 4: Austerity measures force EU into record recession

Government austerity measures have pushed the Eurozone into the longest recession in European Union (EU) history. Figures released today showed the EU's economy shrank 0.2 % in the first quarter – the sixth quarter in a row of contraction – and there is little indication this will change anytime soon.

In an effort to stem the financial crisis, European nations have raised taxes and cut spending in order to reduce government debt. With private-sector spending also getting cut, so far all these austerity measures have done is lowered economic activity and increased the need for unemployment benefits and other social costs. In response to the measures, protesters across Europe mentioned that "the beatings will continue until the economy improves" against a backdrop of severe unemployment of 4.4 million due to a lack of jobs and an extremely bleak economic outlook.

Howard Archer, IHS Global Insight's chief European economist, wrote today in a note to investors, "the upside for domestic demand in the Eurozone remains constrained by restrictive fiscal policy in many countries, still tight credit conditions, high and rising unemployment, and limited consumer purchasing power despite generally very low inflation".

Thanks to these austerity measures, the economic slowdown that started in Greece three years ago has now spread to France, Italy and Spain, which make up half of the Eurozone's GDP. As recession pushes the EU to reverse back into various protectionist measures, and combined with falling spending power region wide, the effects of the austerity measures are starting to be felt in other parts of the world.

Source: MONEYWATCH, May 2013

Extract 5: Fed's Bullard recommends Eurozone to consider quantitative easing

A top U.S. Federal Reserve official urged the European Central Bank (ECB) on Tuesday to consider employing a U.S.-style quantitative easing (QE) programme to counter slowing inflation and recession in the Eurozone. The Central Bank can implement quantitative easing through the purchase of a predetermined number of bonds or other assets from commercial banks and other private institutions to increase the monetary supply.

With the ECB's main interest rate now at 0.5% and Eurozone inflation at 1.2%, St. Louis Federal Reserve Bank President James Bullard recommended the ECB could consider quantitative easing, or printing money for salvaging the economy. "For the euro area, which has not wanted to do QE, I would say this: as inflation is running pretty low in the euro area, the Governing Council on the ECB may want to consider

a quantitative easing programme," he said in a lecture at Frankfurt's Goethe University.

He also cited Japan's lost-decade of economic stagnation to reinforce his argument that just cutting interest rates was insufficient to ward off a damaging deflationary spiral. "Doing nothing risks the deflationary situation experienced by Japan in recent years," he said.

Sceptics questioned the feasibility given the high leakages as a result of increasing tax rates due to the austerity measures and Eurozone's tradition as the largest world importer of goods and services since its inception, with import of goods and services forecasted at 43% of GDP in 2013.

Source: Adapted from Reuters, May 2013

Extract 6: Eurozone crisis is main risk for Singapore: MAS

The Eurozone crisis is the main risk facing Singapore's economy and financial system, the Central Bank said, warning the nation to brace for "a more adverse turn of events". Ravi Menon, managing director of the Monetary Authority of Singapore, said any sharp deterioration in the Eurozone, one of the city-state's biggest export markets, could hurt economic growth.

"The key risk facing the Singapore economy and financial system is the on-going crisis in the Eurozone," Menon said at a news conference. "While Eurozone governments have taken important steps to deal with the crisis, we must be prepared for a more adverse turn of events."

Singapore, an international financial centre, should brace for "excessive inflows as well as outflows" of capital, which could impact the Singapore dollar. Singapore's economy is on track to expand between 1.0% and 3.0% this year, down from 4.9% growth last year, he said. However, economic growth could dip below 1.0% if the situation in the Eurozone escalates, while China's economy slows down drastically and the United States falls into a recession, he added.

Singapore's trade-driven economy, regarded as a bellwether for Asia, contracted by 1.1% in the second quarter from the previous three-months due to a slowdown in global demand especially from Eurozone, and also other major economies which export aggressively to the EU like China and the US.

Source: AFP, July 2012

Table 2: Economic Indicators of Eurozone*

Year	2007	2008	2009	2010	2011	2012
Change in nominal GDP (%)	5.4	2.4	-3.5	2.8	2.7	0.7
Inflation rate (%)	2.1	3.3	0.3	1.6	2.7	2.5
Unemployment rate (%)	7.6	7.6	9.6	10.1	10.2	11.4

Source: Eurostat 2013

Table 3: Gross Domestic Product (GDP) and its components in selected economies (% of total), 2013 Q1

	EU* (17 countries)	US	Japan
Total GDP (million Euros), current prices	2379167	3130263	976465.3
Composition:	%	%	%
Private consumption of households	57.4	68.8	61.2
External balance of goods and services	3.3	-3.2	-2.5

Source: Eurostat 2013

***EU (17 Countries):**
Belgium, Spain, Austria, Cyprus, France, Portugal, Germany, Italy, Slovenia, Estonia, Luxembourg, Slovakia, Ireland, Malta, Finland, Greece, Netherlands

Questions

(a) **(i)** Using Table 2, describe the trend for real GDP growth rate in Eurozone from 2007 to 2012. [1]

(ii) Briefly explain the link that exists between real GDP and unemployment rate for Eurozone from 2010 to 2012. [2]

(b) "U.S. Federal Reserve official urged the European Central Bank (ECB) on Tuesday to consider employing a U.S.-style quantitative easing programme to counter slowing inflation and recession in the Eurozone.'

(i) Using a diagram, explain how Quantitative Easing can possibly resolve recession in the Eurozone. [3]

(ii) Using appropriate data, explain the significance of the multiplier in determining whether Quantitative Easing should be employed by the Eurozone. [6]

(c) Discuss the view expressed by protestors in Extract 4 that EU's standard of living will worsen as a result of the austerity measures. [8]

(d) To what extent does Singapore's approach to international trade require adjustment in response to the Eurozone crisis? [10]

[Total: 30 Marks]

END OF PAPER

MERIDIAN JUNIOR COLLEGE

JC2 PRELIMINARY EXAMINATION 2013

9732/01

COVER SHEET

ECONOMICS HIGHER 2

Paper 1: Case Study Question 1

Name: _____ Civics Group: _____

Register Number: _____ Tutor: _____

16 September 2013

READ THESE INSTRUCTIONS FIRST

Write your name, civics group, register number and tutor's name in the spaces at the top of this cover page and on all the work you hand in.

At the end of the examination, fasten this cover sheet to your answer scripts for Case Study Question 1 with the string provided before submission.

QUESTIONS ATTEMPTED		MARKS
(a)		
(b)		
(c)	**(i)**	
	(ii)	
	(iii)	
(d)		
(e)		
TOTAL		**/30**

MERIDIAN JUNIOR COLLEGE

JC2 PRELIMINARY EXAMINATION 2013

9732/01

COVER SHEET

ECONOMICS HIGHER 2

Paper 1: Case Study Question 2

Name: _____ Civics Group: _____

Register Number: _____ Tutor: _____

16 September 2013

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Write your name, civics group, register number and tutor's name in the spaces at the top of this cover page and on all the work you hand in.

At the end of the examination, fasten this cover sheet to your answer scripts for Case Study Question 2 with the string provided before submission.

QUESTIONS ATTEMPTED		MARKS
(a)	(i)	
	(ii)	
(b)	(i)	
	(ii)	
(c)		
(d)		
TOTAL		/30

MERIDIAN JUNIOR COLLEGE
JC2 PRELIMINARY EXAMINATION 2013
HIGHER 2

H2 Economics 9732/02

Paper 2 Essay Questions

23 September 2013

2 Hours 15 Minutes

Additional Materials: Writing Paper

READ THESE INSTRUCTIONS FIRST

Do not open this booklet until you are told to do so.

Write your name, class and register number in the spaces at the top of the answer sheets.
Write in dark blue or black pen.
Write your answers on the separate answer paper provided.
You may use a soft pencil for any diagrams, graphs or rough working.
Do not use staples, paper clips, highlighters, glue or correction fluid.
You are reminded of the need for good English and clear presentation in your answers.

Section A & B: Essay Questions (2h 15 min)

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 essay question on a fresh sheet of paper.
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 of a question.

[Turn Over]

This document consists of 3 printed pages 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 The price of organic fertilisers for organic crops has been rising. Rising income and healthy living campaigns are encouraging households to switch to consuming organic food.

With reference to the above events, assess the relevance of different concepts of elasticities of demand in explaining the effects on expenditure by consumers on organic and non-organic food. [25]

2 **(a)** Explain how income inequality results in market failure. [10]

(b) Assess the extent to which income inequality, rather than any other potential market failure, is the main cause of government intervention in Singapore. [15]

3 Travel agencies charge a lower price for a child's ticket than an adult's ticket to fly to the same destination.

(a) Explain whether the above pricing policy could be considered to be an example of price discrimination. [12]

With increasing competition and advancement in technology, non-online travel agencies should find new ways to remain relevant in the travel industry.

(b) Discuss the extent to which the growth of online travel agencies has threatened the survival of non-online travel agencies. [13]

Section B

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

4 There is a trade-off between achieving price stability on one hand, and economic growth and unemployment on the other.

(a) Explain the above statement. [10]

(b) How far do conflicts in government policy objectives restrict the extent to which fiscal policy could be used in any economy? [15]

5 Governments around the world often adopt policies to attract fixed capital investment and investment in human capital.

(a) Explain why countries may want to attract fixed capital investment and investment in human capital. [8]

(b) Discuss the relevance of supply-side policies, as opposed to demand-management policies, in attracting these forms of investment. [17]

6 In light of increasing globalisation, discuss whether the traditional analysis of the economic benefits of trade applies in achieving a higher standard of living for different economies. [25]

END OF PAPER

MERIDIAN JUNIOR COLLEGE

JC2 PRELIMINARY EXAMINATION 2013

9732/02

COVER SHEET

H2 ECONOMICS

Section A & B: Essay Question

Name: _____ Civics Group: _____

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QUESTION ATTEMPTED	MARKS
Question _____	**/25**

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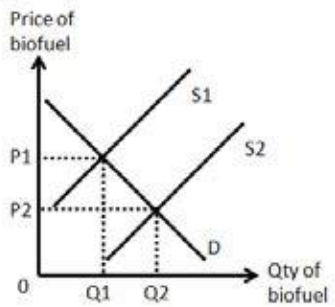
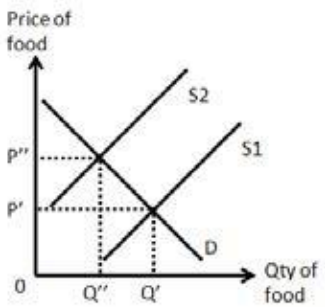
QUESTION ATTEMPTED	MARKS
Question _____	**/25**

The Next Food Crisis

Answers

(a)		**Compare the changes in the price of food from 2006-2008 with that of 2009-2011.**	**[2]**
		Food prices rose in both periods. From 2006-2008, food prices rose by 36.4% and from 2009-2011, food prices rose by 24.3% The rate of increase in food prices during 2009-2011 is 0.67 times that of the increase during 2006-2008	
(b)		**Explain how domestic consumers and producers in Russia and Ukraine are impacted by the halting of food exports in those countries.**	**[3]**
		Increases domestic supply of food à fall in domestic food prices in Russia and Ukraine. Lower domestic prices à improves welfare of consumers (extract 2 "protect supplies for their own people") as food is now more affordable à raises material SOL Increase in SS à fall in price, rise in qty dd à if PED<1 (as food is a necessity), TR will fall à incomes of farmers/producers will be lower	
(c)	**(i)**	**Describe the relationship between oil price and ethanol production between 2004 and 2010.**	**[1]**
		Both oil price and ethanol production have increased between 2004 and 2010, indicating a positive (or direct) relationship **.**	
	(ii)	**Explain the relationship observed in (c)(i)**	**[2]**
		As oil and ethanol are substitutes *OR they are alternative sources of energy* , the rise in price of oil will cause a fall in quantity demanded of oil and hence, demand for ethanol will increase, thereby causing an increase in equilibrium quantity of ethanol produced, ceteris paribus	
	(iii)	**Using supply and demand diagrams, explain how the use of subsidies to biofuel producers will impact the allocation of resources between biofuel and food.**	**[4]**
		Policies such as subsidies given to biofuel producers will lead to a fall in unit cost of production of biofuel. This leads to an increase in supply of biofuel as producers are willing and able to sell more biofuel at every price level.  Fig 1: Market for Biofuel  Fig 2: Market for Food Crops for biofuel and food crops are in **competitive supply**, i.e. the same land resource can be used to produce either crop (Evidence: Extract 3 shows that 125m tonnes of cereals were diverted into biofuel production OR Extract 1 states	

that ethanol producers are expected to use more corn for the production of biofuels). Assuming that no new land is set aside for biofuel production, hence, with an increase in supply of biofuel from S1 to S2 in Fig 1, less land resource will be allocated to the production of food**,** causing supply of food to fall from S' to S'' (Fig 2). This will lead to an increase in equilibrium price of food (from P' to P'') and fall in equilibrium quantity (Q' to Q'').
Thus, there will be an increase in the quantity of resources allocated to the production of biofuel, whereas less resources will be allocated to the production of food.

(d) **Assess whether demand or supply factors are more important to explain the changes in the price of food.** **[8]**

Introduction:

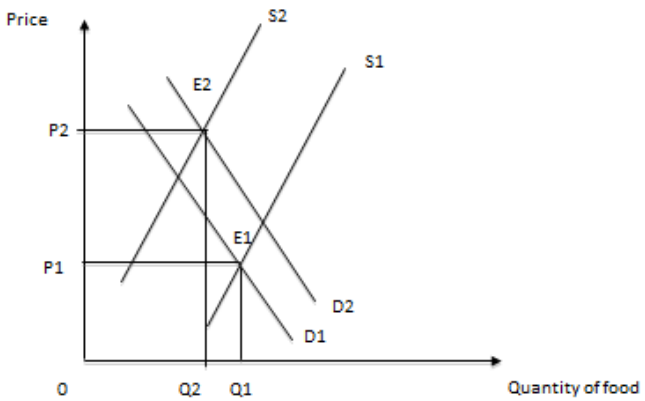
- Based on Table 1 and Extract 1, food prices have been continuously rising until 2011.
- This can be explained using demand and supply side factors. *(will only need to pick any 3 factors to focus on)*
-

Factors affecting the supply of food are:

- Floods in Australia, poor weather in South America, and extremely dry weather in Russia last year (Extract 1).
- Ethanol producers are using more corn for production of biofuels (Extract 1). This leads to fall in supply of food as food and biofuel crops are in competitive supply (as explained above).
- Also, rising oil prices (Figure 1), could further reduce supply of food as oil is an important resource in the production of food. The increase in price of oil will cause an increase in unit cost of production of food, causing a further fall in supply of food.

Factors affecting the demand for food are:

- Demand has increased due to rising population – the world population has nearly doubled since 1970 (Extract 1).
- Rising global standards of living are leading to more demand for meat. This leads to raising more livestock, which consume a large amount of grain and adds to more stress on already tight supplies (Extract 1). Hence, as demand for meat increases, demand for food crop also increases.



- The fall in supply (S1 to S2 in the figure above) as well as rise in demand (D1 to D2) for food has led to the rising food prices in 2011 as indicated in Table 1 and Extract 1.

- The supply of food is relatively price inelastic in the short run (PES<1) as it takes time to grow the food crops and food crops are perishable commodities, making it difficult to maintain stocks of food. Hence, with a rise in demand for food crops from D1 to D2 with supply at S1, the increase in price will be more than proportionate to the increase in equilibrium quantity, causing the 'dramatic leap' in food prices (Extract 1).

Conclusion:

- Whether demand or supply factors are more important in determining the changes in the price of food depends on the extent of impact these factors have in explaining the price change. It is likely that the fall in supply of food is likely to outweigh the rise in demand for food as world population growth has been declining (Extract 1), whereas the biofuel subsidies have been responsible for vast quantities of grain being switched into biofuel production instead of food production (Extract 3), causing massive impacts on the supply of food. Also, major producers of food grains such as Australia, South America and Russia have been affected by adverse weather conditions, further exacerbating the problem.

Level	Descriptor	Marks
L3	For an answer that demonstrates analysis, with relevant evidence from the case study, along with evaluation.	7 - 8
L2	For an answer that demonstrates analysis to show how food price may increase in future, with no evaluation or judgement using the evidence from the extracts.	4 - 6
L1	For an inaccurate answer/ an answer with conceptual errors.	1 - 3

(e) **Discuss the policy options available to the world's governments to address the rising food prices** **[10]**

Aim of the question: Based on the factors identified in (b), (c), (d) and (e), students should aim to suggest appropriate policy options to help to lower food prices.

Intro

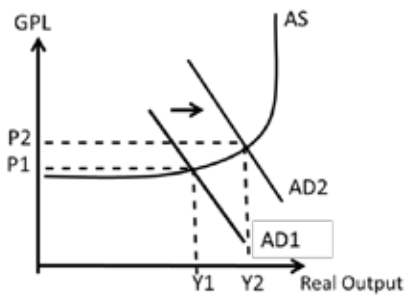
The objective of the policies suggested should aim to moderate or reduce food prices which have been increasing over the past few years (Table 1). This is a problem as rising prices is inequitable and the high prices may mean that not everyone is able to afford the food which is a necessity for survival.

Demand Related Policies

(1)**Reducing demand for biofuel** (ext 1, 3) à finding/developing alternative

		renewable energy sources such as solar, hydro à reduce demand for biofuel à more land avail for food production à increase SS of food à lowers prices Evaluation: **(+)** energy is a necessity à should not reduce production of biofuel unless there are alternatives present due to rising oil prices (Fig 1) à if ss of biofuel is reduced à higher price of biofuel à ↑demand for oil (substitute) à ↑price of oil à affect price of many goods and services especially necessities like energy as unit COP rises à impacts equity **(-)** Long term - requires a long time before results may be seen à not effective in SR **(-)** Costly à high opp cost involved, not all countries may have the resources, may require a global initiative to subsidise such R&D à govt will need to ensure that the benefit of lower price of food outweighs the costs of lower spending in other areas such as healthcare, etc… *Note: Students should note that reducing subsidies for biofuel may not be an ideal policy as it may lead to a rise in the price of oil which is also a necessity à creating another inequitable problem.* <u>Supply Related Policies</u> (3) **Export restrictions** (ext 2) à reduce domestic prices Evaluation: (+) subsidies is a ST solution à impact is immediate à addresses the inequity quickly (-) May impact global prices, ext 2 " interfere with the global food commodity market" à may invite retaliation from other countries. (4) **Investment/Subsidies into food production** (ext 1,3) à increases supply of food Evaluation: (+) subsidies is a ST solution à impact is immediate à addresses the inequity quickly (+) As PED<1, a unit subsidy will result in a more than proportionate fall in price compared to increase in qty à can achieve the objective of ↓prices with a smaller subsidy (-) Subsidies is still costly, may be a burden on govt budget à may need to cut down expenditure elsewhere à need to weigh the ↑benefits of using the subsidy versus costs of cutting of expenditure in other areas i.e. education, etc… <u>Conclusion</u> Due to the urgency of the problem, there may need to be short term solutions that are used to address the rising price of food i.e. price controls, export restrictions, subsidies, etc. However, such policies may cause problems such as shortages for price controls and global impact on prices for export bans. It is necessary to also have a long term solution that targets the root cause of the food crisis i.e. increasing food production to increase food supply to ensure sufficient SS even during adverse weather conditions. Alternatively, demand for biofuels should be reduced to minimise their impact on food prices esp in light of the projected increased in biofuel subsidies.	

Level	Descriptor	Marks
L3	For an answer that demonstrates analysis of at least 3 policies spanned over demand and supply management, with relevant evidence from various sources in the case study, along with evaluation. A reasoned judgment is also required.	7 – 10
L2	For an answer that demonstrates analysis of relevant (1-2) policies to address the rising prices, lacking in evaluation or reasoned judgement using limited evidence from the extracts.	4 – 6
L1	For an inaccurate answer/ an answer with conceptual errors with no use of case evidence.	1 – 3

(a)	(i)	Using Table 1, describe the trend of real GDP growth rate in Eurozone from 2007 to 2012.	[1]
		Real GDP growth rate shows a decreasing trend in Eurozone from the period 2007 to 2012.	
(a)	(ii)	Explain the link that exists between real GDP and unemployment rate for Eurozone between 2010 and 2012.	[2]
		There is an inverse relationship between real GDP and unemployment rate between 2010 and 2012. As real GDP falls, real income of the households and firms in the economy also fall, leading to a **fall in real output in the economy**. As labour is a derived demand, there would be a corresponding fall in the ADL. Given that there are sticky wages in the labour market, this would lead to an increase in demand-deficient unemployment.	
(b)		"U.S. Federal Reserve official urged the European Central Bank (ECB) on Tuesday to consider employing a U.S.-style quantitative easing programme to counter slowing inflation and recession in the euro zone."	
	(i)	Using a diagram, explain how quantitative easing can possibly resolve the recession in the EU.	[3]
		The policy of quantitative easing is designed to inject money into the economy, through the purchase of assets by the Central Bank. Most of the assets purchased are government bonds. There will be an increase in the availability of credit à financial institutions now have more money that can be used to lend out to firms or households on more favourable terms, which increases the amount of investment and domestic consumption in the economy This will lead to an increase in AD from AD1 to AD2 à increase in real output from Y1 to Y2 à actual growth achieved à resolving recession. 	
(b)	(ii)	Using appropriate data, explain the significance of the multiplier in determining whether quantitative easing should be employed by the EU.	[6]
		· An increase in AE will lead to a multiplied increase in national income through the multiplier process à ΔNY = k x ΔAE · Hence the size of the multiplier in an economy determines the effectiveness of demand management policies like Quantitative Easing in raising the National income to correct a recession.	

		· The size of multiplier is calculated by K = 1/ MPW Thus, the smaller the MPW, the greater the size of multiplier. · Thus, in the course of policy decision making, the knowledge of the size of multiplier is significant in influencing the government's decision on the magnitude of money supply changes in Quantitative Easing to bring about the desired increase in AD and hence National income in the economy. · Knowing the size of the multiplier will allow EU to decide how much to increase the money supply in order to bring about the desired outcome in the economy. Data from Table 2 does not reveal the actual value of the multiplier. It does give a hint that the multiplier is likely to be small, as the private consumption of households in EU is about 57% of its GDP. This private consumption is inclusive of consumption of imports of goods and services. In Extract 2 it is mentioned that there are high leakages as a result of **increasing tax rates (increase in MRT) due to the austerity measures** and EU's tradition as the largest world importer of goods and services with a **forecast import of goods and services at 43% (high MPM)** of GDP in 2013. This suggests that MPC is only about 0.14. Since MPW is high, this would mean large amounts of leakages with increases in national income. As such, with each increase in national income, there would be lesser money being passed around in the economy in the inner flow. **This would mean that the EU has a small multiplier and thus would require a large increase in money supply in order to attain a large increase in real GDP.** This might not be feasible, as it requires the government to buy large amounts of bonds and financial assets from commercial banks at a time when most of its governments are in budget deficit. **<u>Evaluation</u>** However there are other criteria that need to be explored, for example, the business outlook in the economy. If business outlook is poor, then increases in money supply with the aim of increasing Cd and I may be futile OR There is not enough data to determine the size of the multiplier and more information is required.	
(c)		Discuss the view expressed by protestors in Extract 4 that EU's standard of living will worsen as a result of the austerity measures.	[8]
		Material SOL: quantity of goods and services enjoyed by an individual Non-material SOL: environmental factors e.g. crime rates, degree of urban crowding; socio-economic factors e.g. life expectancy, infant	

mortality rates, quantity of leisure, etc

Austerity measures imply an increase in taxation and cuts in government spending. This has been implemented in the EU in order to reduce government debt.

Austerity measures adopted by the Eurozone would have both positive and negative impacts on the standard of living in the EU.

Explain how austerity measures will impact AD (either through a fall in G, or increase in T):

With spending cuts (↓G) and raised taxes, AD will fall. With an increase in personal income tax, disposable income of households is reduced à purchasing power falls à Cd falls. An increase in corporate income tax results in a fall in post-tax profits à lower incentive for investments à I falls (leftward shift in the MEI). The fall in AD due to fall in Cd, I, and G will cause a multiplied fall in real national income.

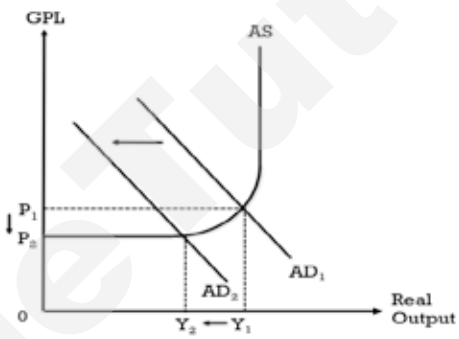


Figure 1: Impact of fall in AD

The fall in real national income/real output i.e. negative economic growth will lead to a fall in the aggregate demand for labour (fall in ADL from ADL1 to ADL2 in Fig. 3) and assuming that wages are sticky downwards, lead to demand-deficient unemployment of N2N1. This is the case in EU as there is "severe unemployment of 4.4 million" due to lack of jobs.

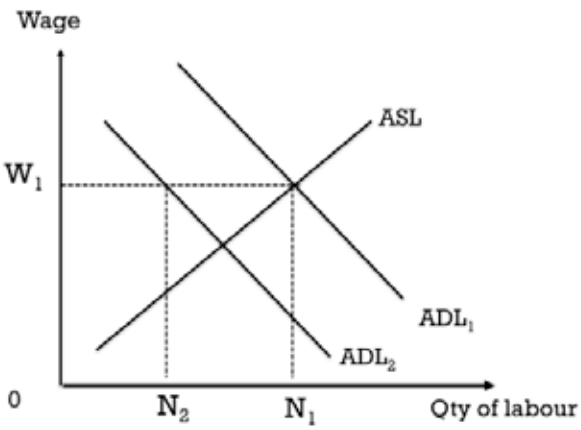


Figure 3: Labour Market diagram

		A fall in real NY means a decrease in the amount of goods and services available to the citizens in the country, holding price levels and population size constant à this would mean a fall in material well-being in the country. As a decrease in the level of national income is often accompanied by a rise in unemployment, this means that there is a lack of job security, decreasing non-material welfare. In addition, decreases in government spending may mean decreased expenditures in education or healthcare sectors which may deprive citizens of better learning facilities or healthcare services hence, leading to a fall in non-material standard of living. The decrease in employment due to the weak economic conditions, along with increase in personal income tax may increase social unrest due to protests in the EU (Extract 4). Disruptions to work due to protests would further affect production levels, hindering economic recovery. If this social and political instability were persistent, this would reduce investor confidence in the economy. There would be a resulting fall in FDI inflow and increase in investments outflow (both local and foreign). AD would fall further due to the fall in investments, further worsening the rate of growth and therefore material SOL. Social unrest due to work protests and possible higher crime rates due to unemployment also lead to higher insecurity and thus a fall in the non-material well-being of citizens in the EU. Explain how the austerity measures may increase AD in the long run: When austerity measures are implemented and are successful à reduce govt budget deficit and reduce debt à credit rating of the country improves à improves investment climate in the country. When the EU adopts austerity measures to generate revenue in order to reduce government debt (Extract 4), this may help to maintain investors' confidence in the economy. This will encourage FDI inflows and hence ensure long-term sustained economic growth of the country. Increases in FDI can lead to increases in both AD and AS as shown below, where real output can increase from Y1 to Y2 with increases in productive capacity as AS increases from Yf to Yf1.	

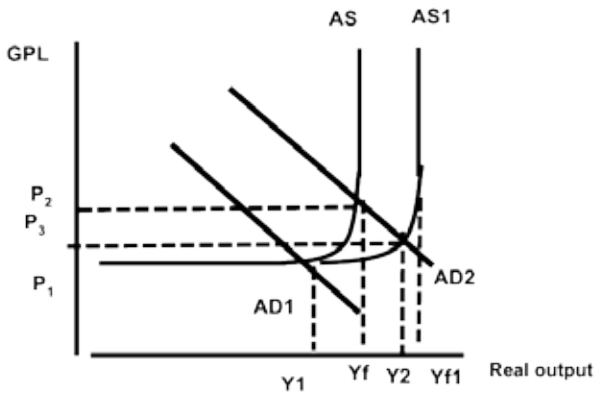


Figure 4: Long-run impact of austerity measures

Employment levels can also increase as demand for labour increases to produce more output. When there is a rise in real output and employment levels, the amount of goods and services available for consumption in the country increases, thereby increasing the material SOL of the EU.

Conclusion

Austerity measures may prove to be more harmful to the Eurozone in the short run given the extent of the various consequences analysed above with the main cost being worsening economic recovery although its benefits are for ensuring long-term economic growth.

Level	Knowledge, Comprehension, Application and Analysis	Marks
L3	A well-developed answer, with clear arguments on both sides, how EU's SOL will or will not worsen due to austerity measures, with reasoned judgement	7-8
L2	A one-sided answer, explaining either only how EU's SOL will worsen or how EU's SOL will not worsen. OR An underdeveloped answer, explaining how EU's SOL will worsen and how EU's SOL will not worsen; lacking rigour	4-6
L1	An answer that shows some understanding of the concept of standard of living and how EU's SOL will be affected by austerity measures	1-3

(d) To what extent does Singapore's approach to international trade require adjustment in response to the Eurozone crisis? [10]

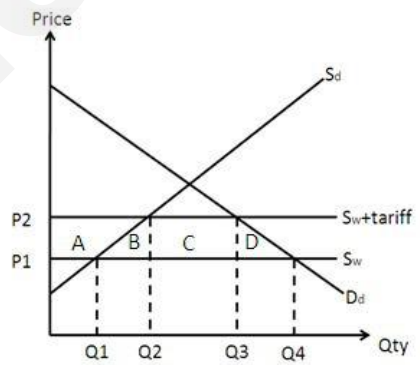
Singapore is a small and open economy, which is highly dependent on exports for her economic growth. External demand is estimated to make up about 75% of Singapore's demand. The trade to GDP ratio is about 300%, which also suggest the importance of trade to the economy.

EU is one of Singapore's top export destinations in 2013. Singapore's trade-driven economy contracted by 1.1% in the second quarter from the previous three-months due to a slowdown in global demand, which stems from the Eurozone crisis. Other major economies like China and the US, which used to export aggressively to the EU also suffered as a result.

Development 1: Impact on Singapore's economy due to Eurozone crisis

1. **<u>EU's response to the crisis: Growth in protectionist measures (Extract 4) to tackle unemployment and recession due to austerity measures</u>**

A growth in protectionism in EU can have a negative impact on Singapore's open economy, as it is one of Singapore's largest export destinations as mentioned in Extract 3. If EU were to increasingly implement protectionist measures against Singapore's exports, this will lead to a large fall in our exports to EU. Using tariffs as an example, once a tariff is implemented, the world price increases to P2. This leads to a fall in the quantity of imports from Q1Q4 to Q2Q3 as seen in Fig 1 à leading to a fall in AD in Singapore à negative economic growth + increasing demand-deficient unemployment.



<u>Figure 1: Impact of tariff in EU on Singapore</u>

The extent to which the quantity of imports is reduced depends on the price elasticity of demand and supply. The more price elastic either curves are, the larger the fall in imports.

<u>2. Fall in disposable income and recession in EU (Extract 3)</u>

Due to a fall in national income, the EU citizens experience a fall in purchasing power, which reduces their demand for goods and services, including imports. As EU imports less, this will result in a fall in aggregate demand in the Singapore economy. The larger the fall in exports, the larger the leftward shift of the AD, and this reduces real output (Fig 2).

This will lead to a fall in employment, as firms lay off workers due to reduced output. National income of the country will also be reduced by a multiplied amount through the multiplier process.

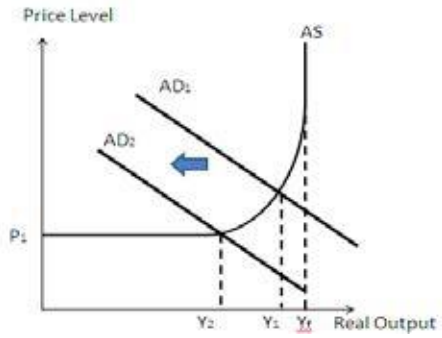


Figure 2: Impact of reduced exports on Singapore

3. Other impacts of Eurozone crisis on SGD: Singapore, an international financial centre, should brace for "excessive inflows as well as outflows" of capital. This would have impacts on the external value of the SGD.

Development 2: Singapore's approach to int'l trade + assessment of extent to which the approach to trade needs to be adjusted due to Eurozone crisis

Singapore aims to continue to keep its exports competitive through a variety of means: A slight appreciation of the currency, supply side policies and lastly by signing Free Trade Agreements (FTAs). By doing so, it will allow the country to continue to have high growth driven by the country's exports.

1. Singapore continues to strive to achieve price competitiveness of its exports through the slight appreciation of its currency using the managed float exchange rate system. Singapore's currency has been gradually appreciating. This allows the country to curb both domestic inflation and also imported inflation. The latter is important because of Singapore's lack of natural resources and the need to import raw materials for production. An increase in cost of raw materials will reduce the price competiveness of domestically produced goods. However, if the SGD were to appreciate too much, Singapore would also lose its export price competitiveness, as the price of the exports in foreign currency will be relatively higher to foreign countries.

In light of falling export revenue, SG should consider making adjustments to its current policy of a gradual appreciation of its domestic currency to one of zero appreciation or depreciation of the domestic currency. This is especially so in light of the fact that there are various factors as a result of the Eurozone crisis that threaten the demand for Singapore's exports.

With a policy of depreciation of the SGD, this will allow the price of Singapore's exports to be cheaper in terms of foreign currency. Assuming

		that the demand for exports is price elastic, this would mean a more than proportionate increase in the quantity of exports, increasing export revenue. **2.** Singapore also uses supply side policies to improve price competitiveness and non-price competiveness. Examples of such policies include improving the labour productivity through skills upgrading and retraining. An improvement in labour productivity alongside close monitoring of wage rates has allowed Singapore to have a low Unit Labour Cost (ULC), which will raise the price competitiveness of goods produced in Singapore. There are also policies in place to encourage innovation of newer products. Such policies incentivize firms to innovate so that they can continue to create new and better products and services to ensure that the country maintains its comparative advantage in a variety of high value-added sectors. This is particularly important, as producing affordable and high quality exports would be a priority amidst global recession. Supply side policies should continue to be of importance to Singapore to maintain its price competitiveness and innovation. However, the cost of such policies will continue to be high, as the government will have to subsidise or provide grants to firms or workers. **3.** FTAs are binding agreements between two or more countries to reduce or remove trade barriers, such as tariffs, to facilitate cross border movement of goods and services between territories of the parties involved. Singapore has many FTAs in place already including bilateral FTAs with Japan, Korea and the United States and also regional FTAs between ASEAN and other countries. The benefit of the FTA is through the removal or reduction of tariffs. Referring to Fig 1, the removal of tariffs from trade will lead to a net gain in society's welfare of area B + D for the importing country and for Singapore, it will benefit via increased exports (from Q2Q3 to Q1Q4) when the protectionistic measures implemented by EU are removed. Additionally, signing of FTAs with other countries will also result in a larger export market for Singapore's firms thus contributing to further growth of the economy (figure 1: rightward shift of AD à increase in NI). The increased export volume will also allow firms to benefit from economies of scale through large-scale production. This is especially important since the traditional export destinations are seeing a contraction of their economies. Seeking new and non-traditional destinations for Singapore exports would be of great importance. In the event of a recession in Singapore's export destinations, signing of FTAs with new countries will be necessary to negate or minimize the impacts Eurozone crisis on Singapore's exports. Success of the FTA depends on the take up rates by firms. If the requirements or paperwork is too tedious or if the information of	

opportunities is not properly disseminated to firms, then the benefits from the FTA may not be obtained, as firms make not leverage on the benefits such as tariff-free trade with those countries. Asian FTAs generally have a low take up rate (or utilization rate) among firms, especially SMEs, of about 20%. This may mean that the cost of negotiating such FTAs may be greater than the benefits and thus maybe resources could be better used in other policies benefiting trade. Thus, Singapore will need to ensure that negotiations for FTAs are complemented with the necessary services to help export firms be aware and access the possible gains.

Conclusion:
As a result of recession in EU, EU might further protect their domestic economy; with increasing protectionism, this can have a large impact on Singapore's national income. To counter this phenomenon, Singapore needs to continue in its approach to trade. Though the types of policies that implemented should not change, more resources should be directed towards negotiating FTAs among the countries that Singapore exports to.

In addition, while Singapore should adjust its policies to adapt to changes in the global economy, there also needs to be policies to develop the domestic market, so that we become less dependent on trade with Western economies like the EU and US which are less stable. Singapore also needs to start to develop regional trade and our domestic economy, and shift our focus away from export-led growth to productivity-led growth.

Level	Knowledge, Comprehension, Application and Analysis	Marks
L3	A detailed analysis of the impact of Eurozone Crisis on the Singapore economy and the explanation of Singapore various approaches to trade including recommendation of what may need to be adjusted.	7-10
L2	An answer that either does not provide any recommendations or does not explain either the impact of Eurozone Crisis or Singapore's approaches to trade in detail.	4-6
L1	An answer that shows some knowledge of the impact of Eurozone Crisis or some of Singapore's approaches to trade	1-3

The price of organic fertilizers for organic crops has been rising. Rising income and healthy living campaigns are encouraging households to switch to consuming organic food.

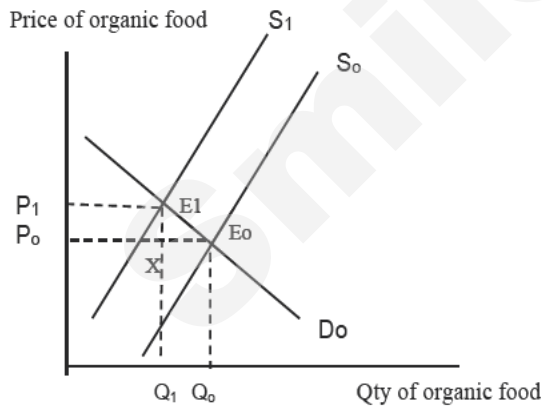
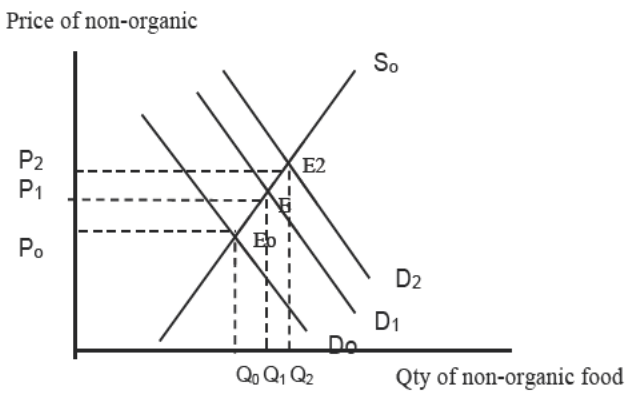
With reference to the above events, assess the relevance of different concepts of elasticities of demand in explaining the effects on expenditure by consumers on organic and non-organic food. [25]

Suggested Marking Scheme:

Introduction

- Focus: Discuss the relevance of PED, YED & XED in affecting CE in each market given a rise in the price of organic fertilizers, a rise in income and healthy living campaigns.
- Key Definitions:
  - Consumer expenditure (CE): Total amount of money that consumers spend on a product.[CE = P x Q]
  - PED: Measures the degree of responsiveness of quantity demanded to a change in the price of the good itself, ceteris paribus.
  - YED: Measures the degree of responsiveness of demand of a good given a change in income, ceteris paribus.
  - XED: Measures the degree of responsiveness of demand of a good to a change in the price of another good B (substitutes / complements), ceteris paribus.

Development 1: Consider a rise in price of organic fertilizers

Organic Food Market	Non-Organic Food Market
 **Fig 1. Market for organic food**	 **Fig 2: Market for non-organic food**

Assume that organic fertilizers are used in the production of organic food (i.e. factor of production): Rise in price of organic fertilizers→ increases the unit cost of product → fall in SS of organic food from So to S1→ less units of organic food is supplied at every price → [briefly explain adjustment process] → rise in eqm price from Po to P1, fall in eqm qty from Qo to Q1. The DD for organic food is likely to be price elastic (PED> 1) due to availability of non-organic food as substitutes to organic food. Hence, a rise in price of organic food lead to a more than proportionate fall in quantity demanded of organic food. Wrt Fig 1, a rise in the price of organic food (due to a fall in SS) leads to a fall in CE due to a more than proportionate fall in qty dd (i.e. area EoQoQ1X) as compared to a smaller rise in CE due to the rise in P (i.e. area E1P1PoX)→ CE on organic food falls from 0PoEoQo to 0P1E1Q1.	Rise in price of organic fertilizers → fall in SS of organic food → fall in qty dd of organic food → rise in DD for non-organic food since they are substitutes (XED>0) → demand curve shifts right from Do to D1 → more units of organic food is demanded at every price → rise in both eqm price & qty from Po to P1, Qo to Q1 → rise in CE from 0PoEoQ0 to 0P1E1Q1.

Comment on Relevance of DD elasticties:

PED is relevant in explaining the impact on CE in the market for organic food as it explains how qty dd of organic food changes w.r.t a rise in the price of organic food due to a fall in its supply.
XED is relevant in explaining the impact on CE in the market for non-organic food as it explains how DD of non-organic food (and therefore its P & Q) is affected due to a rise in the price of organic food.

Development 2: Consider a rise in Income

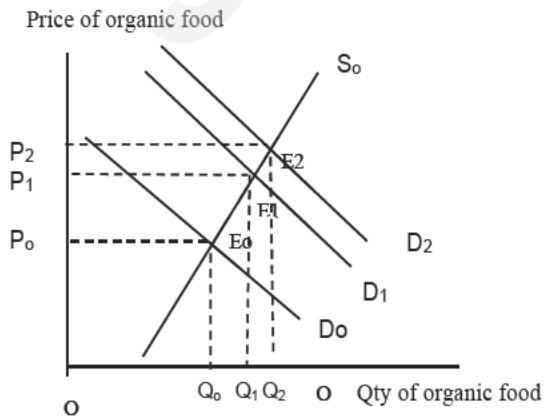


Fig 3. Market for organic food

Refer to Fig 2

Organic and non-organic food are likely to be normal goods (YED>0). As income rises, the purchasing power of households increases and thus, the DD for both organic and non-organic food increases. Organic food is likely to be a luxury good as such food tends to be expensive and thus constitutes a larger proportion of income. Hence the DD for organic food is likely to be income elastic (YED>1). The rise in income would lead to a more than proportionate rise in DD for organic food from Do to D1 à rise in eqm price and quantity from P1 to P2, and Q1 to Q2 à rise in CE on organic food from area 0PoEoQo to area 0P1E1Q1.	Non-organic food is likely to be a necessity, as households generally consume non-organic food as part of their daily diet. Hence the DD for non-organic food is likely to be income inelastic (0<YED<1). The rise in income will lead to a less than proportionate rise in DD for organic food from D1 to D2 à rise in eqm price and qty from P1 to P2, Q1 to Q2 à further rise in CE on organic food from 0P1E1Q1 to 0P2E2Q2.
Comment on Relevance of DD elasticities]:	
Only YED is relevant in explaining the impact on CE in both markets as it explains how DD of each type of food (and therefore its P & Q) affected by a rise in income.	
Development 3:Consider Healthy Living Campaigns	
Refer to Fig 3	**Refer to Fig 2**
Assuming that healthy living campaigns successfully lead to consumers being more informed of the possible health benefits of consuming organic food à change consumers' taste and preference towards organic food à switch to consuming organic food à reinforces the rise in DD for organic food from D1 to D2 à further rise in eqm price and qty from P1 to P2, and Q1 to Q2 à further rise in CE on organic food from 0P1E1Q1 to 0P2E2Q2.	Successful healthy living campaigns in changing taste and preferences towards organic food à assume that the DD for non-organic food falls from D2 to D1 as consumers switch from consuming non-organic food to organic food à fall in eqm price and qty from P2 to P1, Q2 to Q1 à CE decreases from 0P2E2Q2 to 0P1E1Q1.
Comment on Relevance of DD elasticities [2m]:	
PED, YED, XED are not relevant in explaining the impact on CE in both markets due to healthy living campaigns.	
Evaluation (At least 1 well-explained point):	
(1) PED of a good depends on the proportion of income spent on the good. For instance, more efficient	

methods of farming organic food may reduce its unit cost of production, which leads to a lower price of organic food. Thus household expenditure on organic good may constitute a smaller proportion of income. Hence, as the DD for organic food becomes less price elastic, the impact on CE would differ given a rise in the price of organic fertilizers.
Synthesis and Conclusion

Level	Description	Marks
L3	For a well-explained answer on the relevance of all demand elasticity concepts (PED, YED, XED) in both organic and non-organic markets. Judgements on the relevance of the DD elasticity concepts in each market are given.	15-21
L2	For an answer that did not explain the relevance of all demand elasticity concepts (PED, YED, XED) in both organic and non-organic markets OR explains the relevance of all DD elasticity concepts for only organic food or non-organic food.	9-14
L1	For an answer that shows basic shifts of DD & SS curves, but did not explain (or largely unexplained) relevance of the DD elasticity concepts.	1-8
	Allow up to 4 additional marks for Evaluation	
E2	For an evaluative assessment based on economic analysis.	3 - 4
E1	For unexplained assessment.	1 - 2

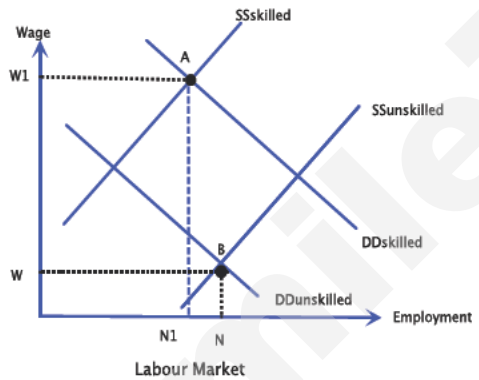
2 (a)	Explain how income inequality results in market failure.	[10]
(b)	Assess the extent to which income inequality, rather than any other potential market failure, is the major cause of government intervention in Singapore.	[15]

Introduction

Market failure occurs when the price mechanism fails to allocate resources efficiently and equitably and usually the government needs to take actions and provide a non-market mechanism to allocate scarce resources.
Income inequality → results in inequity →markets fail
Inequity: unfair and unjust distribution of resources

DEVELOPMENT

Development 1: Income inequality may arise due to differences in dd and ss of labour.
Demand for labour is determined by labour productivity which is influenced by the workers' education, skills and health.
- DD for unskilled labour is relatively lower as firms will be less willing to hire workers with low labour productivity → cost inefficient as wages usually takes up a large proportion of production cost
- The supply of highly skilled labour tends to be lower than that of unskilled labour as the former requires specialized and technical skills that are not easily acquired. SS of unskilled labour is high as there is a readily available pool of such labour.



As shown in Figure 1, a combination of high demand and low supply of skilled labour leads to higher wage of W1. This is as opposed to unskilled workers who would receive much lower wages of W due to its high ss and low dd.
Income inequality can further worsened with **occupational immobility**, whereby the low skilled workers who lack the necessary skills to move into industries which employ high-skilled workers and hence pay higher wages → unequal incomes between low skilled and high skilled workers persist

Development 2 : Income inequality may also arise because of market dominance

- **Worsen the income distribution** in the economy as the **rich gets richer** while the **poor gets poorer**.

Income inequality results in inequity and hence markets fails (diagram optional)

- In a market based economy, allocation of resources is based on the price mechanism. Movements in product prices determine the types and amt of G+S to be produced. An increase in dd for a good → increase in product prices and producers will respond to the price signals by increasing production and the amt. of good produced is distributed among those who are willing and able to pay.
- Consumers command resources according to their dollar votes. Those who are unable to pay will not have access to the goods. Thus in a market based economy, types of goods and the amt of goods produced is based on the willingness and ability to pay rather than on needs.

- Because income is unevenly distributed à people with most income will be able to determine what should be produced as they are able to cast higher money votes for the goods that they want à resources will be diverted to produce luxury goods for the rich, while the needs of the poor will not be satisfied - Unfair distribution of resources à **inequity** à society's welfare not maximized
Conclusion: Because of the unfair allocation of resources à need for govt to intervene through various policies to correct the market failure of income inequality

Knowledge, Application, Understanding and Analysis		
L3	For a well-developed explanation and **relevant analysis** of the causes of income inequality and how income inequality results in market failure.	**7-10**
L2	For an underdeveloped explanation which **describes** the causes of income inequality with **the links unexplained** and/or with **conceptual errors**. E.g. focusing only on how income inequality results in market failure without linking to the causes of income inequality like factor immobility or market dominance	**4-6**
L1	A descriptive answer which shows **some knowledge** about market failure and income inequality. Answers contain **inaccuracies.**	**1-3**

(b) Assess the extent to which income inequality, rather than any other potential market failure, is the major cause of government intervention in Singapore. [15]

Development 1: Income inequality is a major cause of government intervention in Singapore **Causes of why income inequality has become more prevalent in Singapore:** **1) Rising globalization + Rapid economic growth** The transition to a knowledge based economy as engine for growth à skilled workers are able to exploit career and business opportunities in a globalized world à therefore enjoying faster income growth than those who were un-semi-skilled Moreover, the rate of growth in Sg was much more faster than in other countries like US à employment opportunities for the highly skilled expanded rapidly while the unskilled and semi-skilled faced structural unemployment and had little time to adapt to the changing needs of the economy à increased the earning gaps btw the 2 groups 2) Reliance on foreign workers due to government policies Increasing reliance on cheap foreign workers to ensure greater competitiveness + to address the falling fertility rates: à increase in ss of low-skilled workers who are paid lower wages than their counterpart

Singaporeans but higher than the wage levels of their less developed home countries à suppressing wages in sunset industries
à increase in ss of foreign skilled workers who are paid expatriate salaries à spill-over effect of raising the remuneration packages of local managers and professionals
However, the increase in ss of foreign talent is at a lower rate à thus, the fall in wages in sunrise industries < fall in wages in sunset industries à widening of income gap in Singapore

<u>Govt policies to address income inequality: Education and training to improve the skills of workers (explain briefly)</u>

- Education and training of low skilled workers à Increase in skills level + productivity à increases their employability à DD for these workers increase
- At the same time, some of these workers may be equipped with the necessary skills to move to the market for high skilled labour à reduce SS for unskilled workers
  è Wages increase à Higher income for low-skilled workers à reduce income inequality

<u>Impact on the market for high skilled workers</u>
à Increase SS for skilled workers à wage rate from decreases à lower income for the skilled workers à reduces income inequality

Govt has stepped up their intervention to address the problem of rising income inequality in Singapore à less inequity

Anti-thesis: Income inequality is not the major cause of government intervention as the government also intervenes in the case of other forms of market failure as well

In Singapore, government also intervenes actively in the area of externalities, public goods and information failure. ***(explain any other 2 sources of market failure)***

1. Externalities

· E.g. Singapore government has been intervening to address the rising traffic congestion issue.

2.Public goods

· Singapore govt. also intervenes in the provision of public goods e.g. national defence, streetlights, traffic lights etc. Public goods have the characteristics of non-rivalry and non-excludability.

Synthesis/Conclusion

- The Singapore government takes a relatively interventionist approach and will frequently step in to correct any potential market failures that might occur.
- In light of rising globalization which has resulted in greater reliance on cheap foreign labour and also structural unemployment à the extent of government intervention in addressing the problem of income inequality has increased over the years. However, as compared to the other sources of market failure, the level of government intervention might not be as intense/ prevalent/frequent.

Level	Description	Marks
L3	A well balanced analysis which considers how the government intervenes in the case of income inequality as well as other forms of market failure, with relevant examples from the local context. Student must also show some attempt to weigh the extent of government intervention across the various forms of market failure.	9-11
L2	One-sided answer which only explains the different forms of government intervention in the case of income inequality or an underdeveloped explanation on the various other forms of market failure and the methods of government intervention in the market, with some attempt to respond to the signpost. Little use of examples of policies Singapore government adopts.	6-8
L1	Descriptive answer that merely explains the various methods of government intervention with no attempt to respond to the signpost	1-5
E2	For an informed judgment supported by sound economic analysis, that takes into account the local context	3-4
E1	Unexplained judgment with no economic analysis that does not make reference to the context of Singapore	1-2

3. Travel agencies charge a lower price for a child's ticket than an adult's ticket to fly to the same destination.

a) Explain whether the above pricing policy could be considered to be an example of price discrimination. **[10]**

Introduction

Price discrimination
à a firm sells the same product to different groups of consumers at different prices when the price difference cannot be explained by differences in the cost of production.

3 types of PD:

- **1st degree**: charging consumers at the maximum prices they are willing to pay for a particular unit of output. Under such circumstances, the firm is able to capture all of consumer surplus, leaving consumers with zero consumer surplus.E.g. auction
- **2nd degree:** charging same consumer different prices for different quantities sold. The firm will set a uniform price for an initial specific quantity followed by a concession of a lower price for an additional batch of goods. E.g. Carpark charges
- **3rd degree**: occurs when the seller divides his consumers into different groups and charges a different price to each group. E.g. cinema tickets

3 conditions for PD to work:

1. The firm must have the ability to set prices.
2. The markets can be segmented and resale should not be possible between sub-markets.
3. There exists different PED in the different sub-markets.

Respond to signpost: Whether or not the pricing policy can be considered an example would depend on whether or not the 3 conditions, as well as the definition of PD are fulfilled.

Development

Identify the pricing policy: The above is an example of 3rd degree price discrimination where consumers are grouped into different markets and separate prices are charged in the different markets.

Consider the definition as well as all the conditions necessary for PD to take place, in the context of travel agencies:

- The pricing policy implemented by travel agencies is an example of 3rd degree PD
- The firm sells air tickets to the same destination at a higher price for adults and a lower price for children
- It is unlikely that the cost incurred would be different as the adult and the child travel to the same destination on the same flight/class of travel à Definition for PD met

- **Conditions for 3rd degree price discrimination:**

1. The firm must have the ability to set prices

- There are generally a few large and established travel industries in the travel industry à oligopolistic market structures à these large travel agencies possess significant

market power. In SG, for instance, the travel industry is dominated by large and established travel agencies such as Chan Brothers, 5 Star Tours, Dynasty Travel. à a downward sloping demand curve à its significant market power

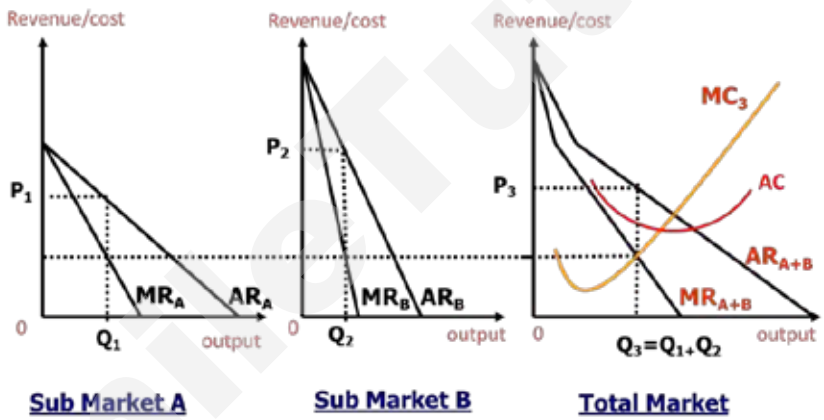
2. Markets can be segmented and there is no possibility of resale between sub-markets

- There must exist two or more sub-markets which can be separated or kept separate; the PED in these sub-markets must be different
- In this case, the market can be segmented according to the age of the customers – for instance, children under 12 years of age would pay a lower price while those above this age are required to purchase the more expensive adult ticket to fly to the same destination on the same flight/ class of travel,

3. There are different price elasticities of demand in the various markets.

- The PED values are likely to be different for the different groups of consumers i.e. children and adults.
- The demand for air tickets by children is relatively price elastic while the demand for air travel by adults tends to be relatively less price elastic. Explain why.

<u>Explain how the large travel agency practices 3rd degree PD:</u>



- The monopolist maximises profits by equating the firm's MC with individual MR curves in the sub markets as shown in Market A and B.
- The output produced in sub market A (Children) is determined by the profit maximising condition, where $MC=MR_A$, and a price of P1 is charged.
- On the other hand, the output produced in sub market B (Adults) is determined by the profit maximising condition, where $MC=MR_B$, and a price of P2 is charged
- Therefore, since demand is more price elastic in sub market A, travel agencies maximise profits via by charging a lower price for children's air tickets and a higher price for adults' air tickets.

Evaluation:

E.g. In reality, it is difficult to obtain accurate estimates of MR in each sub market and MC in the overall market. Hence, it is difficult to determine the different prices to charge in each submarket that allows the firm to maximize its profits.

<u>Conclusion</u>

It is likely that the pricing policy implemented by travel agencies is an example of 3rd degree

PD since it fulfills both the conditions and the definition of PD. However, travel agencies may find it increasingly difficult to practice this form of PD as their market power is likely to fall due to the advancement of technology which increases the level of competition in the travel industry via online travel agencies.

Level	Knowledge, Application, Understanding and Analysis	Marks
L3	For a well-developed answer that uses relevant analysis to explain the concept of PD with the use of appropriate examples, and makes reference to the examples when explaining the conditions under which PD occurs.	7-10
L2	For an underdeveloped answer that describes the concept of PD, with an attempt to use examples to explain the conditions under which PD occurs.	5-6
L1	For an undeveloped answer that shows knowledge of what is meant by PD or gives an unexplained diagram of PD, without any use of examples.	1-4

3b) Discuss the extent to which the growth of online travel agencies has threatened the survival of non-online travel agencies. [15]

	Development:
These: Yes the growth of online travel agencies has threatened the survival of non-online travel agencies	**Anti-Thesis: The survival of non-online travel agencies are not threatened and there are other factors that threatens their survival**
à Shutdown Condition in LR: firms making subnormal profits; AR<AC à as a result firms may have to exit the industry (optional: illustrate with diagram whereby firms are making subnormal profits) EV: However, extent of fall in dd depends on firms' reactions ü Engaging in non-price competition such as advertising & product development to increase market share à Advertising: ü Aim of advertising: to increase sales of their products through	**A) It depends on firms reactions:** 1) Despite making losses in the SR, firms may not leave the industry as shutdown condition not met (AR > or = AVC) 2) Firms may also attempt to minimise costs by investing in process innovation 3) Firms tap on online platforms: ü Firms may use the chance to exploit the benefits of internet technology. With the development of the internet, existing firms could tap on it to expand its consumer base. ü Possibility of lowering operating costs through the development of Internet 4) Existence of non-online firms is still crucial due to its ability to provide personalized and direct services to each client.

informative/ persuasive advertising à Product Development:	**B) There are other factors that threatened the survival of non-online travel agencies:** E.g. Shortage of labour/ changes in government policies on foreign labour has resulted in an increase in cost of labour à increase in MC and AC
Conclusion: The growth of online travel agencies has threatened the survival of non-online travel agencies to a small extent. This is because both online and non-online travel agencies sell differentiated products. While online travel agencies cater to consumers mainly for air tickets and accommodation, non-online travel agencies tend to provide consumers with tour packages. However, in light of the pervasiveness of IT in one's daily live today, non-online travel agencies should embrace the change and continue to innovate to ensure a 'richer and deeper' experiences for their consumers, thus preventing them from turning to online travel agencies.	

Knowledge, Understanding, Application, Analysis		
L3	For a well-developed, balanced answer that competently discusses the extent to which the growth of online travel agencies has threatened the survival of non-online travel agencies.	9 - 11
L2	For an underdeveloped or lop-sided answer that explains how the growth of online travel agencies has threatened the survival of non-online travel agencies	6 - 8
L1	For an answer that is descriptive and exhibiting knowledge of how the growth of online travel agencies has threatened the survival of non-online travel agencies	1 - 5
	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

1. There is a trade-off between achievement of price stability on one hand and achievement of growth and unemployment on the other.
   (a) Explain the statement. [10]
   (b) How far do conflicts in government policy objectives restrict the extent to which fiscal policy could be used in any economy? [15]

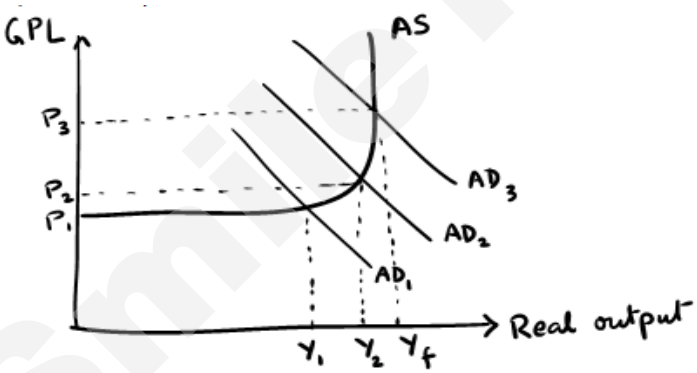
Introduction

There is a trade-off between achievement of price stability and achievement of growth and employment. For an economy facing high inflation, policies to mitigate it can help to restore price stability, but it may conflict with other macroeconomic objectives such as growth and low unemployment.

Development

Price instability due to high inflation:

Country à high demand pull inflation due to rising domestic demand à situation where AD is persistently greater than AS, close to or at full employment. The excess dd cannot be met due to existing resources being fully or almost fully employed



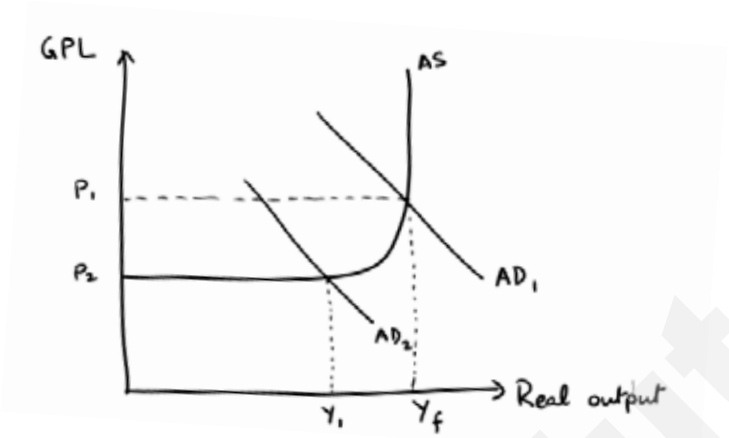
Achievement of price stability:

A contractionary demand management policy can be used to reduce AD with the objective of restoring price stability.

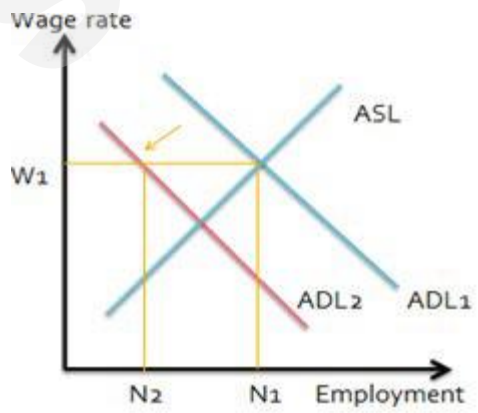
- E.g. A contractionary fiscal policy such as fall in G or rise in direct tax rates (à rise in personal income tax à fall in disposable income à fall in purchasing power à fall in Cd)
- Fall in AD since Ad = Cd + I + G + X
- As AD falls from AD3 to AD2.
- GPL falls from P3 to P2 à reduction of inflation à thus price stability is restored.

Conflict with other macro objectives/Trade-off with growth and uN:

- **Negative economic growth**: As AD decreases, there is a fall in output produced by the economy. There is a large trade-off between achievement of price stability and achievement of growth, if the AD decreases by too much à The reduction of inflation is achieved at the cost of lower output as output falls from Yf to Y1 à negative economic growth. With lower income earned, there is a fall in purchasing power of households à fall in material SOL.



- **Demand deficient unemployment:** With a fall in output, firms in the economy will produce fewer units of output à reduce the demand for factors of production including labour à Aggregate demand for labour (ADL) falls from ADL1 to ADL2. Assuming that wage rate is sticky downwards, there is a surplus of labour (N2N1) at the existing wage rate W1 à demand deficient unemployment of N2N1.
  Evaluation: The extent of dd-deficient uN will be large if the country specializes in the production of labour intensive goods. Thus ADL will fall by a significant amount. Thus there is a large trade-off between achievement of price stability and achievement of low unemployment.



Labour Market

Conclusion:

The extent of the trade-off between achievement of price stability and achievement of growth and low unemployment depends on the **time frame**. If price stability is achieved using supply side policies, then in the long run, GPL falls. Thus both growth and price stability is achieved. Thus there will not be any trade-off between achievement of price stability and achievement of growth and low uN in the long run.

(b)

1. State the govt macroeconomic goals and define fiscal policy

- **Govt macroeconomic objectives**
- à **Internal Goals**
  - full employment of resources
  - low rate of inflation and
  - sustained economic growth
- **External Goals**
  - balance of payment equilibrium
  - stable exchange rate
- **Fiscal Policy**

  Fiscal policy refers to the use of government spending and taxation to achieve the macroeconomic policy objectives such as economic growth, low and stable inflation, low unemployment and a healthy balance of payments.

  Conflicts in achieving the different objectives may arise when the government implements discretionary fiscal policy. An expansionary fiscal policy to raise output and employment may result in inflationary pressures if the economy is operating near full employment and worsen the country's balance of payments. On the other hand, a contractionary fiscal policy to control inflation may lower employment and economic growth of the country.

2. Explain how the use of expansionary FP to boost economic growth leads to conflict with low inflation

- Expansionary FP à Govt increases government spending and/or reduces personal income and corporate income tax rates à G, Cd & I increase, increasing AD and through the k process creates a larger increase in NI, output & employment. As long as there is spare capacity, real output will increase resulting in actual growth.
- Inflationary pressures: Due to time lag and inaccuracies in government's prediction of how much to inject to maintain or sustain growth, there may be overshooting.

3. Explain how the use of expansionary FP to boost economic growth leads to conflict with sound balance of payments

Economic growth and the resulting inflation lead to a higher domestic price level and thus a loss in export competitiveness. Higher export prices in international markets would lead to a lower quantity demanded of exports. Export revenue will fall assuming that the PEDx >1. On the other hand, imports become relatively cheaper, resulting in domestic consumers increasing their demand for imports and hence payments for imports rise. Thus, a relatively higher inflation in

comparison with other countries will worsen the current account balance. Hence, inflation will cause the balance of payments of a country to worsen. Also, higher economic growth à increase in national income à increase in demand for imports since these goods have high positive income elasticity à further worsens current accounts and hence the BOP.

4. Examine the extent to which conflicts in (i) economic growth and low inflation, and (ii) economic growth and sound BOP limit the scope for the use of fiscal policy

· **Extent of conflicts depends on availability of resources in economy**

Economic growth due to persistent rise in AD > AS when the economy is near or at full-employment causing prices to be pulled upward. As Singapore is very near to full employment, demand pull inflation may result, especially in the short run. Hence, the conflicts in macroeconomic goals may limit the scope of the use of FP.

· **Extent of conflicts depends on time frame and nature of the fiscal measures.**

- The rise in investment due to fall in corporate income tax rates will also lead to potential growth in the LR. Hence this reduces the conflicts in macro goals.
- FP measures which have a supply side impact will not be limited by goal conflicts.

5. Examine other factors more significant in limiting scope e.g. availability of govt funds, size of multiplier (explain any 1 factor)

· As the SG govt had accumulated large amount of reserves during the good years through its fiscal prudence, it was able to bear a budget deficit during a recession or a slow-down. The surpluses accumulated enabled the S'pore government to stimulate EG without having to raise taxes. Conversely, if a govt lacks the necessary funds it will be less able to increase govt expenditure without raising taxes, or borrowing. If government spending has to be financed by borrowing from the banking sector, it will be competing with the private sector for finance. This competition for the limited funds raises interest rate and discourages firms from investing. This is known as the crowding out effect.

Conclusion: Make judgement

Mark Scheme

(a)

Level	Knowledge, Application, Understanding, Analysis	Marks
L3	For an answer that uses relevant analysis such as diagrams to explain	7-10

	both trade-offs (trade-off between price stability and growth; trade-off between price stability and unemployment)	
L2	For an answer, that shows lacks scope (only explains one trade-off) or lacks analysis (no clear linkage between how the achievement of price stability conflicts with another goal)	4-6
L1	For an answer, that shows limited understanding of the trade-off between price stability with growth and unemployment.	1-3

(b)

Level	**Knowledge, Application, Understanding, Analysis**	**Marks**
L3	For an answer that uses relevant analysis to support the explanation why FP might lead to conflict in goals and thus restricting its use and also factors that influence the extent of the conflicts, along with other factors that can also restrict the use of FP.	9-11
L2	For an answer that gives a descriptive explanation of how conflicts limits the scope to use FP without addressing the factors that influence the extent.	6-8
L1	For an answer that shows knowledge of why fiscal policy has limited use e.g. gives a list of potential conflicts or other reasons to explain why FP may be ineffective.	1-5
	Allow up to 4 additional marks for evaluation	
E2	Reasoned judgement	3-4
E1	Unexplained evaluation	1-2

Governments around the world often adopt policies to attract fixed capital investment and investment in human capital

(a) Explain why countries may want to attract fixed capital investment and investment in human capital. [8]
(b) Discuss the relevance of supply side policies, as opposed to demand management policies, in attracting these forms of investment. [17]

Part (a)

Development: Benefits of investment

(i) Short-term growth and Rise in SOL:

- Investment is a component of AD [AD = Cd + I + G + X]. An increase in I à increase in AD.
- Increase in AD, assuming spare capacity à Increase in Real output by a multiplied amount. [Detailed adjustment process and AD AS diagram]
- Short term growth which is a macro goal of a country.
- Assume growth in NI > growth in population à GDP per capita ↑
- Increase in purchasing power à households are willing and able to consume more units of goods and services à material well-being in an economy, ceteris paribus.
- **Evaluation:** However if the growth rate is very high, it may imply longer working hours and high stress levels à Worsens the quality of life à fall in non-material SOL.

(ii) Fall in unemployment (short run):

- Assume economy is experiencing dd-deficient UE (N2N1). With investment, ↑AD à ↑real output à As firms in the economy produce more output, they demand more factors of production including labour à ↑ADL (labour is a derived demand)
- Reduces dd-deficient unemployment present in economy [labour market diagram]
- **Evaluation:** If the increase in output is mainly due to increase in the production of capital intensive goods, then the increase in ADL will be limited à dd-deficient uN will fall only to a limited extent.

(iii) Long-term growth and stability:

- In the long run, the fixed capital investment à capital formation à addition to the existing stock of capital goods and replacement of worn out capital goods à increase in quantity and quality of capital.
- Investment in human capital à improve the productivity and skills of workers à increase in quality of labour
- Increase in quantity and quality of factors of production
- Increase in productive capacity of the economy à at every GPL, producers are willing and able to produce greater quantity of output
- Increase in AS (rightward shift) à higher output is produced à **long term growth** à further improvement in SOL

- Also GPL falls in the long run à **price stability** à improve export competitiveness.
- Export revenue goes up assuming PEDx>1 à BOT improves, c.p à BOP improves, c.p.
- This could reflect that the country is living within its means and is credit worthy, boosting business confidence à attract investment and accelerate growth.

Conclusion

Countries want to attract investment due to the above benefits. However, for countries operating close to full employment output level, the increase in investment may lead to demand pull inflation in the short run, thus conflicting with price stability. As a result, there will be loss in export competitiveness à may worsen BOP. In the long run, this problem will be solved as the country achieves potential growth.

Part (b)

Development

Thesis: Supply side policy is more relevant, as opposed to demand management policies, in attracting investment:

- Supply side policies are a basket of policies implemented by the govt, used to influence the AS so as to achieve macroeconomic objectives of growth and stability.
- These could be in the form of market based policies such as tax cuts, reduction in unemployment benefits, encourage competition etc. or in the form of interventionist policies such as provide education and training, promoting R & D activities, etc.

(a) <u>1. SS side policies are relevant to attract fixed capital investment:</u>

SS side policies will influence the overall state of the economy and its economic performance. It stimulates economic growth which in turn influences expectations by increasing expected yields. This attracts investment.

E.g. A reduction in corporate income tax (CIT) attracts Investment:

- This policy is intended to increase the AS by increasing the productive capacity in the long run. It works through increasing investment in the short run. A fall in CIT à rise in post-tax profits à rise in expected yields from investment. à **Rightward shift in MEI curve**. At every interest rate, the volume of investment is higher à In the long run, the fixed capital investment à capital formation à increase in quantity and quality of capital à Increase in quantity and quality of factors of production such as capital à Increase in productive capacity of the economy à Increase in AS (rightward shift) à higher output is produced assuming a high level of AD initially à GDP increases

- **Long term growth** and increase in employment
  - This rise in economic growth will influence expectations, increasing expected yields since consumer spending is expected to increase and hence attract investment, both domestic as well as FDI.

- At the same time, as AS increases, GPL is lowered à **Price stability** is achieved
    - This represents a more certain environment in which businesses can plan and operate more efficiently. Firms are more able to predict future revenue, costs and profits within the economy à Increases **business confidence à Rightward shift in MEI curve** à Volume of investment increases

2. SS side policies are more relevant than dd side policies to attract fixed capital investment

For a developed economy operating with little or no spare capacity (AD is at a very high level relative to AS), expansionary dd side policies will not be able to achieve growth and instead it may lead to dd-pull inflation. This will reduce business confidence in the economy and thus, not be able to attract investment. Hence ss side policies will be required for further growth and stability which will spur business confidence and thereby attract fixed capital investment.

3. Evaluation:

- Investment may or may not depend on host country's GDP. A Chinese company building a factory and supply chain in USA in order to tap into the American market will be an FDI which is influenced by USA's GDP. However, in case of FDI in Singapore, GDP may not be an important factor in attracting FDI as most MNC's are export oriented that are trying to tap on the expanding global market.
- Policies such as reducing CIT can directly attract investment (FDI) assuming ceteris paribus. However, ceteris paribus assumption may not hold. This policy may not be effective in attracting FDI if other countries have also reduced their CIT rates which are now relatively lower. With globalization, countries worldwide are competing for FDI. For example: Hong Kong's CIT rate is 16% à may be a more attractive destination for FDI than Singapore

(b) SS side policies to attract human capital investment

E.g. Direct provision or subsidies for education and training:

1. SS side policies are relevant to attract human capital investment

- Human capital is accrued through training and education. Govt can directly provide or subsidise education and training programmes. For example govt can provide subsidies to firms to provide training to its employees or alternatively, directly provide the opportunities for skills upgrading and acquisition of knowledge à future generation of workers are more productive and able to develop more skills à improve the quality of future labour force

- This policy increase AS by improving the quality of human capital and achieves long term growth and stability à attracts investment

2. SS side policies are more relevant than dd side policies to attract human capital investment:

This type of policy can directly increase investment in human capital investment unlike dd side policies.

3. Policies intended to increase one type of investment such human capital investment will also influence other types of investment such as

- There is a fall in Unit Labour Cost (ULC) due to an increase in labour productivity. Ceteris paribus, the fall in ULC à Fall in Unit cost of production

- The lower unit COP can attract investment due to greater profitability. For example, pharmaceutical MNCs invest in Singapore because they require highly skilled labour capable of using sophisticated technology. Hence Singapore's skilful labour force which is highly educated attracts FDI. Hence SS side policies such as education and training influences FDI to a large extent.

- **The FDI that comes in can also bring in human capital investment**
  - For example, MNCs that require the use of advanced technology or different methods of production, may seek to invest in training their employees

4. Evaluation:

- The impact of this policy is only felt in the long run and the outcome is uncertain. For instance, it takes time to improve literacy and skills and acquire a degree. So the policy of education and training may not be able to attract FDI immediately. If this policy is eventually successful in the long run and the country has a highly productive workforce, it will attract both domestic investment and FDI.

Anti-thesis: Under certain circumstances, demand management policies may be more relevant than ss side policies, in attracting investment:

Demand management policies are policies that influence AD to achieve the macroeconomic objectives. There are 2 types – Monetary and Fiscal policy

E.g. Monetary policy – Reduction in interest rate

1. DD side policies are relevant in attracting investment

- A fall in i/r à reduces the cost of borrowing for firms à Investment projects with lower expected returns will appear profitable now à Increase the incentive to invest by firms à Movement along the MEI curve (MEI diagram) à Rise in the volume of investment. Since I is a component of AD, AD will increase à GDP increases assuming spare capacity à short term actual growth
- Economic growth creates an optimistic business outlook à higher expected yields at every interest rate à attracts investment (rightward shift in MEI).

2. DD side policies are more relevant than ss side policies to attract investment

- SS side policies may not always be enough to achieve growth and hence attract investment. There must be a high enough level of AD relative to AS so that the productive capacity of the economy is brought into play. DD side policies are more relevant than ss side policies in attracting investment in the short run due to its short term impacts compared to the latter which comes with time lags.

3. Evaluation:

- However, this policy is applicable to countries that can influence interest rate.
- Lower interest rate may not be effective in attracting FDI. Firms may have other sources of funds and thus they need not borrow from banks. MNCs need not borrow from domestic sources to finance their investment as they may have their own reserves. They may also borrow from foreign sources.

Conclusion

The relevance of supply side policies and demand management policies in attracting investment can be judged by the effectiveness of the policies in achieving their objective without giving rise to unintended costs on the economy. This would depend on the **current economic climate**. In times of a recession, AD is at a low level relative to AS and there is a rise in dd-deficient unemployment. Thus business confidence and consumer confidence is very low. SS side policies such as provision of education and training and promoting R & D will not be able to attract investment since it works only in the long run. However, a dd side policy such as increasing govt spending can have immediate effect and help the economy to recover and eventually spur business confidence and attract investment.

Mark Scheme

(a)

Level	Knowledge, Application, Understanding, Analysis	Marks
L3	For an answer that uses relevant analysis such as diagrams to explain the benefits of attracting investment, linking them to the achievement of the macro goals and SOL.	6-8
L2	For an answer, that shows lacks scope (only explains one or two benefits) or lacks analysis.	4-5
L1	For an answer, that shows limited understanding of benefits of attracting investment in terms of achievement of macro goals.	1-3

(b)

Level	Knowledge, Application, Understanding, Analysis	Marks
L3	For an answer that uses relevant analysis to support the explanation of how ss side policies are more relevant in attracting investment as opposed to dd side policies and vice versa.	10-13
L2	For an answer that gives a descriptive explanation of how supply side policies can attract investment and how demand management policies can also attract investment.	6-9
L1	For an answer that shows knowledge of how supply side policies can attract investment without comparing them with demand management policies which can attract investment.	1-5
	Allow up to 4 additional marks for evaluation	
E2	Reasoned judgement	3-4
E1	Unexplained evaluation	1-2

In light of increasing globalisation, discuss whether the traditional analysis of the economic benefits of trade applies in achieving a higher standard of living for different economies. [25]

Suggested Answer Model:

Introduction

- "Traditional analysis" à theory of comparative advantage
- Standard of living
  - Material SOL & Non-material SOL
- "Different economies"
  - Small vs large
  - Open vs closed (or degree of openness)
- Globalization – increase in the volume and speed of trade, labour mobility and financial capital mobility

Body

Thesis: In light of increasing globalization, traditional analysis of the economic benefits of trade applies to a large extent in achieving a higher SOL (with evaluation on different economy types)

Anti-thesis: In light of increasing globalization, other economic theories/reasons apply in how an economy may achiev a higher SOL (with evaluation on different economy types)

Alternate view: Gain in material SOL does not account for the non-material benefits (intangibles) of SOL

Thesis: Traditional analysis of the economic benefits of trade applies to a large extent in achieving a higher SOL (with evaluation on different economy types)	**Anti-thesis:** In light of increasing globalization, other economic theories/reasons apply in how an economy may achiev a higher SOL (with evaluation on different economy types) **Alternate view:** Gain in material SOL does not account for the non-material benefits (intangibles) of SOL
1. Theory of CA and how it leads to greater material SOL · Theory of CA analysis (trade table) + PPC diagram showing greater material SOL · Trade diagram showing lower prices of imports and greater quantity consumed à greater consumer welfare and greater material SOL · Increasing globalization à greater	1. Countries who are open both trade and investment can also grow through increased investment flows across borders · Increasing globalization has saw increasing deregulation of financial markets, allowing for greater flows of foreign direct investment in the form of financial and capital investments · Increase in investments will increase AD

volumes of trade and thus greater quantity of goods and services consumed à increased material SOL · Theory of CA (trade table) analysis: o Statement + assumptions of the theory o Reasons for differences in relative opportunity costs o Terms of trade o Insert PPC/TPC **showing why both countries experience an increase in material SOL** o Globalization à increased trade à greater instances of gains in material SOL	à increase in Y à increase real GDP à if population size is the same, increase in real GDP per capita · Increase in investments also lead to increase in AS in the LR à LRAS shifts out à increase in potential growth · Increase in Y à increase in material SOL
2. **Open economies** with CA who are exporting and face export growth will see an increase in export revenue, and thus increase in AD and national income · X increase à AD increase à Y increase à increase real GDP, given population size remains the same, real GDP per capita increases à increase in material SOL · With greater globalization à greater export demand, leading to greater increases in X and consequently AD · Increase in Y à increase in material SOL	2. Some open economies may lose CA at a faster rate due to globalization, leading to greater structural changes and decreases in material SOL, and therefore need to depend on domestic policies to boost SOL instead. · With globalization à loss in CA à leading to DD-deficient unN, which if uncurbed à can become structural unemployment (occupational immobility) at a faster rate as workers' skills become increasingly obsolete faster à fall in material SOL · As such, governments of these economies may need to enact expansionary monetary or fiscal policies to stimulate the economy and prevent DD-deficient unemployment, and at the same time carry out skills training and upgrading policies to prevent the onset of structural unemployment, so as to prevent a fall in future SOL · Governments may even need to consider using protectionistic measures if the degree of onset of structural changes is too quick · Supply-side policies will also need to be enacted to strengthen or develop greater efficiency in production so as to retain or prevent loss of CA
	3. **Closed economies** that do not trade much will have to depend on domestic demand to fuel growth and increase SOL

	· Will need to resort to domestic expansionary policies à FP, MP
	4. Non-material SOL not accounted for à trade will not increase material SOL, and it's the onus of the government to improve the non-material aspects of the economy · Discussions on SOL need to account for intangibles · Will need to use other economic indicators such as HDI, which is a composite indicator comprising of real GDP per capita, life expectancy, and literacy rate · Government will need to enact SS-side policies or focus their fiscal spending on improving non-material SOL of its citizens, such as through spending on healthcare, overall security, education and literacy, etc.

Conclusion

· Traditional analysis of economic benefits of trade apply, however the trend towards globalization necessitates that countries enact policies to prevent the negative impacts of globalization from instead reducing SOL in their country. Countries will also need to enact domestic policies to improve non-material SOL.

·

Level	Knowledge, Application, Understanding & Analysis	Marks
L3	A well-developed essay that discusses whether economic analysis using the Theory of Comparative Advantage or other economic theories/reasons apply in countries achieving a higher standard of living, in both the material and non-material aspects. Context of globalization and different economies are well accounted for.	15 – 21
L2	One-sided response that explores whether economic analysis using the Theory of Comparative Advantage applies in achieving a higher standard of living, in both the material and non-material aspects. Context of globalization and different economies are accounted for but not well developed.	10 – 14
L1	An underdeveloped essay that attempts to attempts to explain why trade may be beneficial to countries in achieving a higher standard of living. Material and non-material aspects of standard of living may not be well accounted for, and analysis may be largely generic and underdeveloped.	1 – 9
	Up to 4 additional marks for evaluation	

E2	Evaluation with justification. The synthesis and conclusion are derived from a well-developed and logical argument.	3 – 4
E1	For unexplained evaluative statements without explanation.	1 – 2

Class	Adm No

Candidate Name: _____

millennia institute

2013 Promotional Examination 2

Pre-university 2

H1 ECONOMICS **8819/ 01**

Paper 1 **17 September 2013**

Additional Materials: Writing Paper 3 hours

READ THESE INSTRUCTIONS FIRST

Write your name, class and admission number in the spaces at the top of this page and on all pages of 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 answers on a fresh sheet of writing paper.

At the end of the examination, hand in all answers scripts.
You are reminded of the need for clear presentation in your answers.
The number of marks is given in brackets [ ] at the end of each question or part question.

This question paper consists of 8 printed pages.

[Turn over

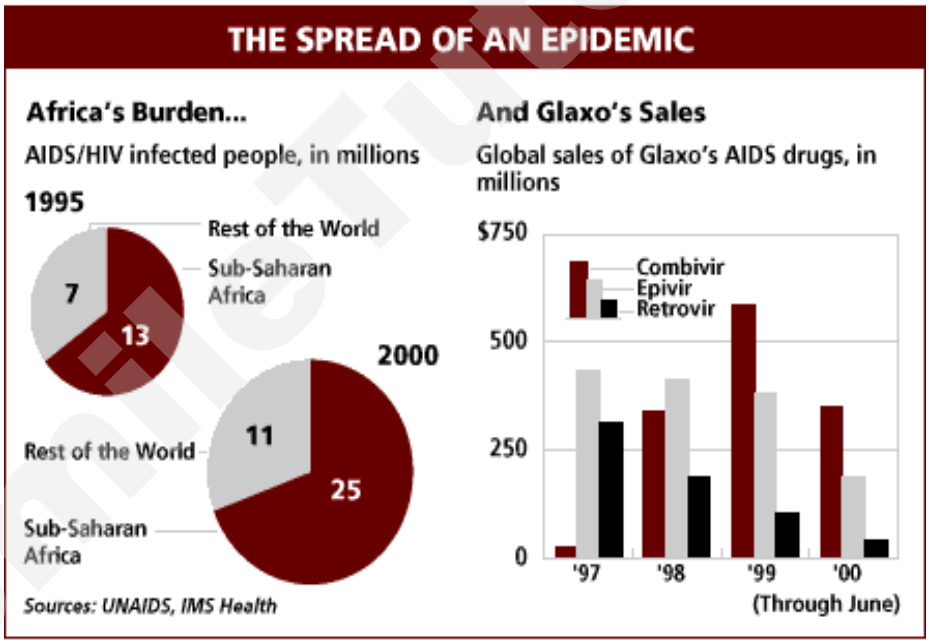
Question 1

The Pharmaceutical Industry

Extract 1: AIDS: Branded and Generic anti-HIV drugs

Roche, the pharmaceutical giant, recently announced a price of $20,424 for a year's supply of its anti-HIV drug Fuzeon in U.S. This was almost three times the price of the most expensive AIDS drug. Roche claimed that Fuzeon is more expensive to produce than other anti-HIV drugs, claiming that it spent $600 million developing the drug. However, many HIV drugs that cost up to $15,000 a year in the U.S. can be made for less than $300 a year by generic manufacturers overseas. These generic firms are allowed to enter the market and sell copies of the original drug when the pharmaceutical patent expires. As generic drugs contain exactly the same active chemical substances, these are considered as strong substitutes to the original branded drugs.

Figure 1



Sources: World Street Journal, 1 Dec 00 and ACT up press release 13 Mar 03

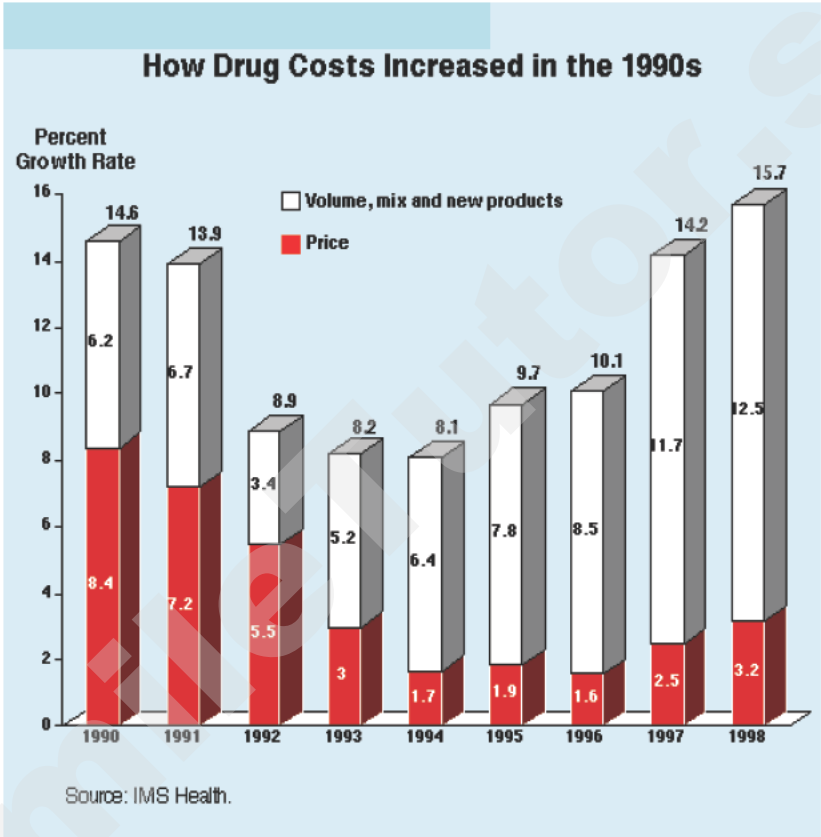
Extract 2: Regulation of branded drugs

In the past year, critics have complained that prescription drugs are contributing to escalating health care costs in the developed countries. Some also assail drug manufacturers, contending that drug prices are too high. They propose price controls as a way to lower drug prices. Price controls have a consistent history: they don't work. Whether they apply to air fares, gasoline, telecommunications or medicines, they discourage innovation, create shortages and fail to keep prices in check. Further, they harm the poor by making whatever is controlled more difficult and more expensive to obtain.

However, according to leading prescription drug price and sales database information company, IMS Health, drug costs are rising primarily because of rising costs of innovation that contributed to record sales of new products and a changing mix of available products. Price increases have been relatively modest over the past 10 years.

Sources: National Centre for Policy Analysis Policy Report No. 23 Oct 99 and Focus 16 Apr 04

Figure 2: Composition of Drug Costs



Sources: National Centre for Policy Analysis Policy Report No. 23 Oct 99 and Focus 16 Apr 04

Extract 3: Under-consumption of drugs in developing countries

The major communicable diseases of poverty, especially AIDS, TB and malaria, cause over six million deaths annually, with devastating social and economic impacts. The global community has recognised the causal links between ill-health, poverty and weak economic growth. Historically, efforts to tackle the major diseases affecting developing countries have been poorly coordinated, resulting in under-consumption of drugs that can cure these diseases.

OECD governments and international bodies such as the World Bank have stepped up investments in these areas. In response, new private sector allies– especially the pharmaceutical companies are forging partnerships with governments to undertake a wide range of activities, such as distributing donated or subsidised products, strengthening health service delivery and access to drugs and educating the public.

Adapted from http://www.eldis.org

Questions

(a) (i) Describe the changes in sales of Glaxo's AIDS drugs from 1997 to 2000 using Figure 1. [2]

(ii) Illustrate, using demand and supply diagrams, how the change in the number of AIDS patients and entry of generic AIDS drug producers affect the market for branded AIDS drugs. [4]

(b) (i) Using an appropriate diagram, explain the type of price control that can be used to regulate the price of branded drugs. [4]

(ii) Discuss the effectiveness of price controls in the regulation of branded drugs prices. [6]

(c) (i) Using relevant economic analysis, explain why the market fails to allocate sufficient resources to the consumption of drugs in developing countries. [4]

(ii) Evaluate, with reference to Extract 3, the policies that governments in developing countries have undertaken to address the under-consumption of drugs. [10]

[Total 30m]

Question 2

The Chinese Economy

Extract 4: China and Currency Manipulation

The subject of whether China undervalues its currency to gain a trade advantage on the United States is a longstanding point of contention between Washington and Beijing.

Critics in the U.S. claim that currency manipulation has cost about 2 million U.S. jobs and hurt manufacturers. China claims that its exchange rates are not the reason for the trade gap and has accused the U.S. of using Beijing as a "scapegoat" for its greater economic woes.

A wide coalition of US trade unions and members of Congress is stepping up pressure on President Barack Obama to confront China over alleged illegal currency manipulation.

Source: Adapted from The Guardian, 20 May 2009 and http://worldnews.about.com

Extract 5: China's Exchange Rate Reform

China's fixed exchange system was discontinued from 2005 and a managed float system was adopted. A move that would increase the value of the Chinese Yuan against the dollar and help ease a trade imbalance, which has cost U.S. jobs. The move would come amid growing complaints that China's undervalued Yuan has made it difficult for manufacturers in the United States and other countries to compete with China's exports.

However, He Weiwen in the Global Times news article states that the US trade woes shouldn't be blamed on the Yuan. He points out that from 1998-2004, the Yuan was fixed at 8.28 to the dollar and China's exports to the U.S. varied from year to year stressing that the Yuan exchange rate doesn't play a significant role in affecting US exports. China also continued to record trade surpluses against the United States after it initiated exchange rate reform in 2005 to allow the renminbi to appreciate 20 percent against the US dollar.

Source: Adapted from http://www.epi.org/news/china and EPI News, April 9, 2010, "China Reportedly Close to an Agreement to Revalue Yuan"

Table 1: Growth of U.S. trade in goods with China (%)

Before Chinese Yuan's reform	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**
Growth of China Exports to US (%)	14.9	22.3	22.3	22.4	21.8	29
Growth of US Exports to China (%)	7.9	23.4	18.5	15.4	28.2	21.4
After Chinese Yuan's reform	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
Growth of China Exports to US (%)	23.8	18.2	11.7	5.1	-12.3	23.1
Growth of US Exports to China (%)	31.3	30.3	17.3	10.8	-0.3	32.3

Extract 6: China's Economic Growth to Benefit All of Asia?

Foreign direct investment (FDI) into the mainland saw its strongest surge in more than two years last month with the US$14.4 billion of capital committed leaving the world's second biggest economy firmly on track to meet the government's target of US$120 billion of inflows this year. It is one of the principal drivers of mainland's breakneck economic growth in the past three decades.

But foreign investment has grown elsewhere too. The ten ASEAN countries saw a record $37 billion of investment in 2005. For some manufacturers, South-East Asia (or India) serves as a hedge against something going wrong in their China operations – be it social unrest, economic problems or a business climate that turns against foreign investment.

However, much investment outside China is in fact dependent on the China boom. So supercharged has the Chinese export machine become that it has sucked in vast quantities of parts and components for final assembly from other parts of Asia – Thailand, Malaysia, Singapore, the Philippines and Indonesia, as well as richer Taiwan and South Korea. Everybody has benefited by Chinese demand for top-notch components and capital goods. In China, the processing and assembly of imported parts and components now accounts for more than half of all exports. It has recently recorded phenomenal growth in exports of high-tech products, principally notebook and desktop computers, DVD players, mobile phones and the like.

For South Korea, Taiwan, Hong Kong and Singapore, trade has also turned from the rich world towards China. So has Philippines and Thailand. Their export to China has increased and that the country at present enjoys surplus trade balance with China. Meanwhile, Chinese tourists made 83 million overseas travels, of which more than 90 percent were to other Asian countries, among which Malaysia, Singapore, Thailand and South Korea were their favorites.

However, the economic growth is not only relying on export. Instead, domestic consumption is going to drive the economy, which will provide other countries with numerous business opportunities. Wang Chuanfu, chairman and president of China's largest rechargeable battery maker, said that his company is a good example of China's vigorous economy. Wang's company had only 20-odd persons when it was first founded but now has more than 30,000 workers. When China becomes rich, the country will create a large amount of business opportunities and make inconceivable contribution to the world economy, said Wang.

With China's rising consumption in recent years, this huge domestic demand is now growing at 9% a year and starting to act as a regional engine of growth, sucking in imports to feed its increasing consumption for products it has no comparative advantage in. The World Bank forecasts that this will be the first year in which China's imports will be growing and becoming the biggest source of import growth in the world. Goldman Sachs, an investment bank, reckons that China's imports for domestic use are now roughly the same as those used in assembling exports, whereas five years ago they were only half as big.

China's reform and opening-up drives over the past two decades have produced one of the most dynamic economies in the world, offering the rest of the world a huge potential market.

Source: Adapted from The Economist, "The export juggernaut" and http://www.china.org.cn

Table 2: Singapore-China Bilateral Trade (S$ Thousands)

Source: IE Singapore

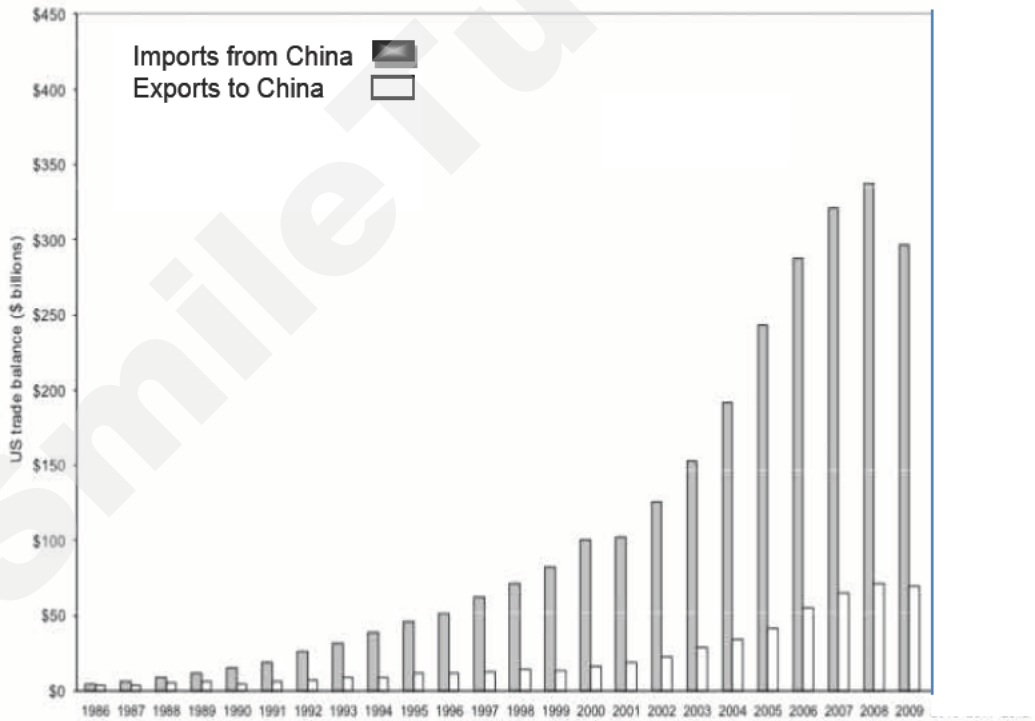
	2008	2009
Imports from China	47,594,565	37,585,345
Exports to China	43,817,922	38,125,119

Table 3: Exchange Rate of Singapore Dollar (SGD) vs. Chinese Yuan (CNY)

Year	2008	2009	2010	2011
SGD/100CNY	21.09	20.55	19.53	20.61

Source: Monetary Authority of Singapore

Figure 3



Annual data from 1986 through 2009

Source: Goldman Sachs Global Markets Institute, Bureau of the Census.

Questions

(a) (i) Explain the meaning of balance of payments of a country. [2]

(ii) Explain the impact of foreign direct investment on China's balance of payments. [4]

(b) (i) With reference to Figure 3, describe the trend of US trade balance with China. [2]

(ii) Discuss the effects of the "2005 China exchange rate reform" on the US trade balance with China. [8]

(c) Using Table 3, identify the trend of exchange rate between Singapore dollar and Chinese Yuan from 2008 to 2011. [2]

(d) Consider the impact of China's growth on the Singapore economy. [12]

[Total 30m]

Section B

Answer **one** question from this section.

3 (a) Using appropriate examples, explain why the existence of negative externalities and public good causes market failure. [10]

(b) Discuss the various policies which the Singapore government adopts in correcting the market failures above. [15]

4 (a) Explain the causes of a current account deficit. [10]

(b) Assess the effectiveness of the policies that a government can implement when faced with a current account deficit. [15]

- End of Paper -

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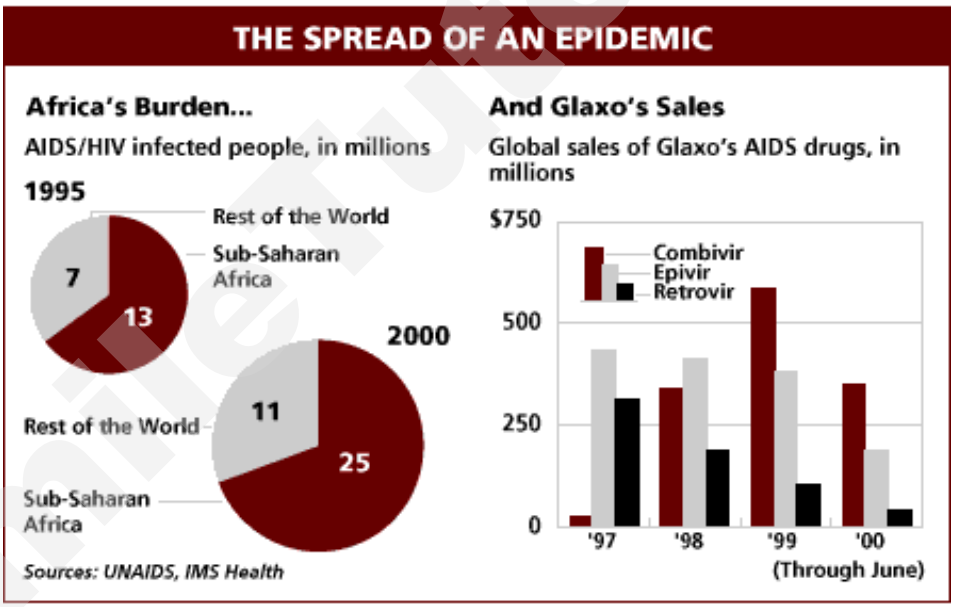

Sources: World Street Journal, 1 Dec 00 and ACT up press release 13 Mar 03

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However, according to leading prescription drug price and sales database information company, IMS Health, drug costs are rising primarily because of rising costs of innovation

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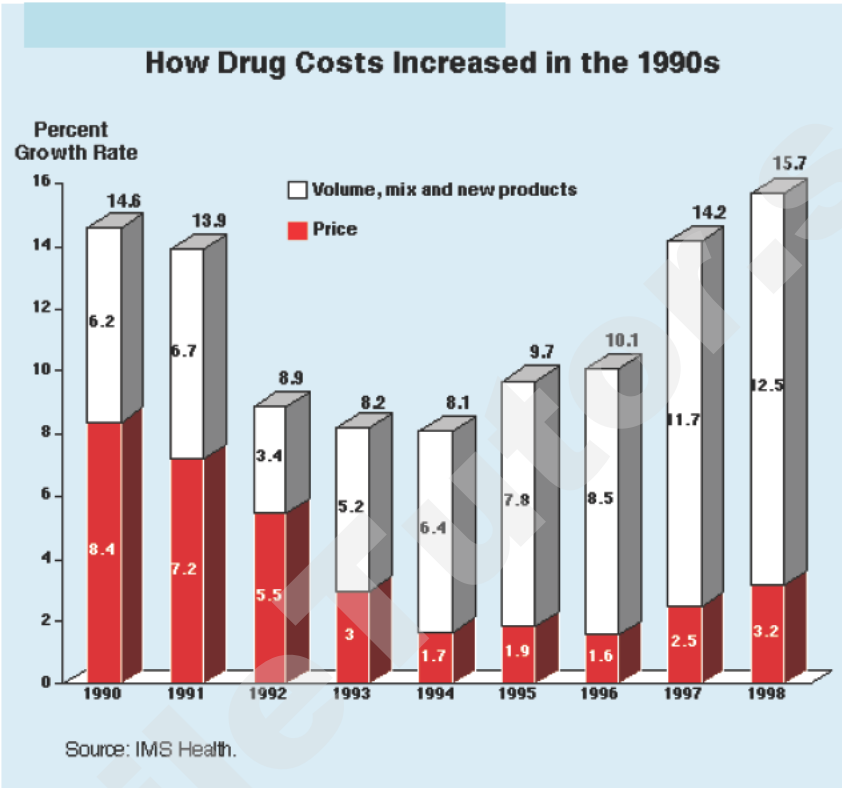


Sources: National Centre for Policy Analysis Policy Report No. 23 Oct 99 and Focus 16 Apr 04

Extract 3: Under-consumption of drugs in developing countries

The major communicable diseases of poverty, especially AIDS, TB and malaria, cause over six million deaths annually, with devastating social and economic impacts. The global community has recognised the causal links between ill-health, poverty and weak economic growth. Historically, efforts to tackle the major diseases affecting developing countries have been poorly coordinated, resulting in under-consumption of drugs that can cure these diseases.

OECD governments and international bodies such as the World Bank have stepped up investments in these areas. In response, new private sector allies– especially the pharmaceutical companies are forging partnerships with governments to undertake a wide range of activities, such as distributing donated or subsidised products, strengthening health service delivery and access to drugs and educating the public.

Adapted from http://www.eldis.org

Questions

(a) (i) Describe the changes in sales of Glaxo's AIDS drugs from 1997 to 2000 using Figure 1. [2]

(ii) Illustrate, using demand and supply diagrams, how the change in the number of AIDS patients and entry of generic AIDS drug producers affect the market for branded AIDS drugs. [4]

(b) (i) Using an appropriate diagram, explain the type of price control that can be used to regulate the price of branded drugs. [4]

(ii) Discuss the effectiveness of price controls in the regulation of branded drugs prices. [6]

(c) (i) Using relevant economic analysis, explain why the market fails to allocate sufficient resources to the consumption of drugs in developing countries. [4]

(ii) Evaluate, with reference to Extract 3, the policies that governments in developing countries have undertaken to address the under-consumption of drugs. [10]

[Total 30m]

Answers

(a) **(i)** Generally, sales of Glaxo AIDs drugs decreased [1]. However, sales for one of the drugs, Combivir rose in 1999 , followed by a fall. [1]

(ii) The rise in the number of AIDS patients would lead to an increase in the demand for branded drugs by these patients seeking to increase their life expectancy, causing the demand curve to shift to the right.

The entry of generic drug producers will lead to a fall in the demand for branded drugs as price of substitutes (generic drugs) decrease. The entry of generic drugs would increase the number of suppliers in the generic drug market, causing the price of generic drugs to fall. Since generic drugs are substitutes of branded drugs, the demand for branded drugs fall due to the fall in the price of substitutes i.e. generic drugs.

The net impact on the equilibrium price and output depends on the relative strength of the two events.

1-2m: Explanation of factors that affect the market for branded AIDS drugs tend to be scanty

Max of 3m : Explanation of the two factors that affect the market for branded AIDS drugs, without comment on how price and output depends on the relative strength of demand

Max of 4m : With judgement on relative strength of demand or some acknowledgement that price and output depends on the relative strength of demand.

(b) (i) Price ceiling+diagram+ references to diagram

The type of price control that can be used to regulate the price of branded drugs is the price ceiling. Price ceiling refers to government-imposed price above which firms are not legally allowed to charge. It is the maximum price that the government sets on drug prices, below the market equilibrium price which is deemed too high. The objective of implementing price ceiling is to prevent prices from rising beyond a certain level to ensure the much needed drug remains affordable to the poor patients. This is to achieve equity, i.e. a fairer distribution of goods and services in the country to prevent social instability. With reference to the diagram, the price ceiling is set at Pmax below the market equilibrium price, Pe.

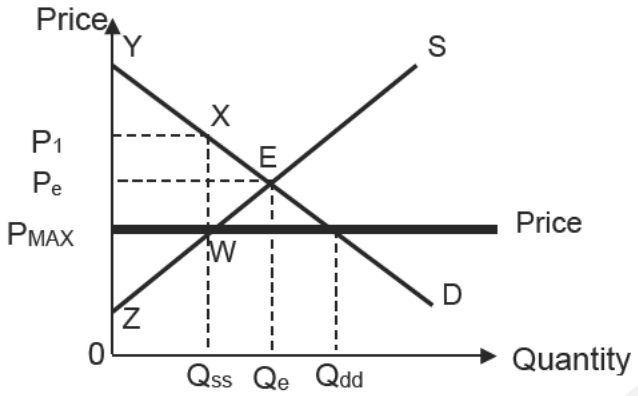
1m: Identification of price ceiling

1m: Explanation of price ceiling &/or objective

1m: Graph

1m: Reference to graph

Figure 1. Price Ceiling



b (ii) Price ceiling is desirable because it increases lowers the price of the costly drug resulting in the increased affordability of the drug to lower-income AIDS patients, thus leading to increased equity. This is especially pertinent for the increasing number of patients residing in developing countries.

In addition, the market for AIDS drugs is inelastic due to few close substitutes available to the AIDS drugs. Since the branded drug producers who have sole owndership of the patents, are able to pass on high costs of production to consumers in the form of higher prices and hence, price regulation would restrict the monopolists from exploiting the consumers. As a result, the price control would ensure affordability of drugs especially for the needy patients.

On the other hand, a maximum price on AIDS drugs may not be desirable as it reduces the incentive of firms to produce and invest in costly innovation. As a result, few new and effective drugs are discovered as a maximum price would reduce the amount of profits earned by the AIDS drug producers and hence, resulting in reduction of profits channeled into research and innovation. Furthermore, according to Figure 2 the percentage increase in drug cost is more than the percentage increase in price of drugs, largely due to rising costs of innovation. This shows that price control may cause the drug producers to make more losses resulting in fewer drugs introduced in the market.

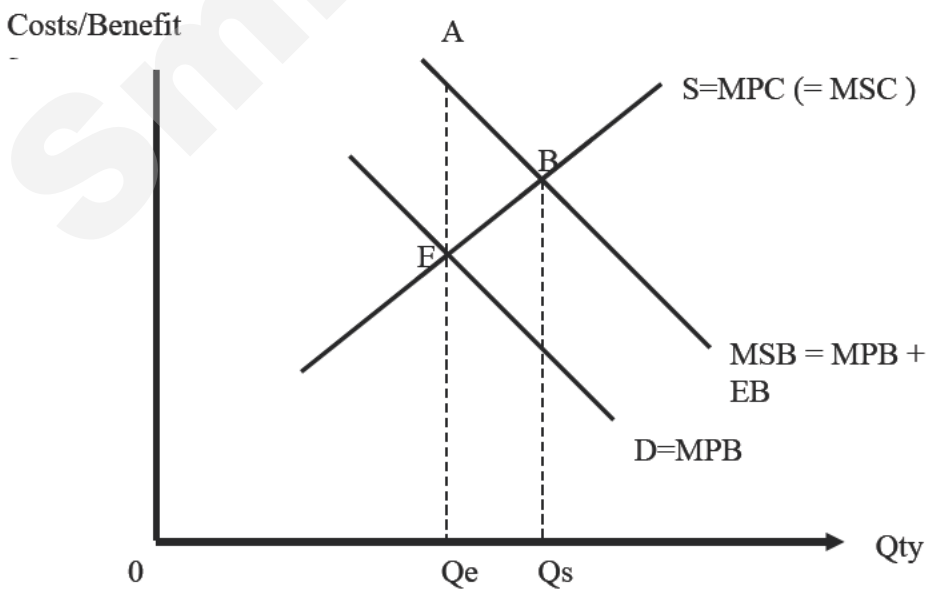
There would also be a shortage of AIDS drugs in the market as quantity demanded (Qdd) exceeds quantity supplied (Qss) at P max in Fig. 1 above. Hence, there would be insufficient drugs for the patients and A black market may ensue, causing the price of AIDS drugs to be even higher and the AIDS drugs would be unaffordable to the poor. Only the wealthier patients, who have the ability and willingness to pay the price, Pb would be able to buy the drug and hence, the price control would result in even higher prices at Pb than the price that clears the market.

Mark scheme		
Level	**Marks**	**Descriptor**
L1	1-2	Largely irrelevant points that are not clearly explained. Major conceptual errors.
L2	3-4	One-sided answer that is fairly developed or two sided answer that is underveloped and lacks rigour
L3	5-6	Two sided answer that is well-developed with good rigour of analysis. Some recognition of context or reference of analysis. (at least three points of arguments in total, covering thesis and anti thesis.

(c) (i) The market fails to allocate sufficient resources to the consumption of drugs due to the presence of positive externalities.

The positive externality will cause a divergence between private benefit and social benefit or private cost and social cost.

There are external benefits from consumption of drugs. For example, drugs will not only benefit the individual who pays for them due to increased life expectancy and better health but may increase the productivity of the economy, resulting in higher economic growth and so raise other people's incomes. From the standpoint of society as a whole, MSB > MPB because of the external benefit.



In the diagram above, S=MPC=MSC because there are no negative externalites. The individual's market demand curve also reflects his MPB, therefore D = MPB. Due to the

positive externality in consumption, MSB is higher than MPB because of the External Benefit.

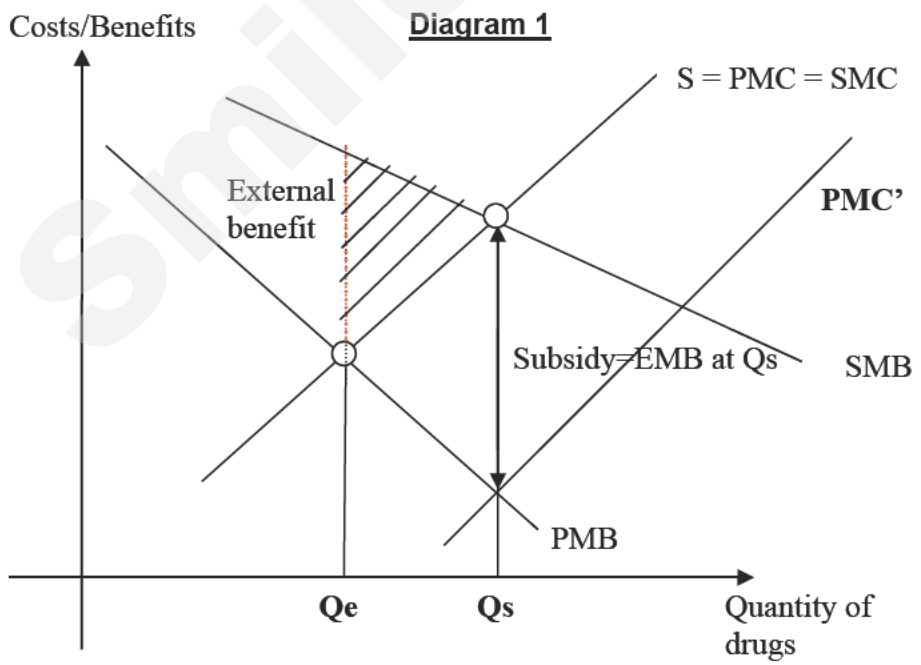
The market equilibrium is at E where MPB = MPC. This will give a market equilibrium quantity 0Qe where there is underconsumption of drugs if left to the free market. The private individual does not consider the external benefit in his action.

At market equilibrium output 0Qe, MSB is greater than MSC; that is society values an extra unit of the good more than what it would cost society to produce it. The socially efficient level should be where MSC = MSB, ie. at output 0Qs. Therefore, the price mechanism under-allocates resources to the production of the good since 0Qe < 0Qs. 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 about the external benefit in consumption.

- Identification and explanations of type of externaity + examples of third party effects **(2m)**
- graph **(1m)**
-graphical references to divergence of MSB and MPB and MSB>MSC: interpretation resulting in allocation of resources below socially efficient level **(for a maximum of 4 m)**

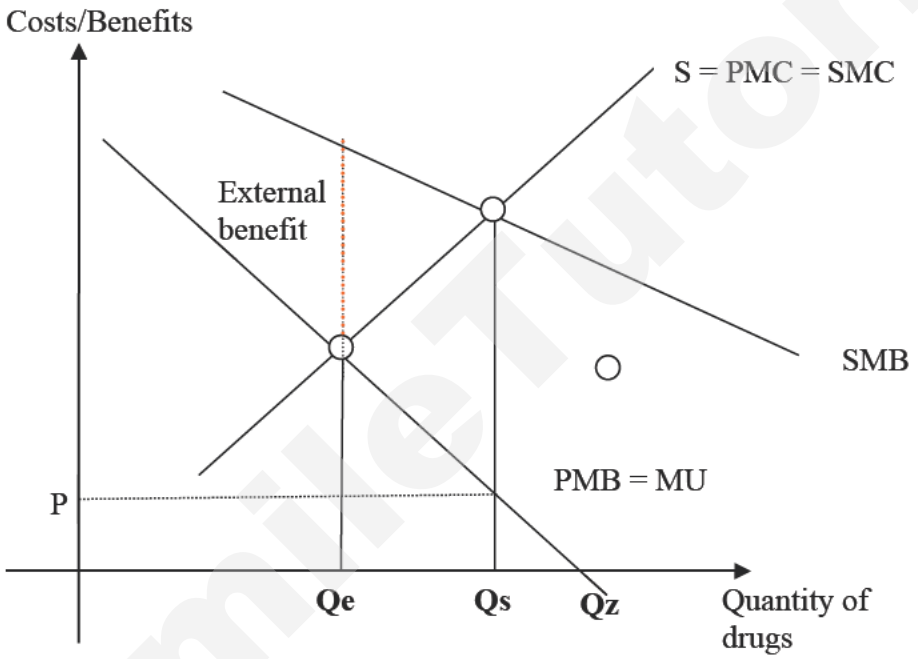
(ii)



Policies that governments in developing countries have undertaken include forging partnerships (extract 3) with pharmaceutical companies to subsidise drugs to encourage the consumption of drugs.This would effectively shift the supply curve of drugs to PMC', by the

amount of the subsidy (equivalent to EMB at Qs as shown in Diagram 1). The cost of consuming education is now lower. Equilibrium quantity of drugs is increased to Qs, and the deadweight loss is eliminated.

However, there is again the difficulty in assessing the extent of marginal benefit and determining the right amount of subsidy to be given, especially for citizens of differing income levels, which may lead to equity issues. Despite the inherent problems in measuring the external marginal benefit, subsidizing drugs would definitely help in reducing the deadweight loss and in bringing the consumption of health enhancing drugs closer to Qs. As such, the government can only consider re-evaluating the amount of subsidies given, to judge whether it is reflective of the true external marginal benefit.



Public provision of drugs at zero cost also poses another problem: that of over-provision and over-consumption. As seen in the diagram above, provision of drugs at zero price i.e. for free, would lead to consumption over and above the socially optimal amount, at Qz. This would result in a misallocation of resources and an efficiency loss. An alternative would be to provide a subsidized rate of education at P, as mentioned above. However, this would lead to issues of equity, as the lowest-income patients would not be able to afford paying price P.

As mentioned in Extract 3, educating the public and raising awareness is also a possible solution to the problem. For instance, the government may set up regulatory bodies in raising awareness of the access to health enhancing drugs to resolve the problem of imperfect information. However, there may be problems in changing the mindset of some ill patients who are not convinced of the efficacy of the drugs in alleviating their illness and hence, may think that the drugs are not necessary.

However, these policies may not be the most appropriate over time as the needs of the seriously ill patients would change over time. Hence, the government has to constantly review its policies over time to ensure appropriateness and equity. Otherwise, government failure would occur alongside market failure. It is important to complement the policies of

subsidizing drugs with raising awareness through education as increasing affordability would need to be paired with increased receptiveness and mindsets towards the consumption of drugs to increase consumption towards the socially efficient level.

Marking Scheme

Level	Marks	Descriptor
L3	7-8	· For a well-developed analytical explanation of measures with good assessment and application to extract · Use of well illustrated and explained diagrams
L2	5-6	· For an explanation of measures without limitations *and* · Underdeveloped explanation of measures
L1	1-4	· For a general and superficial description of measures used by government to increase consumption of drugs · Basic errors of theory or inadequate development of economic analysis
E2	2	· Proposing alternative policies · Most appropriate/ effective measure
E1	1	· Largely unexplained judgment

Question 2

The Chinese Economy

Extract 4: China and Currency Manipulation

The subject of whether China undervalues its currency to gain a trade advantage on the United States is a longstanding point of contention between Washington and Beijing.

Critics in the U.S. claim that currency manipulation has cost about 2 million U.S. jobs and hurt manufacturers. China claims that its exchange rates are not the reason for the trade gap and has accused the U.S. of using Beijing as a "scapegoat" for its greater economic woes.

A wide coalition of US trade unions and members of Congress is stepping up pressure on President Barack Obama to confront China over alleged illegal currency manipulation.

Source: Adapted from The Guardian, 20 May 2009 and http://worldnews.about.com

Extract 5: China's Exchange Rate Reform

China's fixed exchange system was discontinued from 2005 and a managed float system was adopted. A move that would increase the value of the Chinese Yuan against the dollar and help ease a trade imbalance, which has cost U.S. jobs. The move would come amid growing complaints that China's undervalued Yuan has made it difficult for manufacturers in the United States and other countries to compete with China's exports.

However, He Weiwen in the Global Times news article states that the US trade woes shouldn't be blamed on the Yuan. He points out that from 1998-2004, the Yuan was fixed at 8.28 to the dollar and China's exports to the U.S. varied from year to year stressing that the Yuan exchange rate doesn't play a significant role in affecting US exports. China also continued to record trade surpluses against the United States after it initiated exchange rate reform in 2005 to allow the renminbi to appreciate 20 percent against the US dollar.

Source: Adapted from http://www.epi.org/news/china and EPI News, April 9, 2010, "China Reportedly Close to an Agreement to Revalue Yuan"

Table 1: Growth of U.S. trade in goods with China (%)

Before Chinese Yuan's reform	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**
Growth of China Exports to US (%)	14.9	22.3	22.3	22.4	21.8	29
Growth of US Exports to China (%)	7.9	23.4	18.5	15.4	28.2	21.4
After Chinese Yuan's reform	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
Growth of China Exports to US (%)	23.8	18.2	11.7	5.1	-12.3	23.1
Growth of US Exports to China (%)	31.3	30.3	17.3	10.8	-0.3	32.3

Extract 6: China's Economic Growth to Benefit All of Asia?

Foreign direct investment (FDI) into the mainland saw its strongest surge in more than two years last month with the US$14.4 billion of capital committed leaving the world's second biggest economy firmly on track to meet the government's target of US$120 billion of inflows this year. It is one of the principal drivers of mainland's breakneck economic growth in the past three decades.

But foreign investment has grown elsewhere too. The ten ASEAN countries saw a record $37 billion of investment in 2005. For some manufacturers, South-East Asia (or India) serves as a hedge against something going wrong in their China operations – be it social unrest, economic problems or a business climate that turns against foreign investment.

However, much investment outside China is in fact dependent on the China boom. So supercharged has the Chinese export machine become that it has sucked in vast quantities of parts and components for final assembly from other parts of Asia – Thailand, Malaysia, Singapore, the Philippines and Indonesia, as well as richer Taiwan and South Korea. Everybody has benefited by Chinese demand for top-notch components and capital goods. In China, the processing and assembly of imported parts and components now accounts for more than half of all exports. It has recently recorded phenomenal growth in exports of high-tech products, principally notebook and desktop computers, DVD players, mobile phones and the like.

For South Korea, Taiwan, Hong Kong and Singapore, trade has also turned from the rich world towards China. So has Philippines and Thailand. Their export to China has increased and that the country at present enjoys surplus trade balance with China. Meanwhile, Chinese tourists made 83 million overseas travels, of which more than 90 percent were to other Asian countries, among which Malaysia, Singapore, Thailand and South Korea were their favorites.

However, the economic growth is not only relying on export. Instead, domestic consumption is going to drive the economy, which will provide other countries with numerous business opportunities. Wang Chuanfu, chairman and president of China's largest rechargeable battery maker, said that his company is a good example of China's vigorous economy. Wang's company had only 20-odd persons when it was first founded but now has more than 30,000 workers. When China becomes rich, the country will create a large amount of business opportunities and make inconceivable contribution to the world economy, said Wang.

With China's rising consumption in recent years, this huge domestic demand is now growing at 9% a year and starting to act as a regional engine of growth, sucking in imports to feed its increasing consumption for products it has no comparative advantage in. The World Bank forecasts that this will be the first year in which China's imports will be growing and becoming the biggest source of import growth in the world. Goldman Sachs, an investment bank, reckons that China's imports for domestic use are now roughly the same as those used in assembling exports, whereas five years ago they were only half as big.

China's reform and opening-up drives over the past two decades have produced one of the most dynamic economies in the world, offering the rest of the world a huge potential market.

Source: Adapted from The Economist, "The export juggernaut" and http://www.china.org.cn

Table 2: Singapore-China Bilateral Trade (S$ Thousands)

Source: IE Singapore

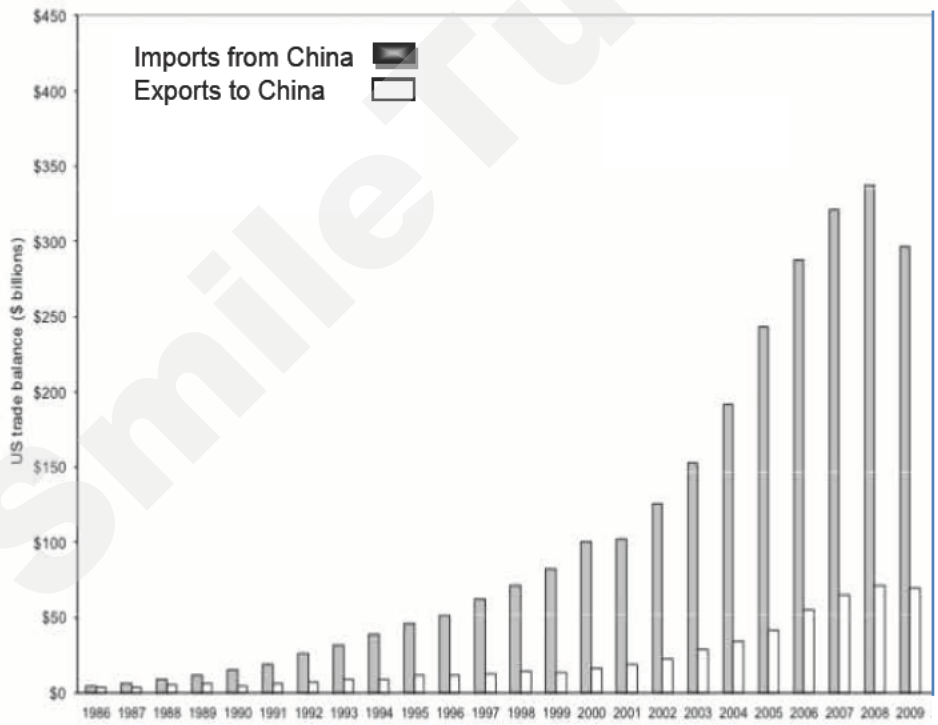
	2008	2009
Imports from China	47,594,565	37,585,345
Exports to China	43,817,922	38,125,119

Table 3: Exchange Rate of Singapore Dollar (SGD) vs. Chinese Yuan (CNY)

Year	2008	2009	2010	2011
SGD/100CNY	21.09	20.55	19.53	20.61

Source: Monetary Authority of Singapore

Figure 3



Annual data from 1986 through 2009

Source: Goldman Sachs Global Markets Institute, Bureau of the Census.

(a) (i) Explain the meaning of balance of payments of a country. [2]

- The balance of payments is a record of all economic transactions between residents of an economy and the rest of the world.
- It comprises transactions in goods and services, income flows, transfers, as well as capital and financial flows.
- It is very useful for assessing the external performance of an economy and for formulating policies connected with it.

(ii) Explain the impact of foreign direct investment on China's balance of payments. [4]

Foreign direct investment (FDI) is a direct investment into production or business in a country by an individual or company in another country, either by buying a company in the target country or by expanding operations of an existing business in that country.

BOP comprises mainly the current account and the capital account.
Capital and financial account :

- Long-term capital flows refers to <u>investments that has maturity of 1 year or more</u>. Such capital flows can be in the form of foreign direct investments (FDIs) and portfolio investments.

- Short-term capital flows refers to <u>investments that has maturity of less than 1 year</u>. Such capital flows are also referred as '*hot*' money flows.

- FDI comes under **direct investment** and it is a credit item i.e capital inflow to China

- Improves BOP. (In the short run)

Current account:

– Record trade in goods, services, income flows and transfers

– When **profits** made by the foreign firms (FDI) are sent out to their parent company abroad, it will be recorded in the current account as a debit item due to income outflows. (In the long run)

In addition,
If the FDI uses **imported materials** for production, a debit item is recorded in the current account as money is sent out of China whereas, FDI which production is **export oriented**, will see a credit item in the current account due to the increase in China's exports, resulting in revenue earned from overseas.

Overall impact on BOP:
Depends on the relative strength of the credit items and debit items. If the credit items exceed the sum of the debit items, there will be an improvement in the BOP.

(b) (i) With reference to Figure 3, describe the trend of US trade balance with China. [2]

In Figure 3, imports from China is greater than exports to China throughout the period indicating that US is having a **trade deficit** with China.

Imports from China is **growing much faster** than the exports to China during the period, hence the trend of US trade balance with China is a **widening** trade deficit.

(ii) Discuss the effects of the "2005 China exchange rate reform" on the US trade balance with China. [8]

From Extract 5 para 1 :
"China's fixed exchange system was discontinued from 2005 and a managed float system was adopted. A move that would **increase the value** of the Chinese Yuan against the dollar.
When the yuan appreciates against the US$, a given amount of yuan is worth more in US$. An appreciation of the Yuan implies a depreciation of the US$

In China,
Px from China in US currency (i.e US imported from China) will be relatively more expensive in US market. while Pm to China (i.e US goods/exports in China) will be cheaper in China market.

In the US,
Effects on **US** trade balance:
Since US exports to China is now relatively cheaper,
Qddx for US will rise proportionately more than its price fall
à Export revenue in US will rise

US imported goods from China is now relatively more expensive,
Qddm from China to the US fall proportionately more than its price rise
à Import expenditure in US will fall

Assume the demand for both exports and imports are **price elastic,** trade deficit US had with China will be reduced.

According to the Marshall-Lerner condition (where the sum of the price elasticity of dd for exports and imports exceeds one), China's appreciation (US depreciation) will improve US trade balance with China

However the Marshall Lerner condition may not hold in the SR due to binding contracts of exports and imports. It is likely to be satisfied in the long run and this means that the trade deficit is likely to worsen before it improves.
(J-curve effect).

Evidence from CSQ :

Fig 3 seems to show the J-curve effect as the appreciation of the yuan (depreciation of US$) after 2005 led to a widening trade deficit up to 2008 before it improved in 2009.

Evidence from Extract 5 (para 2) and Table 1 :

US widening trade Deficit may not be due to the undervaluation of the yuan as "China exports to US ***varied from year to year*** stressing that the Yuan exchange rate doesn't play a significant role in affecting US exports."

In addition, "China continued to have trade surpluses with the US even after appreciation of the yuan after 2005 to allow the renminbi to appreciate 20 percent against the US dollar."

Moreover, % growth of U.S. trade in goods with China in Table 1 is insufficient to conclude that the US exports to China is greater than the imports from China after the appreciation.

Table 1: Growth of U.S. trade in goods with China (%)

Before Chinese Yuan's reform	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**
Growth of China Exports to US	14.9	22.3	22.3	22.4	21.8	29
Growth of US Exports to China (%)	7.9	23.4	18.5	15.4	28.2	21.4
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Growth of China Exports to US (%)	23.8	18.2	11.7	5.1	-12.3	23.1
Growth of US Exports to China (%)	31.3	30.3	17.3	10.8	-0.3	32.3

The US trade balance with China may be influenced by other factors and not the exchange rate. For example,

- rising income of USA
- improved productivity of China's exports,
- China export of more higher value added products like notebook and desktop computers, DVD players, mobile phones (Extract 6, 3rd para). There is phenomenal growth in exports of these high-tech products.

The widening of US trade deficit observed in fig 3 could be due to

-rising income in USA that led it to import more, and the improvement in the trade deficit could be due to global crisis in 2009 that reduces its income.

-improved productivity of China exports offsetting the rising Px, hence china's

appreciation may have limited impact on US

The improvement of the US trade deficit in could be due to :
Evidence from Extract 6 :
-the rapid growth/income in China that led to the rising consumption (and not due the rising yuan) in China which results in the increasing imports especially for products it has no comparative advantage.

Evaluation:
The extent of impact on the US economy also depends on the
-magnitude of change/appreciation in the exchange rate
-the extent of the rising imported goods are from USA(Extract 6 mostly mentioned China imports are from Asia)
-fig 3 showed trade deficit worsens from 205-2008 and improves only in 2009, there is insufficient data on how the US trade balance performs after 2009 to see the impact of yuan's appreciation after 2005

A change in the exchange rate is just one factor affecting the US trade balance.

Level	Marks	Descriptors
L1	1-3	Weak/little explanation of how appreciation of Chinese yuan affect US trade balance with little economic analysis or one sided analysis.
L2	5-6	Clear explanation with clear analysis of how Chinese yuan will affect US trade balance with to provide alternative views of Chinese appreciation on US trade balance using some case
E1	1-2	Able to make a conclusive stand and provide justification eg M-L condition may not be met; fig 3 and other factors eg income/productivity affecting Chinese exports to US and/or US imports to China)

(c) Using Table 3, identify the trend of exchange rate between Singapore dollar and Chinese Yuan from 2008 to 2011. [2]

Table 3: Exchange Rate of Singapore Dollar (SGD) vs. Chinese Yuan (CNY)

Year	2008	2009	2010	2011
SGD/100CNY	21.09	20.55	19.53	20.61

Generally, the exchange rate of S$ in Yuan showed gradual appreciation/rising.[1]
Or
Generally, the exchange rate of S$ in Yuan showed gradual appreciation/rising from 2008 to 2010 [1] before depreciating in 2011 (Refinement).

Refinement:
Exchange rate of yuan was the strongest/highest in 2008 (exchange rate of S$ was the weakest/lowest in 2008) [1]
Or

Exchange rate of yuan was the weakest/lowest in 2010 (exchange rate of S$ was the strongest/highest 2010) [1]

(d) Consider the impact of China's growth on the Singapore economy. [12]

China's growth implies rising

- **income**
- **exports**
- **employment opportunities**
- **foreign direct investments**

Positive Impact	Negative Impact
On Spore exports & imports :	
- China presents a big and growing market for Singapore export oriented economy. - Extract 6 para 6 mentioned that consumption level in China is rising and some of these will be in the form of imports (China buying exports from S'pore). - Singapore can export goods and services (e.g. medical services, education, refined oil, tourism) that she has comparative advantage in. - There could also be intra-industry trade to satisfy Chimese consumers' varying tastes and preferences. (that China has no comparative advantage in) - Evidence from Extract 6 para 3 mentioned that China export machine has sucked in vast quantities of parts and components from Asia indicating that Spore can benefit from selling high-end parts and components to China as mentioned in Extract 6…the processing and assembly of imported parts and components now accounts for more than half of all exports in China. The phenomenal growth in	- Cheap imports (e.g. lower end electronic/manufactured prodts from China poses a threat for Spore as it competes directly with similar Spore domestic products causing rising imports from China. The goods are cheap because China has abundant SS of cheap labour, giving it comparative advantage in labour intensive products over Singapore. - In the longer term, when China moved into the production of higher value-added products like desktop computers, mobile phones. Some of these products compete directly with Singapore's exports and will cause falling exports for Spore in the LR.

exports of high-tech products in China has led to more Spore exports to China. Differences in Comparative advantage : China's fast export growth is not at the expense of other countries in Asia due to differing comparative advantages Evidence Table 2 suggested that S'pore's balance of trade with China did improve from a trade deficit to a trade surplus between 2008 and 2009.	
On investment	
Evidence from Extract 6 para 2 indicates that : - FDI has grown elsewhere other than China. ASEAN countries in which Spore is a member, saw a record $37 billion of investment in 2005 - FDI outside China as a hedge against some unforeseen circumstances in China eg social unrest, economic problems or a business climate that turns against FDI. Good Business Environment in Spore : - Singapore does have certain advantages over China like protection of intellectual property rights, clear rule of law for businesses and developed infrastructure.	Closure/relocation of existing firms or FDI choosing China instead of Spore due to the lack of competitiveness or comparative advantage have a negative impact on Spore SR & LR growth. (Evaluation: However, income sent back from China by Spore firms adds to Spore GNP and improve CA in the future)
On macro aims:	
Rising net exports and investment above will raise AD and shift the AD curve upwards and increasing income and creating more jobs, assuming Spore has not reached full employment. In addition, net exports and FDI contribute to the improvement in Singapore's balance of payments.	- In the future, with cheaper imports and China competing with Spore on high-end prodts, Spore will be faced with falling AD and income/BOP - If Singapore loses its comparative advantage in the products we compete with, then, there will be also be structural unemployment.

(Evaluation: Extent of impact depends on multiplier and the size of increase for AD NY etc)	firms close down/relocate. - This will be made worse if Spore loses its attractiveness for FDI. - In addition, growth of China implies that its citizens with see better job prospects. The inflow of foreign workers from China could reverse. If this happens, it will reduce the availability of cheap FOP for Spore's production, leading to fall in AS and potential economic growth.
<u>Diversification to reduce risks:</u> <u>Evidence from Extract 6 last para:</u> "China's reform ….. most dynamic economies in the world…offering the rest of the world a huge potential market." Growth of China opens up a huge market for Singapore and reduced our dependency on the developed nations like EU and USA for its export market. The rise of China provides Singapore with a market to diversify to reduce risk. For e.g. if USA economy is slowing down, she still have the China market to sell to, thereby reducing the impact of a fall in exports and foreign investment.	

Assess: Is China's growth a threat or benefit?

China's rise is likely to be a benefit rather than a threat as it has contributed to providing a

- cheap source of food products and
- cheap inputs

as Singapore lacks natural resources.

The huge potential China market with its rapid growth is sucking in imports to feed its increasing consumption for products it has no comparative advantage allows Spore to sell more of exports such as top-notch components and parts that has contributed to rising AD that increases growth and employment. The threat of China competing with Spore on high end products can be minimized as long as Spore continuously finds niche areas where she excels in and its ability to equip the workers with the appropriate skills and education in this changing world to stay competitive. The structural unemployment can be reduced with education and training to move workers to expanding industries.

Level	Marks	Descriptors
L1	1 – 3	Little explanation of China's growth on Singapore economy using little or no economic analysis or one sided analysis.
L2	4-6	Some explanation of the impact of China's growth on Singapore economy with some analysis of 1-sided effects (either positive or negative effects or weak 2 sided effects)
L3	7-8	In depth explanation of how China's growth impact Spore with clear analysis of both positive and negative effects and supported with case materials addressing issues such as export growth, employment opportunities, income increases & FDI growth.
E1	1-2	Able to make a conclusive stand with some justification
E2	3-4	Able to make a conclusive stand with strong justification.

3 (a) Using appropriate examples, explain why the existence of negative externalities and public good causes market failure. [10]

(b) Discuss the various policies which the Singapore government adopts in correcting the market failures above. [15]

Suggested answer:

Part (A)

Intro

1. **Define market failure**
   - Less than desirable outcome where resources are **not** used in the most efficient way. Hence, there is allocative and productive inefficiencies.
   - Partial market failure: where there is over or under production/consumption which leads to inefficient allocation of scarce resources. This arises when there are externalities.
   - Define externalities
     1. 3rd party effects on someone not directly involved in the production &/or consumption of a gd.
     2. may be negative(external cost or 3rd party cost) or positive (ext. benefit or 3rd party benefit)

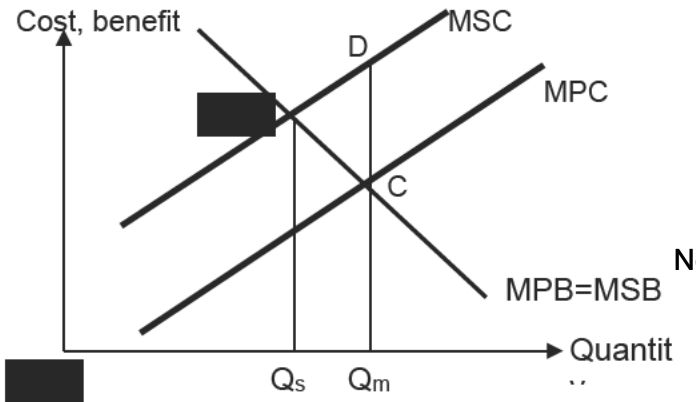
Body

1. State that traffic congestion is a form of partial market failure where there is negative externality

- Define negative externalities (by making reference to any e.g.: road congestion, smoking): external cost to 3rd parties who are not directly involved in the production and/or consumption of the good. For example, road congestion generates noise and air pollution that affect the quality of living for residents living near the congested roads or road congestion leads to a delay in arrival time for work for other road users such as passengers on public buses. This could lead to a fall in the revenue for firms when the workers report late for work./ Smoking generates second hand smokers which can cause other non-smokers to have health problems like breathing difficulties.
- Because of the presence of negative externalities, there is a divergence between private costs and social costs by the extent of the external costs.

2. Explain how road congestion/second hand smoke results in negative externalities and hence, market failure.

- Diagram showing socially optimal level of consumption (MSC=MSB) and the equilibrium level of consumption without government intervention (MPC=MPB).
- Show that there is overconsumption of cars/smoking and hence, welfare loss to society.



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· Assuming that there is no external benefit, marginal private benefit (MPB) is equal to marginal social benefit (MSB). In this case, marginal private cost could include cost of petrol and the depreciation cost of the car for the additional trip, and the time lost when the driver is caught in traffic congestion/ cost of cigarettes, personal health problems. Marginal private benefit could be in terms of the convenience one gets from driving a car/satisfaction from smoking. The private equilibrium occurs at MPC equals to MPB, i.e. 0Qm level of traffic flow/smoking in a not crowded place.
  The social equilibrium occurs at MSC, which is the summation of marginal private cost and marginal external cost, equals to MSB, i.e. 0Qs level of traffic flow. If left alone, the price mechanism will bring about a level of traffic flow that is higher than what is deemed to be socially desirable.
· As a result, there is a deadweight or welfare loss to society of area EDC. There is welfare loss because the MSC exceeds the MSB for each additional trip taken beyond 0Qs. Hence, the government should deal with traffic congestion.
· When the number of cars exceeds the road capacity, traffic congestion arises, which is a form of market failure. As resources are allocated inefficiently by the market mechanism, the government has to intervene.

How Public Goods cause markets to fail:

· Private sector will not be willing to provide such public goods as the free rider problem make it difficult to charge people.
· Important to highlight the non-excludable and non-rival nature of public goods with the use of appropriate examples
· It is impossible for the producer to know where, when, how much and who to charge and hence no profits can be made.
· But public goods are vital or essential to the nation Eg: ***National Defence, Policing for***
· ***keeping law and order*** ….etc
· Provision of public goods results in positive externalities (MSB>MPB),
· No resources will be allocated to the production of public goods in the private sector.
· Market fails as there is no provision of public goods at all (absence of market).

Mark Scheme

L3	**7-10**	Good analysis of welfare loss using relevant marginal cost and benefit concepts, with help of appropriate diagram. Competent explanation with good description of terms and a clear understanding of the concepts involved..
L2	**5-6**	· Shows understanding the market failure which results in welfare loss and/or with little explanation · Diagram is drawn but with errors · Examples are missing but may show some inaccuries; if they are included, concept of external cost is not clearly explained.
L1	**1-4**	Showed little/ some basic concepts. May contain inaccuracies and/or irrelevant information

Part b

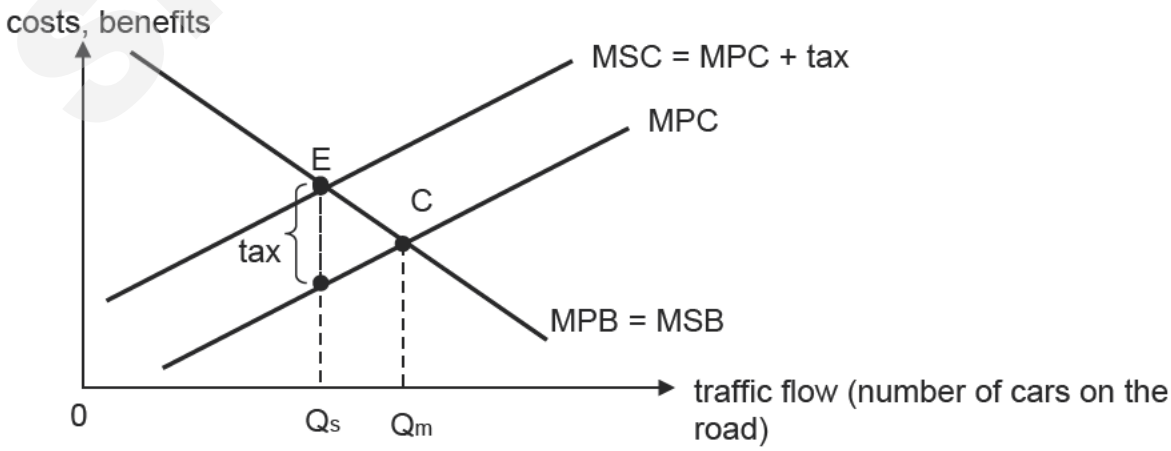
Introduction

- Negative externalities like smoking occurs when there is over consumption of the use of cigarettes. It is again necessary to implement policies to reduce the market failure./ Traffic congestion occurs when there are too many cars on the road, given the road capacity. Therefore, it is necessary to note that policies implemented to reduce the problem of traffic congestion must tackle the problem of car ownership and car usage.
- The Singapore government has implemented a range of policies to tackle the problem of smoking. These policies include taxation, moral suasion and education. / The Singapore government has implemented a range of policies to tackle the problem of traffic congestion. These policies include COE, ERP system and improvement of the public transport system. It is important to note that main cause of Singapore's current traffic congestion problem arises primarily due to excessive car ownership.

Body

1. Taxation

- Singapore has implemented various forms of taxes to curb the problem of congestion.
  - **(a) Motor Vehicle Taxes & Road Tax and tax on complementary good i.e. petrol**
    - Explain how the traffic congestion leads to market failure or deadweight loss using relevant examples and the aid of a diagram (see below).
    - Taxation is done with the purpose to internalise the external cost to reduce the road usage. This can be achieved by imposing taxes that is equal to marginal external cost.
    - This policy has been implemented by the Singapore government and can be seen from the taxes on petrol and the imposition of motor vehicles taxes and road taxes.
    - When the tax is imposed, the MPC curve shifts up by the amount of the tax to the MPC+tax curve. As a result, traffic flow is reduced from 0Qm to the socially optimal level of 0Qs.



Evaluation (for both Taxation and ERP, unless otherwise stated)

§ This policy of taxation is suitable if the country is able to obtain accurate estimates of the level of external cost and hence, the amount of tax or ERP charge. This is because overtaxing or overcharging may result in underutilising of roads while under-taxing or undercharging may *still* result in congestion. Therefore, for a developing country that has problems in data collection, the amount of tax imposed may not be optimal.

§ Unit tax on cigarettes to discourage smoking. In Singapore, the total tax as a % of retail price is 69%. The high tax is to reduce the consumption of cigarettes in order to reduce the negative externality. (Theoretical explanation as above).

Evaluation

§ Hard to determine how much to tax
§ Over- correction may also result in market failure.

2. Direct controls through quotas

§ In Singapore, the government also uses tradable permits to reduce the problem of congestion.
§ Essentially, the government limits the number of cars that can be bought or sold. This is done through Certificate of Entitlement (COE), which are essentially tradable permits. The number of COEs determines the number of cars on the roads. And this number depends on the annual rate of car growth and the number of vehicles deregistered in the previous period.

Evaluation

§ COE is effective in controlling car ownership. However, because it controls car ownership but not car usage, this means that current car owners are not affected by the fall in the number of COEs issued. As a result, traffic congestion may not be reduced if car usage does not fall.

3. Improve public transport system and road system

§ With the above policies in place to reduce car ownership and car usage, it is therefore necessary for the government to improve public transport so as to make demand for private transport price elastic.
§ Build more roads and expressways**,** widen existing roads to ease traffic flow, underground tunnels, etc.
§ Improve the existing infrastructure through building a more efficient public transport system. E.g.: The Circle Line in the Mass Rapid Transit system.
§ Subsidies for public transport to keep travelling by public transport affordable

Evaluation

§ The difficulty in implementing this policy is to balance between providing quality public transport and keeping costs low and hence, affordable for users.

4. Moral Suasion/ Education
   Through the use of imageries and advertisement messages, persuade and discourage the consumption of cigarettes.

Public goods

- Government adopts appropriate policies in correcting non-provision of public goods
- E.g. National defence/ street lighting
- As a result of the lack of market, government provision is needed.

Evaluate appropriateness of policies

- Economic analysis of how the non-provision is being addressed
- Evaluation: Can analyse amount of deadweight loss before and after government intervention
- Defence takes up the largest proportion of government budget in Singapore. Could be a case of government failure, over- consumption. However, situation has been improved from a case of non-provision. In view of the increasing threat of terrorism (Changing situations)
- Requires government to constantly review their policies e.g. Cyber security – are we spending sufficiently on that?

Conclusion

As far as dealing with road congestion is concerned, the Singapore government has implemented a package of policies that seek to reduce traffic congestion by addressing car ownership, car usage and quality of public transport.

Answer Scheme

L3	For an analytical discussion referring to policies employed by the Singapore government with well developed evaluative comments.	9 – 11
L2	Under-developed answer with insufficient depth in economic analysis	6 – 8
L1	Sputtering of points	1 – 5
E1	For unexplained assessment	1 – 2
E2	For evaluative assessment based on economic analysis on most appropriate policies.	3 – 4

4 (a) Explain the causes of a current account deficit. [10]

(b) Assess the effectiveness of the policies that a government can implement when faced with a current account deficit. [15]

Introduction:

Define: The current account records payments for imports and exports of goods and services. The causes of current account deficit are relatively high domestic Inflation, relatively high economic growth rate, overvalued domestic currency, loss in comparative advantage and ambitious development programme.

Body:

ü Relatively high domestic Inflation

When inflation in Singapore (domestic economy) is relatively high, Singapore produced goods will become more expensive. Exports of Singapore goods will be relatively more expensive, thus Malaysian will reduce the quantity demanded of Singapore exports. Malaysian imports become relatively cheaper, thus Singaporeans will substitute Malaysian imports for Singapore goods and increase the quantity demanded of Malaysian imports. Receipts from Singapore exports will fall while the payments for Malaysian imports will increase, assuming that the demand for exports and imports is elastic. This will cause the current account for Singapore economy to worsen.

ü Relatively high economic growth rate,

A high rate of economic growth indicates that real national income of a country has risen relative to other countries. Residents of Singapore, whose economy has registered a high rate of economic growth will have greater purchasing power. There will be increased consumption of both domestically produced goods as well as imported goods. Import expenditure rises. This will cause current account to worsen.

ü Overvalued domestic currency,

An overvalued Chinese domestic currency will lead to high export prices in foreign currency terms and low import prices in local currency terms. The quantity demanded of exports will be low while that for imports will be high. Receipts from exports will be low while payments for imports will be high assuming that the demand for exports and imports is elastic. This will cause the current account of the country to worsen.

ü Loss in comparative advantage

Over time, patterns of trade are likely to change as costs of production change. If other countries have been able to gain comparative advantage in the production of a good which used to be exported by the domestic country, this will mean that the similar product produced by foreign countries is now cheaper than that produced by the domestic country. The domestic country will experience a fall in export demand and a rise in import demand. A loss in comparative advantage will thus cause the current account of a country to worsen.

ü Ambitious development programme

This mainly applies to developing countries as they embark on an ambitious industrialization programme. Large-scale imports of factors of production, e.g. machinery, equipment, raw materials and technology are required for industrialization to take place. This will lead to a drastic increase in payments for imports. This will cause the current account of the country to worsen.

Mark Scheme

L3	At least 3 well elaborated and developed causes of current account deficit with relevant examples	7 - 10
L2	At least 2 reasons for current account deficit was developed and explained with relevant examples.	5 - 6
L1	Little or no elaboration of the causes of current account deficit.	1 - 4

Part b

Introduction:
The various policies used to rectify a current account deficit are expenditure reducing and expenditure switching policies. Expenditure reducing policy includes contractionary fiscal and monetary policies while expenditure switching policies are protectionism, supply- side policy and depreciation of the currency. The various policies are effective in different context. The following discussion will assess its varying effectiveness under various contexts.

Body:
The expenditure-reducing policy aims to reduce the expenditure on imports through the use of contractionary monetary and/or fiscal policies.

Expenditure reducing- Contractionary fiscal policy

Contractionary fiscal policy is to reduce government spending and increasing tax in the economy. Decreasing government spending will reduce AD directly. The reduction in taxation can be done through reduction of income tax or corporate tax. This will result in the fall in consumption and investment in the economy respectively. The fall in AD will lead to lower national income equilibrium. As such, the purchasing power of consumers will fall, leading to lower import expenditure. This helps to improve the BOP via current account.

Expenditure reducing- Contractionary monetary policy
Contractionary monetary policy can also be used to explain as well.

Evaluation: The success of the contractionary monetary and/or fiscal policies depends on the income elasticity of demand for imports. If the demand for imports is income inelastic, then for a given decrease in income, there will be a less than proportionate decrease in the quantity demanded for imports. Thus, total import expenditure will only reduce to a limited extent, limiting the effectiveness of the policies to rectify the problem of BOP deficit. Also, the policies have their own limitations. Higher unemployment will result due to the contractionary fiscal policy adopted. Thus, if the country is already experiencing depressed economy, the problem of demand-deficient unemployment would be further aggravated.

Expenditure switching

The expenditure-switching policy aims to increase the price of imports by making domestic goods/exports cheaper and/or making foreign goods/imports more expensive. This is to switch the expenditure of domestic households from foreign to domestic goods to reduce imports and/or switch the expenditure of foreign households to goods produced by the country to increase its exports.

Protectionism (any protectionistic measure can be used to explain):

Tariffs, also known as import duties, are taxes levied by the government on imported goods. A tariff can be specific tax (i.e. a fixed amount imposed per unit of imported good) or ad-valorem tax (i.e. a fixed percentage of the unit price of the imported good). Many agriculture-based countries protect their domestic agriculture sector by imposing tariffs on imports. Figure 4 below illustrates the effects of the imposition of tariff in an economy.

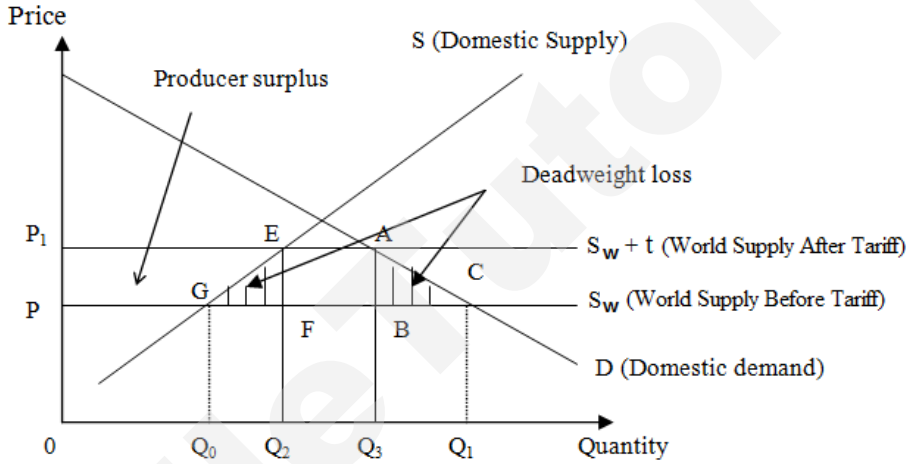


Figure 4: Imposition of Tariffs

Assume country is too small to influence world price: it is a price taker. Note that the world supply curve is horizontal because supply is perfectly price elastic due to perfect substitutes available in the world. Before the imposition of tariffs, consumption is at Q_1 at world price P as shown in figure 4. However, domestic quantity supplied is at Q_0. As such, the shortage of Q_0Q_1 is being imported from the world. However, with the imposition of tariffs, the world price increases to P_1. At this new price level, consumption reduces to Q_3 and domestic production increases to Q_2. As a result, imports reduce to Q_2Q_3.

This imposition of tariffs creates both gains and losses to the country. Domestic producers in the country gain as its production increases from Q_0 to Q_2. Thus, the producers enjoy an increase in the producer surplus as shown in figure 4. Also, the government also gains as it collects revenue from the imposition of tariffs. The area ABFE in figure 4 shows the revenue collected by the government. But part of this tax revenue needs to be spent on administration such as extra custom officials to enforce and administer the tariff, causing unproductive use of resources.

Evaluation:

- ü Tax policy and subsidies should not be long-term policies as they can result in complacency and cause inefficiency in the industries concerned.

- Such policies will deplete the country's reserves.
- The success of the tax policy and subsidies also depends on the price elasticity of demand for exports. If the demand for exports is price inelastic, a decrease in the price of exports will lead to a less than proportionate increase in the quantity demanded of exports. As such, export earnings will decrease instead and worsen the BOP via the capital account, ceteris paribus.
- these trade policies have their own limitations (Beggar-thy-neighbour, retaliation).
- The removal foreign competitors may mean that the local firms have no incentives to improve efficiency. As such, these policies did little or nothing about the underlying causes of the BOP deficit.
- In the long-run, the root of the problem is still unresolved and retaliation by foreign countries may take place, worsening the BOP position in the country. Further, the success of these policies also 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 BOP via the capital account, ceteris paribus.

Supply-side Policies:

The long-term answer to the problem of a balance of payments deficit is to adopt supply side policies. The government can embark on a long term policy which aims to increase domestic productivity through research and development and improvement of technology. This will lead to a reduction in unit costs of production and improve the competitiveness of exports. It will not only eventually bring about an improvement in the current account and hence, balance of payments but also economic growth.

Evaluation:

- This is a long-term policy and cannot cure a balance of payments deficit in the short-term.

Depreciation/ Devaluation of its Currency:

Depreciation of currency involves reducing the external value of a country's currency. This will make exports relatively cheaper because foreigners now need lesser of their foreign currency to exchange for the local currency and imports relatively more expensive because the locals need more of their local currency in exchange for foreign currency.

As a result, the quantity demanded of exports will increase while that of imports will fall more than proportionately. Receipts from exports will rise while payments for imports will fall assuming that the demand for exports and imports is price elastic. The current account and hence the balance of payments will improve.

Thus, depreciation of currency will improve the current account and hence balance of payment, if the sum of price elasticities of demand for imports and exports is more than one, i.e. Marshall-Lerner condition holds ($PED_x + PED_M > 1$).

Evaluation:

ü Marshall-Lerner condition does not hold. In the short run, the price elasticity of demand for a country's imports and exports tends to be highly inelastic, thus the Marshall-Lerner condition may not hold, i.e. ($PED_x + PED_M < 1$). This could be due to both domestic and foreign consumers requiring some time to respond to the price changes. For example, it may take time to change import and export contracts signed before the devaluation. Hence, devaluation may initially cause the current account to worsen in the short run, but will eventually lead to an improvement in the current account in the long run

Mark Scheme

L3	Well developed and contextualised explanation of the policies which can solve current account deficit. At least one expenditure-reducing and one expenditure switching policy is well elaborated.	9 – 11
L2	At least 2 policies were elaborated but not well developed. Only explained EITHER expenditure reducing OR expenditure switching policies were explained. Some answers are contextualized.	6 – 8
L1	An undeveloped assessment of the policies which can help to resolve current account deficit. Little theoretical explanation with some inaccuracies in elaboration.	1 – 5
E1	For unexplained assessment	1 – 2
E2	For evaluative assessment based on economic analysis on most appropriate policies.	3 – 4

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millennia institute

2013 Preliminary Examination 2
Pre-University 3

ECONOMICS **9732/01**

Paper 1: Case Study **17 September 2013**

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

Answer all questions.

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.

Answer all questions.

Question 1: The Pharmaceutical Industry

Extract 1: World vaccine market grows to $25b in 2010

The world market for preventative vaccines totalled $25.3 billion in 2010, up from $22.1 billion in 2009, according to a report published by Kalorama Information.

"At $25 billion, it's still too small to replace all of the bad news in the pharmaceutical industry – the industry will have to advance its research and development (R&D) in other biologic areas, as well," said Kalorama publisher Bruce Carlson. "But, it has helped balance sheets at the majors." Together, Sanofi Pasteur, GlaxoSmithKline, Merck & Co., Pfizer and Novartis held four-fifths of the market in 2010.

"We think pharmacos are continuing to invest in vaccines because it is uncultivated land, for the time being, nearly free from generic threat," continued Carlson. "While the broader drug market has been heavily impacted by the ongoing introduction of low cost generic alternatives, these are largely absent in the vaccine market." A generic drug is a drug that is exactly the same as the brand-name drug, but can only be produced after the brand-name drug's patent has expired.

Kalorama indicated that sales to Latin America, India and China will grow at double-digit rates. "We continue to see over nine percent growth in sales, and in some emerging markets the rate of growth is even faster." said Carlson.

Pandemic influenza scares provided another boost to the business. Repeated outbreaks of avian flu in recent years have prompted widespear fear that a new strain might develop into a global scourge. Governments around the world wasted no time in ordering vaccines. Innovators are also working on cell-based manufacturing techniques that promise to be quicker and more reliable.

"One challenge for companies to be aware of is we see that increasingly the 'refusal to immunize' is an issue," said Carlson. "It's not affecting the growth projections we have, but it's something drug companies would need to be aware of as the number of vaccine products increase." This underlines the issue of profits as more marketing efforts are needed.

Sources: Healthcarefinancenew.com, August 2011 & The Economist, Oct 2009

Extract 2: Patent Expiry Strategies of Big Pharma

With an unusually high number of blockbuster drugs going off patent by 2013, many pharmaceutical companies are under a lot of pressure to develop innovative strategies to counteract the revenue loss from these generic drugs.

Brand name drug companies, such as Pfizer and GlaxoSmithKline, are using a number of strategies to either extend their market exclusivity period for their blockbuster drugs and resorting to mergers and acquisitions to prevent generic competition to their drugs.

Glaxo's diverse operating platform should more than offset patent expirations for respiratory drug Advair and antiviral drug Valtrex. The magnitude of the company's reach is further evidenced by drugs that span all major therapeutic classes, as well as vaccines and consumer goods. The diverse platform insulates the company from problems with any single product. The vaccine business should drive strong returns as fewer competitors remain in the market, increasing the pricing power for new vaccines. Specifically, the company's human papillomavirus (HPV) vaccine to prevent cervical cancer, Cervarix, holds blockbuster potential and should compete well with Merck's Gardasil on the basis of price.

Source: Morningstar.co.uk, February 2011 & Pharma-Reports, January 2012

Extract 3: Merck, GSK cut price of cervical cancer shots for poor countries

Drugmakers Merck and GlaxoSmithKline (GSK) have cut the price of cervical cancer shots in a deal that will deliver them to poor countries for less than $5 a dose. Global Alliance for Vaccines and Immunisations (GAVI), a non-profit group that funds bulk-buy vaccine programs for poor countries, will deliver the cut-price shots.

The vaccines - Merck's Gardasil and GSK's Cervarix - can retail more than $100 in developed countries and have been introduced in immunization campaigns in rich regions like the United States and Europe in recent years.

A study published in 2011 found that since 1980, new cervical cancer cases and deaths have dropped substantially in rich countries - mostly due to better screening and earlier detection - but increased sharply in poor regions. Sub-Saharan Africa has 22 percent of all cervical cancer cases worldwide.

The U.S. drugmaker Merck said it expects to supply around 2.4 million doses of Gardasil at $4.50 per dose to GAVI-eligible countries between 2013 to 2017. British rival GSK said its Cervarix shot would cost $4.60 per dose.

Yet critics said the deal was still far too expensive for many poor countries - particularly since the vaccines need to be given as three doses to ensure full protection against HPV. Merck made $1.63 billion and GSK more than $416 million from their HPV vaccines in 2012 alone. The companies were accused of "seeking to maximize their profits on the backs of developing countries" by international charity Medecins Sans Frontieres.

Source: Reuters.com, May 2013

Extract 4: Government will continue to promote biomedical industry

In Singapore, the Economic Development Board (EDB) is responsible for building and supporting key industry sectors. The EDB provides a number of tax and grant incentive schemes for foreign and domestic investors to attract investments, including in the biomedical industry which consists of pharmaceutical and medical technology sectors. These include the Research and Development Assistance Scheme where grants are offered to support specific projects on product or process R&D that lead to the enhancement of the company’s competitiveness and in-house capability development.

"We can't be in all industries, some will not fit into Singapore but high value, knowledge intensive industries such as the biomedical science will continue to have a role here for a very long time," said PM Lee at the 40th anniversary of GSK's first manufacturing plant in Singapore.

Source: Asiaone, 1 Nov 2012

Figure 1. World vaccine market growth

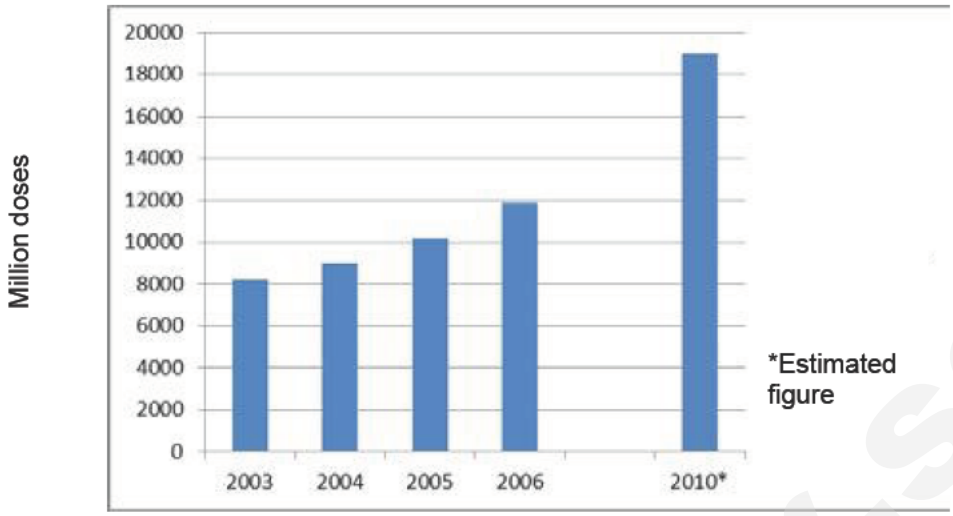
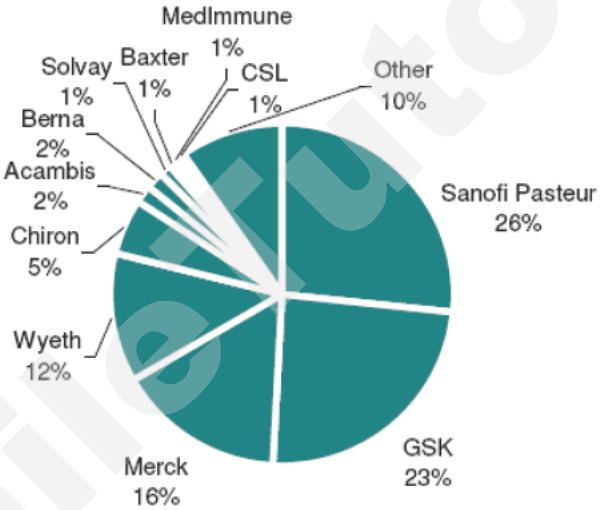


Figure 2. Key players in the world vaccine market



Source: Bionest Partners, Exane BNP Paribas, 2007

Questions

(a) **(i)** Describe the trend in the world vaccine market growth from 2003 to 2010. [1]

(ii) Explain one demand side reason and one supply side reason for the above trend. [4]

(b) Explain the form of price discrimination practised by the pharmaceutical firms. [3]

(c) Explain two characteristics that suggest pharmaceutical firms are oligopolistic. [4]

(d) Discuss the effects of blockbuster drugs patent expiry on the profits of GSK. [8]

(e) Discuss the desirability of the Singapore government providing grants on R&D in the biomedical industry. [10]

[Total:30]

Question 2: Crisis in Europe

Extract 5: Bail-out 2.0 and Dependence on Europe

Two and a half thousand years ago, Greece shaped the western mind. More recently, it shaped the response to the financial crisis. Greece suffered a calamity – and others' fear of following it justified the shift to austerity. The result has been a feeble recovery from the post-crisis recession, notably in the eurozone and the UK.

The latest rescue plan by the International Monetary Fund (IMF) to bail-out Greece merely puts off the inevitable day of reckoning. First, Greece's moribund economy is hopelessly uncompetitive and the country's only route to growth is through deep reforms that slash costs and boost productivity.

Second, the government is bust. Despite the austerity of the past year, to reduce government spending and raise taxes, introduced as part of Greece's first rescue package, its primary budget (i.e. even before debt payments) is still deeply in deficit. Under any realistic assumptions for future growth and interest rates, its stock of debt, at 150% of GDP and rising, is unpayable.

In return for the latest rescue package, Greece's government has cut spending and raised taxes worth some 7% of GDP. It has taken an axe to the country's absurdly generous pension system and started to free up the economy, for instance by easing entry into some 150 restricted professions.

Under these circumstances, Greece's dependence on the rest of Europe comes through clearly in today's report from the Bank of Greece on the nation's balance of payments. By definition, the balance of payments for every nation always comes out zero. But there are good ways and bad ways to get to that zero. Greece is getting there in a bad way.

Start with trade. In the first three months of the year, Greece's exports of goods were only half as big as its imports of goods: some €4.9 billion ($6.2 billion) vs. €10.8 billion. The biggest import item is oil.

Luckily for Greece, it partially offset the goods deficit with a surplus in services, with receipts of €4.7 billion exceeding payments of €3.2 billion. The biggest earner in services is transportation (i.e., shipping).

Income is next. For years, Greece has paid for its imports with IOUs. Other nations have made loans to Greece or acquired stocks and real estate in the country. All those foreigners' assets earn income. In the first quarter, Greece paid out €2.5 billion in interest, dividends, rents, and the like, while receiving only €800 million on its investments abroad. That deepened the hole.

Direct aid from other governments, mostly the European Union, came to a net of €1.4 billion and helped close the gap. So did €1.1 billion of government "capital transfers," which includes so-called structural assistance.

The heaviest action is down at the bottom of the balance of payments balance sheet. That's the financial account, which is for investment flows rather than trade, interest payments, donations, and other current transactions. It shows a mighty battle between the flight of private capital out of the country and compensating government flows in. In the first quarter, portfolio investment in Greece declined by €37 billion. That reflects foreigners pulling out, plus Greeks stashing their money outside the country. Offsetting that were loans to Greece of €39 billion from the European Financial Stability Facility and the International Monetary Fund.

Bottom line: Greece is dependent on the kindness of strangers. Increasingly, those strangers are not private investors, but governments. Which is to say: taxpayers.

Sources: Bloomberg Businessweek, 23 May 2012 & The Economist, 09 June 2011

Extract 6: The Toxic Legacy of the Greek Crisis

A critical evaluation by the Oxford University on the IMF's Greek programme said: "Market confidence was not restored, the banking system lost 30 per cent of its deposits, and the economy encountered a much-deeper-than-expected recession with exceptionally high unemployment. Public debt remained too high and eventually had to be restructured, with collateral damage for bank balance sheets that were also weakened by the recession. Competitiveness improved somewhat on the back of falling wages, but structural reforms stalled and productivity gains proved elusive."

While the programme forecast a 5½ per cent decline in real gross domestic product between 2009 and 2012, the outcome was a fall of 17 per cent. According to the OECD, real private demand fell by 33 per cent between the first quarters of 2008 and 2013, while unemployment rose to 27 per cent of the labour force. The only justification for such a depression is that a huge fall in output and a parallel rise in unemployment is necessary to force needed reductions in relative costs on to a country that is part of a currency union. Since the Greeks want to remain inside the eurozone, they have to bear the resultant pain.

Source: Financial Times, June 2013

Extract 7: EU debt crisis sparks protectionism

China's Commerce Ministry said it is worried that Europe's debt crisis could spark trade friction and hurt sales to the China's largest export market, the European Union. The comments come as debt-laden European countries call for protectionism in the midst of a profound crisis ignited in one minor country, Greece, but has consumed the whole of the Eurozone. Once again, the trade deficit with China has come to the media's attention. Complaints that China's undervalued currency was unfairly benefiting its exports and that rampant intellectual property theft in the country is costing foreign companies billions of dollars every year were made. These comments come at an especially sensitive time as foreign governments look to China's relatively robust economy to help drive global growth amid fears of a worldwide recession.

Europe needs to resolve its debt woes and increasing trade with the rest of the world could be a remedy. The European companies need a market to sell to but the US is unlikely to provide much assistance in that aspect. Instead, the emerging economies who have recovered to their pre-crisis levels may matter more. The inevitable impact of the crisis and the EU's policy responses of austerity measures will reduce growth in Europe and consequently demand for Chinese goods. Chinese policy makers were thus forced to move in the direction of bolstering domestic demand.

Trade tensions with Europe are expected to rise, but will likely be contained, in part because of Beijing's greater bargaining power in trade negotiations, resulting from its investment in European debt," said Liu Yuanchuan, professor in international trade at Beijing's Renmin University. It would help the EU break away from their current financial woes should they ditch protectionist measures and sincerely open their arms to Chinese investments, making the most of China's rich foreign exchange reserves," the commentary said.

Adapted: EUobserver, 2 June 2010 and Bloomberg Businessweek, 20 September 2011

Table 1: Selected Macroeconomic Indicators for Greece

Selected Macroeconomic Indicators (annual average rate, %)			
	1994-1999	2000-2004	2005-2009
Real GDP growth	2.8	4.5	2.0
Fixed Investment growth	6.1	6.3	-1.9
Inflation (CPI)	6.8	3.3	3.0
Government Budget Deficit (% of GDP)	-7.0	-5.7	-9.1
Government Debt (% of GDP)	109.0	110.7	120.1
Current Account Deficit (% of GDP)	-3.0	-6.8	-11.9

Source: Bank of Greece, Jun 2011

Table 2: Greek Balance of Payments

BALANCE OF PAYMENTS (EUR millions)			
	2009	2010	2011
CURRENT ACCOUNT	-25,818.7	-22,975.6	-21,069.8
GOODS	-30,767.3	-28,279.6	-27,221.2
Exports	15,318.0	17,081.5	20,233.0
Imports	46,085.3	45,361.0	47,454.1
SERVICES	12,640.2	13,248.5	14,638.7
INCOME	-8,984.3	-8,143.4	-9,066.5

Source: Bank of Greece, Feb 2012

Questions

(a) Compare the change in the Greek current account between 2009 and 2011. [2]

(b) **(i)** Using AD/AS analysis, explain the theoretical relationship between current account and real GDP growth. [2]

(ii) To what extent is the above relationship illustrated in the case of Greece? [4]

(c) To what extent does the data suggest that the standard of living in Greece has changed during the period 1994 to 2011? [4]

(d) If you were an economic policy advisor, suggest and evaluate the policies that you could recommend to the Greek government to overcome the calamity. [10]

(e) Using both the data and your own relevant knowledge, assess whether the debt-laden European countries' calls for protectionism are well founded. [8]

[Total:30]

End of paper

H

millennia institute

2013 Preliminary Examination 2
Pre-University 3

ECONOMICS **9732/02**

Paper 2: Essay Questions **23 September 2013**

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 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.

Begin each question on a fresh sheet of paper. 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.

Answer **three** questions in total.

Section A

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

1 India's economy has been experiencing positive GDP growth for the past few years. Meanwhile, India has also recently agreed to jointly develop 4G telecommunication services with Israel, a country with the innovation and technology for the latest generation of telecommunication services.
(4G telecommunication services include mobile ultra – broadband internet access, high definition mobile TV and video conferencing).

Assess how the above developments will affect the markets of 4G telecommunication services and complementary products in India. [25]

2 Explain why congestion caused by cars leads to market failure and assess the extent to which the Singapore government's policies to address this market failure may need to be adjusted. [25]

3 AMR Corp, parent of American Airlines, bowed to pressure recently from its creditors, including its largest labour unions, and said it would explore merger options while it is still in bankruptcy. Its rival, US Airways Group Inc has been expressing major interest for a possible tie - up.

Source: www.reuters.com, May 2012

(a) Explain how, in economic theory, airline firms like AMR Corp would price its tickets. [10]

(b) Discuss if a merger between AMR Corp and US Airways Group Inc would benefit consumers more than producers. [15]

Section B

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

4 With the economy slowing, Singapore's employee confidence in the local job market has dipped to the lowest in the region. Almost half, 46 per cent, of the workers in Singapore said there are 'not enough' job opportunities here.

Asiaone Business, March 2012

Analyse the possible sources of unemployment in Singapore and assess whether low unemployment should be the main macroeconomic objective of the Singapore government. [25]

5 Singapore's inflation rate last month rose to the highest level since December 2008, adding pressure on the central bank to damp price gains by allowing greater currency appreciation. Private home prices rose to a record in 2010, while the cost of car-ownership permits surged as the economy expanded an unprecedented 14.7 percent.

Source: Bloomberg, January 2011

(a) Explain what causes inflation in Singapore. [10]

(b) An increase in inflation levels is more likely to cause problems for the domestic than the external sector of the Singapore economy. Discuss. [15]

6 (a) Explain how a global recession would affect the circular flow of income in a country. [10]

(b) Discuss the relative effectiveness of demand side and supply side policies in sustaining economic growth in Singapore. [15]

End of paper

Suggested Answers to CSQ1

(a) **(i)** Describe the trend in the world vaccine market growth from 2003 to 2010. [1]
- Increasing.

(ii) Explain one demand side reason and one supply side reason for the above trend. [4]

Demand side reasons [2m]:
-Government policy from fear of flu pandemic
-Higher income from emerging countries and vaccine seen as a normal good.

Supply side reasons [2m]:
-Goods in competitive supply. Fall in price of drugs due to competition from generic drugs à firms are motivated to research on vaccine instead.
- No. of 'producers': Cell-based manufacturing techniques that promise to be quicker and reliable à producers are more willing to research in vaccine market due to more guaranteed potential returns

(b) Explain the form of price discrimination practised by the pharmaceutical firms. [3]
- 3rd degree [1m]
- Explanation [2m]:
Market segmented into developed/rich countries and developing/poor countries. Dd for vaccines by people developed rich countries are relative price inelastic as they are more well-off and in a better position to be vaccinated/ proportion of income spent on vaccines is less VS dd for vaccines in developing countries are relative price elastic as they are less well-off and see vaccines as non-necessity/ proportional of income spent on vaccines is more à higher price in developed countries vs lower price in developing countries

(c) Explain two characteristics that suggest pharmaceutical firms are oligopolistic. [4]
- Mutual dependence: Similar pricing of cervical cancer vaccine suggests mutual dependence. Briefly explain why oligopolistic firm consider action/ reaction of rivals when making its own decision
- Barriers to entry: Patents issued by government OR need for high capital cost due to R&D on drugs and vaccine suggests existence of barriers to entry à new firms cannot easily enter à industry dominated by few large firms.

[2m for each well-explained characteristics].

(d) Discuss the effects of blockbuster drugs patent expiry on the profits of GSK. [8]

SR:
- Expiry of patents à competition from generic drugs à fall in demand à DD & AR curves shift left à supernormal profits fall

LR:
- R&D on vaccine à increase in demand à DD & AR curves shift right
- However, R&D incurs higher fixed cost too. Marketing of new vaccine incurs higher fixed cost too à AC curve shifts up.

Evaluation:
Extract 1 suggests firm is able to make at least normal profits
OR
Extract 2 suggests increase in revenue from higher dd > higher cost from R&D/ marketing à firm is able to still make supernormal profits in LR.

L3:5-6	Balanced (One point on profits in SR and one point on profits in LR) and developed answer.
L2:3-4	Unbalanced (SR only) and developed or undeveloped but balanced answer.
L1:1-2	Very undeveloped answer and/or without economic analysis.
E: 1-2	Take a stand in possible profits to be made with reference to data. Without reference to data, max 1m.

(e) Discuss the desirability of the Singapore government providing grants on R&D in the biomedical industry. [10]

Thesis: Desirability of government providing grants on R&D.

[Due to mark allocation & time constraint, only need to discuss desirability to society &/or consumers.]

On society/ economy:

- Extract 1: *Repeated outbreaks of avian flu in recent years have prompted widespear fear that a new strain might develop into a global scourge* à suggests vaccines are market with positive externalities in consumption (3rd parties will not be infected with flu virus) à Explain how R&D corrects market failure in pharmaceutical industry with positive externality with diagram.

[Also accept answer on R&D is a market with positive externalities in production and how grant on R&D increases ss of R&D].

- Extract 4: *We can't be in all industries, some will not fit into Singapore but high value, knowledge intensive industries such as the biomedical science will continue to have a role here for a very long time*
à due to educational policies à skilled labour à C.A. in high value manufacturing industry. Grant on R&D in biomedical industry à reduce cost of conducting R&D à process innovation à produce same amount of goods with less resources à reduce in opportunity cost à increase C.A. in biomedical industry à with specialization and trade à increase output à increase NY

- Process innovation à AS increases (assuming biomedical industry is major sector in economy) à X: cost competitive à increase NX à increase economic growth, employment and improve current account

- Product innovation à quality &/or new drugs/ vaccines à C & X increases à AD increases à increase economic growth, employment and improve current account

Evaluation: Biomedical sector is capital/ knowledge-intensive □糧DL糧BE
of labour in Singapore

- Grant on R&D à reduce cost of conducting R&D à attract firms à more competition à greater productive and allocative efficiency

On consumers:

- Process innovation à reduce cost of production à lower price à higher CS.
- Product innovation à dynamic efficiency à better quality &/or variety of drugs/ vaccines à higher consumer welfare.

Anti-thesis: Undesirability of government providing grants on R&D.

- R&D to pharmaceutical firms à if successful R&D: produce goods at relatively low cost à gain market share à may lead to greater market power à explain one disadvantage of high market power to consumers or society
- Opportunity cost of grants
- Cost of grant come from tax revenue à may lead to higher tax rates

Take a stand.

L3:7-8	Well-balanced and developed answer. At least 3 points (either 2 points in thesis and 1 point in anti-thesis or vice-versa). With reference to extracts. Without reference to extracts at all but well-balanced and developed answer, max. 6m.
L2:4-6	Balanced and developed but limited scope or undeveloped but balanced answer.
L1:1-3	Very undeveloped answer and/or without economic analysis.
E: 1-2	Evaluative comments and/or take a stand with reference to data. Without stand or reference to data, max 1m.

Suggested Answers for CSQ2

a) Compare the change in the Greek current account between 2009 and 2011. [2]

The Greek current account remained in deficit [1m] despite showing some improvement between 2009 and 2011. [1m]

b) (i) Using AD/AS analysis, explain the theoretical relationship between current account and real GDP growth. [2]

Real GDP can be explained as a relationship between consumption, investment, government expenditure and exports and imports after adjustment for inflation. It is commonly expressed in the form, GDP = C + I + G + X – M, where imports are withdrawals while the rest can raise the AD and hence the national income by a larger proportion due to the multiplier effect. The current account is captured by the term X – M, and an overall positive value i.e. a surplus will add to the real GDP while a deficit will reduce real GDP. An increase in the net exports will be illustrated as a rightward shift of the AD curve and *vice versa*. Hence, there is a direct relationship between the two. [2m]

Also accept the following:
Current a/c increases, NX increases leading to real GDP increase. Real GDP growth is positive. Or Current a/c increases at an increasing rate, NX increases at increasing rate leading to real GDP growth increase.

(ii) To what extent is the above relationship illustrated in the case of Greece? [4]

Table 1 show that the Greek current account has worsened continually from 1994 through to 2009, while Table 2 reinforces the negative state although with small improvements. [1m] The theory would suggest a falling real GDP growth rate throughout the period since there is a direct relationship. [1m]
Overall, we find the relationship holding as Table 1 shows a decrease in the real GDP growth rates and extract 6 reports a dramatic fall in Greek GDP. However, the data does not hold out for the period 2000 – 2004, where the current account deficit is more than double the previous period yet the real GDP growth has improved. Otherwise, for the rest of the period the theoretical relationship seems to hold true. [1m]
The anomaly of 2000 – 2004 could be possibly explained by the improvement in higher investment compared to the previous period and the small reduction in the government budget deficit as a result of a more responsible government. [1m]

c) To what extent does the data suggest that the standard of living in Greece has changed during the period 1994 to 2011? [4]

Define SOL. As the national income data has indicated a fall in GDP, real GDP growth, high unemployment, poor Balance of Payments we can conclude that Greece's SOL has fallen. This is because a fall in national income indicates that Greece is producing less goods and services for the Greeks to enjoy (or that the income level of Greeks was falling thus less able to purchase goods and services to enjoy). With less goods and services (or less income to obtain goods and services), the standard of living of the Greeks will decrease. Despite the lack of population growth figures we could conclude poorer living standards as Extract 6 shows a dramatic 17 percent fall in the real GDP for the period 2009 to 2012. Even if population remained stable the GDP per capita would have slid drastically.

However, the GDP data may not be accurate, i.e. understated or overstated. If the GDP was not accurate, it will not be a true reflection of the SOL. For example if the

GDP is understated, the SOL of the Greeks should be higher than what the GDP indicated as they, in reality, have higher income level thus can enjoy more goods and services. In fact, it is possible that many Greeks (especially the rich) have understated their income. Therefore, while the GDP figures did indicate a fall in SOL, it may be a case of understated income level, thus the GDP figures should see an increase instead. This will imply that the SOL is also understated.

The national income figures also do not represent the SOL for each and every person in an economy. If the income inequality is high, it will be a case where some people's income, thus SOL will increase drastically when GDP increases, while others' income, thus SOL may be stagnant or even fallen. There may be some form of income inequality in Greece, thus even when the GNP is falling, some may still experience an increase in income level. Thus the decrease in SOL, as indicated by a fall in GDP figures, may not be true.

In addition, there is limited data to truly indicate whether Greece's SOL has fallen as there are other factors to consider besides national income data. One of these factors is pollution level. If the pollution level is very high, even if the GDP is high the SOL of the people will still be low because they will be suffering from the ill effects of the pollution. In this case, even when national income of Greece has fallen, if their environment is better off (less pollution), the SOL of Greeks can still be higher.

Another factor is the quality of the goods and services produced. If the quality of goods and services is higher, even if they have less to enjoy (as shown in lower national income) their SOL may still be higher.

Both extract 5 and table 2 suggest that the Greeks enjoy high and increasing level of imports. This would suggest a higher SOL as it implies a greater amount and variety of goods and services to be consumed. Greece's "absurdly generous pension system" (extract 5) also suggests a high SOL at least for some section of the population. The healthier inflation rates also suggest greater purchasing power.

While the national income data does indicate that the SOL of Greece has fallen, it cannot be concluded that the SOL definitely has fallen due to the various factors explained above including other non-material factors such as health and education indicators.

d) If you were an economic policy advisor, suggest and evaluate the policies that you could recommend to the Greek government to overcome the calamity. [10]

Students should evaluate at least two relevant policies.
Monetary policies, whether interest rates or exchange rate manipulation, is not a relevant policy as these policies are dictated by the ECB and not the Greeks. On the other hand, demand side policies such as contractionary fiscal policy is of little relevance as it is mandatory and causes much pain.

Most relevant policies will include supply-side policies such as productivity enhancements, education and training, cost cutting measures, innovation, developing niche markets, infrastructure development and research and development. Another strand that students can explore will include greater liberalization and enhancing free trade relationship with existing partners and creating new ones.

Students should explain the relevant policy, how it enables Greece to overcome the problems and the possible side-effects of pursuing such a policy.

L1	1 – 3	Contain many conceptual errors or limited conceptual analysis used (Mostly descriptive). No provision of alternative viewpoints (no thesis-anti-thesis). Points not well developed (Incidental statements made). Points are not logically or coherently presented. Little attempt to address the question directly. Little attempt to make evaluative comments.
L2	4 –6	Attempt to use theoretical analysis, but may contain some inaccuracies. Attempt to present alternative viewpoints. Attempted to elaborate on points but may contain some logical or coherent issues. Attempted to make evaluative comments with some effectiveness. Where answer focusses on only 2 supply-side policies maximum of 4 marks to be awarded.
L3	7–8	Conceptually analysed with accuracy in content knowledge. Alternative viewpoints presented. Points are well-developed and well-presented. Evaluative comments made with reference to stem of question.
E1	1-2	Evaluative comments with a stand taken as to the preferred policy. Without stand or reference to data limited to 1 mark.

e) Using both the case study and your own relevant knowledge, assess whether the debt-laden European countries' calls for protectionism are well founded. [8]

Introduction: Define protectionist measures that the European countries plan to adopt – tariffs or quotas on imports

<u>Thesis: debt-laden European countries' calls for protectionism are well-founded</u>

#1: High level of debts in Europe + Use of Austerity measures in Europe due to debt à slow down growth + high levels of unemployment à Need to tackle trade deficit to promote employment, reduce trade deficit, and achieve growth à cushion impact of austerity + collect more tax revenues to deal with deficit

- High debt in Europe à implement austerity measures à lower G and raise T à lower AD à fall in real GDP à slow down EU's growth + lead to cyclical unemployment

- Implement protectionist measure (Expenditure switching policy) à limit entry of imports à trade deficit reduced

- In addition, promote consumption of domestic goods and services à increase domestic production à increase employment à explain higher income and corporate tax revenues
  High unemployment rate is slowing down advanced economies' growth rates and could lead to social issues like widening income gap (extract 6 & 7)

- Government forced to implement spending cuts on healthcare and education in Europe à affect qualitative SOL and future productive capacity à Need to increase employment and achieve growth à increase income à government has more to spend on providing healthcare, education, and infrastructure

#**2: Promote growth in Europe + improve budget deficit**

- Provide subsidies for EU's export industries à more cost competitive exports
- Higher X and lower M à increase AD à achieve actual growth à higher tax revenues à repay high levels of debt in Europe

#3: Retaliation towards China's protectionist measures

- Undervalued Yuan makes China's exports relatively cheaper in terms of Euros and make Europe's imports to China's relatively more expensive in terms of Yuan à China enjoys a CA surplus whereas Europe faces a CA deficit. (extract 7)
- Protectionism à increase prices of China's exports to Europe à lowers quantity demanded of China's exports à EU's import expenditure falls

#4: Protect against dumping by China

- Austerity measures by EU due to debt à lower demand for China's exports à increase tendency for China to dump goods in China
- Prevent against predatory dumping by China à hurts EU consumers' welfare à already suffering from slow growth

<u>Anti-thesis: debt-laden European countries' calls for protectionism are not well-founded</u>

#1: Emerging economies provide market to sell to but protectionism may invite retaliation

- Emerging economies have faster pace of growth à protectionism measures used by Europe may trigger retaliation à emerging economies impose trade barriers on Europe's exports or switch to domestic demand
- [Extract 7 – China forced to bolster domestic demand] à lower demand for Europe's X or increase Px of EU's exports and lead to a fall in X à lower AD à lower growth à unable to repay high debt levels

#2: Protectionism will affect level of investments

- EU implements protectionist measures à anger China investors à less investments to EU à But EU needs to open up its market to Chinese investments à FDI helps to create jobs à increase employment + more employment = more tax revenue à Potential growth [Extract 7]

#3: Beggar-thy-neighbour

- Buy less of Europe's trading partners' exports à trading partners in turn have lower purchasing power to buy less imports from Europe

Conclusion/ Evaluation:

- EU is one of the world's biggest buyers of exports behind US, and also 2nd largest training partner of China à use of protectionism may trigger global trade war
- China has the world's largest foreign reserves à the most credible buyer of Europe's debt since US also has a high level of debt à EU cannot afford to turn itself against China

L2	A well-developed explanation on the arguments for and against protectionism, with reference to the data	4 – 6
L1	One-sided undeveloped explanation on the arguments for or/and against protectionism	1 – 3
E1	Judgment on whether debt-laden countries in Europe should resort to protectionism to address its financial woes that is supported by economic analysis	1 – 2

India's economy has been experiencing positive GDP growth for the past few years. Meanwhile, India has also recently agreed to jointly develop 4G telecommunication services with Israel, a country with the innovation and technology for the latest generation of telecommunication services.

***4G telecommunication services include mobile ultra – broadband internet access, high definition mobile TV and video conferencing.**

Assess how the above developments will affect the markets of 4G telecommunication services and complementary products in India. [25]

Suggested outline

Introduction:

The mentioned developments above would have led to varying changes to demand and supply. This would in turn impact the price and quantity of the 4G telecommunication services market and its related markets in India. For this essay, the selective impacts on the 4G telecommunication services market as well as its complementary 4G compatible smartphone market would be examined. (Note: students are free to choose any other relevant complement to 4G telecommunication services besides smartphones)

Development:

4G telecommunication services market

Analysis of demand/supply impacts

India experiencing positive GDP growth translates to an increase in national income for India's citizens. Being a normal good (necessity), demand for 4G telecommunication services will generally increase due to the increase in national income levels. (Add diagram)

On the other hand, collaboration with Israel to jointly develop 4G telecommunication services would probably mean that the cost of production for 4G telecommunication services will fall. Supply for 4G telecommunication services will increase. (Add diagram)

Application of relevant elasticity concepts

Given the increase in supply, the extent of change in price and output would depend on the **PED** for 4G telecommunication services.

PED value is likely to be less than 1 – implying that the demand for 4G telecommunication services is price inelastic.

Possible justification: In this ever increasing globalised world, services which allow people to communicate or assess to internet on the go has become so integral in people's lifestyles. Furthermore, it can be considered a 'necessity' as people in India hanker after 4G services to keep up with technology and times.

A fall in price, due to an increase in supply will lead to a less than proportionate increase in quantity for 4G telecommunication services. (Add diagram)

Outcome: P **decrease**, Q **increase by a less than proportionate amount**, R earned by 4G telecommunication services firms would **decrease** as well.

As 4G telecommunication services is considered as a necessity, as analysed above, **YED** value for it is less than 1. An increase in national income levels of Indian citizens would lead to a less than proportionate increase in demand for 4G telecommunication services.

Outcome: P **increase**, Q **increase**.

Overall, an increase in both demand and supply will lead to an increase in quantity of telecommunication services. However, whether prices would increase or fall would depend on the relative shifts of the demand and supply.

Possible judgement: The increase in supply is likely to outweigh the increase in demand as a successful collaboration with Israel can lead to significant cost reductions due to the external economies of scale, hence leading to a general price fall for 4G telecommunication services.

Smartphones market

Analysis of demand/supply impacts

Smartphones are considered complement to 4G telecommunication services as both have to be used together to satisfy a mobile user need. An increase in the demand for 4G telecommunication services due to an increase in national income levels will thus also increase the demand for smartphones. (Add diagram)

Application of relevant elasticity concepts

Given the inability of firms producing smartphones to ramp up production in the short run to respond immediately to the increase in demand, PES for smartphones would be considered inelastic with a value less than 1.

An increase in demand for smartphones would lead to a sharp increase in price and a less than proportionate increase in quantity. (Add diagram)

Outcome: Q **increase**, P **increase by a more then proportionate amount.**

Furthermore, it had been ascertained that the price of 4G telecommunication services would fall due to an increase in supply, based on the above analysis. Since smartphones are considered complements to 4G telecommunication services (**XED** less than 0), the fall in price for 4G telecommunication services will lead to an increase in demand for smartphones as well, boosting the demand for smartphones even further.

Since 4G telecommunication services and smartphones are very close complements (**XED** has a large negative value), the fall in price for 4G telecommunication services will result in a more than proportionate increase in the demand for smartphones.

Outcome: Q **increase**, P **increase**.

Overall, there would definitely be an increase in both quantity and price for smartphones, due to the increase in demand. However, the price for smartphones would increase sharply in the short run. In the long run, as firms would be better adjusted to respond to the increase in demand for smartphones, supply would become more elastic and price would not increase as sharply.

Conclusion:

The conclusion will just be a summary of the respective outcomes for the markets being analysed. Limitations of the elasticity concepts can be included as well.

Mark Scheme

L3 **(15– 21)**	For an answer that has: 1) Developed explanation of the impact on 4G services and relevant complementary market due to a rise in income and fall in cost of production. 2) Clear assessment of the extent of change in the 4G services and relevant complementary markets using the relevant elasticity concepts. Students are required to utilise PED, YED, XED and PES to obtain the maximum marks. Answer should include application of the pre – amber context.
L2 **(10– 14)**	For an undeveloped answer that explains the impacts and extent of changes in the 4G services and relevant complementary markets due to a rise in income and fall in cost of production. If only 1 market is well developed with at least 1 relevant elasticity concept applied **(max 12 marks)** Students are required to utilise at least 1 relevant elasticity concept. No elasticity concept applied **(max 12 marks)** Answer has little or no relation to the pre – amber.
L1 **(1 – 9)**	For an answer that shows some superficial analysis of how a rise in income and fall in cost of production will affect the 4G services and relevant complementary markets. No application of elasticity concepts. Conceptual errors are evident.
E2 **(3 - 4)**	Evaluation justified based on analysis.
E1 **(1 – 2)**	For an unjustified evaluation

Explain why congestion caused by cars leads to market failure and assess the extent to which the Singapore government's policies to address this market failure may need to be adjusted. [25]

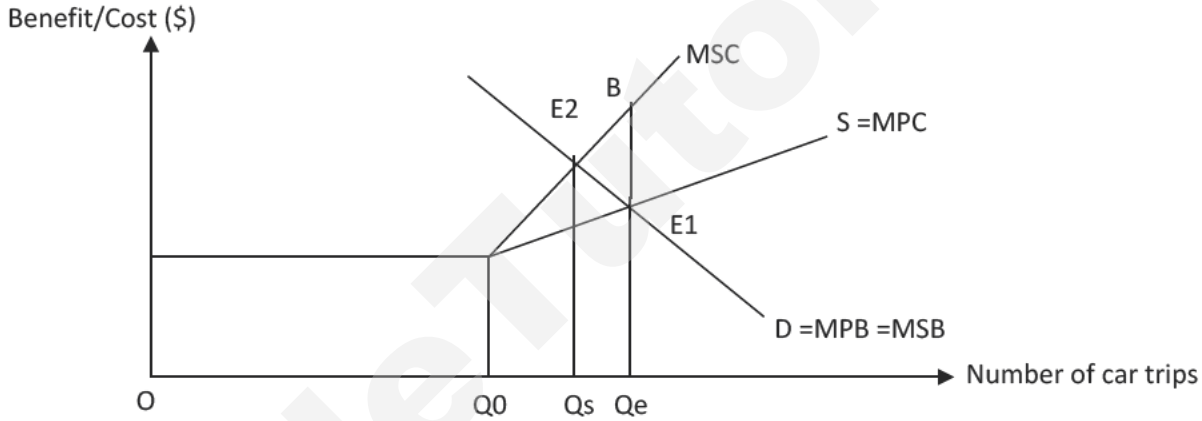
Suggested Outline

Introduction:

- Congestion: negative externalities in consumption
- Define market failure within context of externalities: Allocation of resources fail to achieve efficiency. MSB not equal to MSC.

Body:

- Explain why congestion leads to market failure with a diagram



- MPB: benefit of additional car trip. E.g. convenience. MPC: cost of additional car trip. E.g. wear & tear of tyre, cost of petrol, time taken to travel. As more and more vehicles enter a particular stretch of road, all vehicles must travel at a slower rate such that the costs of a car journey in terms of private cost rises. Hence beyond 0Q0, the MPC slopes upwards as shown in figure 8.
- Negative externalities from congestion, e.g. longer journey time to commuters on buses or other drivers → MSC > MPC
- Market equilibrium: MPB=MPC=Qe
- Socially efficient lvl: MSB=MSC=Qs
- Problem: Overconsumption/pdtn of car trips. Deadweight loss: E2BE1

Thesis: Explain the policies that Singapore government use to address above market failure.

1. High petrol duties and high parking fees increase MPC/ ERP to increase MPC.

Limitation: Difficult to estimate MEC and hence correct amount of petrol duties/ERP. If dd for car trip is price inelastic, tax rate needs to be very high in order to achieve Qs.

2. COE to determine no of new cars on the road. If ss of COE falls, price of COE increases. Assuming car retailers bid for COE, cost of 'production' increases à price of new car increases à reduce qty dd for cars à dd for car trips fall.

[Alternative explanation: Assume car drivers bid for COE. COE & new cars seen as complementary goods. When price of COE increases, dd for new cars fall].

Evaluation:

3. Improve public transport. In railway public transport, government builds the infrastructure and public transport operators provide the services and maintenance.

Limitation: With an ageing rail network and rapidly growing ridership, operators face huge increase in maintenance demand but this adversely affect profits and dividends to shareholders maintenance à more frequent breakdowns of trains.

4. Expand existing roads/ increase new roads/ underground roads

Limitation: Takes time; Singapore is a land-scarce country à limited roads that can be built in the LR; Underground roads are very expensive

Anti-thesis: Singapore government's policies to address this market failure may need to be adjusted.

- Limitations of above policies à existing policies have not addressed problems of congestion effectively from empirical evidence.

1. Alternative solution: Nationalise railway transport system
Evaluation: Nationalised firm may be bureaucratic à cost-inefficient

2. Alternative solution: Create a semi-private company which will own tracks, signalling systems amd stations à responsible for all maintenance works. It will generate revenue by charging fees to public transport operators for track usage. As a semi-private company, it will not pay out dividends. Company will be an enginerring oriented company with public service in mind. Current public transport operators become purely train service providers without the responsibility for maintaining infrastructure.

3. Alternative solution: Increase MPC of car trips. Current ERP and petrol duties may not be sufficiently high à sharper increase in ERP & petrol duties.

4. Alternative solution: Car ownership: only one car per household.

Conclusion: Take a stand.

Mark Scheme

L1	1- 5	For an answer which explains why congestion leads to market failure only.
	6-9	For an answer which explains why congestion leads to market failure and policies to address market failure but answer lacks economic analysis or limited scope.
L2	10 - 14	For an analytical but undeveloped answer which explains why congestion leads to market failure. Thesis: at least two policies to address market failure and Anti-thesis: Benefits &/or limitations of policies but answer is undeveloped. Did not consider alternative policies.
L3	15 - 17	For a well-developed and analytical answer which explains why congestion leads to market failure. Thesis: at least two policies to address market failure and Anti-thesis: Benefits &/or the limitations of the policies. Little or no consideration of alternative policies.
	18 - 21	For a well-developed and analytical answer which explains why congestion leads to market failure. Thesis: at least two policies to address market failure and Anti-thesis: Benefits &/or the limitations of the policies. At least one well-explained alternative policy.
E1	1-2	Weak and/or Limited evaluation. Or Evaluation of alternative policy.
E2	3-4	Comparison between policies and makes an overall stand.

AMR Corp, parent of American Airlines, bowed to pressure recently from its creditors, including its largest labour unions, and said it would explore merger options while it is still in bankruptcy. Its rival, US Airways Group Inc has been expressing major interest for a possible tie - up.

Source: www.reuters.com, May 2012

a) **Explain, according to economics theory, how airline firms like AMR Corp would price its tickets. [10]**

Suggested outline

Introduction:

Airline firms like AMR Corp can be considered as operating in an oligopolistic industry.

Summarise the key features of the airline industry which justify the above statement.

Development:

In the real world, an oligopolistic industry (airline) is considered imperfect due the existence of firms with market power.

Since airline firms tend to hold significant market share, they tend to have price setting abilities, just like a monopolist and monopolistic competitive firms.

MC = MR (profit maximising) approach

A profit maximizing monopolist will price at Pm quantity where MR = MC (point A in the diagram).

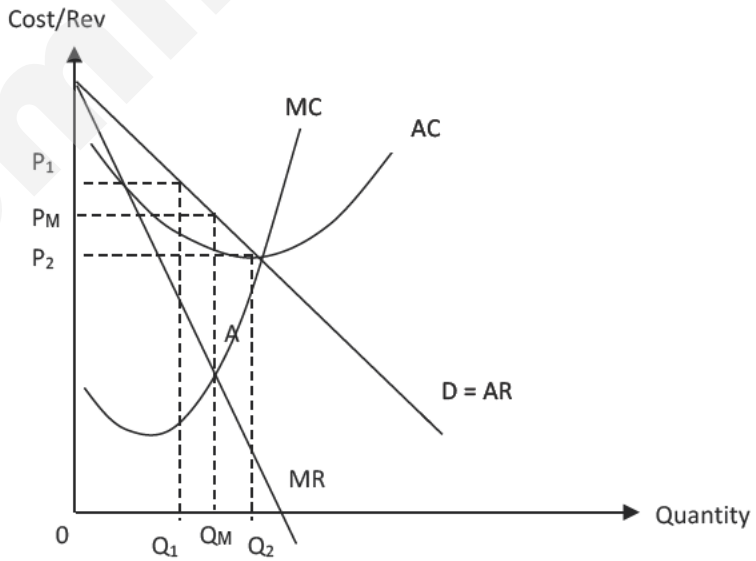


Fig 1: Equilibrium of a monopolist using MR = MC Approach

At Pm, the airline firms would charge the price that consumers are willing to pay for that quantity as indicated by the demand curve at Pm. At price P1, where marginal revenue exceeds the marginal cost of that production, the marginal unit produced will add more to the total revenue than total

cost. Hence, it is more profitable for the monopolist reduce price and expand output until Qm. At price P2, marginal cost of production exceeds marginal revenue from production, the marginal unit produced will add more to total cost than to total revenue. As a result, profits will decline and monopolist should increase price and reduce production back to Qm. Since the firm decrease production, the costs saved would exceed the revenue lost.

Therefore, it must be true that profits are maximised at Pm when MR = MC. A profit-maximising monopolist will produce output OQm where MR = MC and look at its demand curve to charge OPm, which is the profit maximsing price.

However, due to the **interdependence relationship** between airline firms, the above analysis **may not** fully explain firm's pricing behaviour.

Collusive behaviour

If airline firms were to collude to maximise industry profits, they can agree to restrict competition among themselves by deciding on a fixed price to be set.

*** Any forms of formal collusion is considered illegal.**

For example, a cartel may be formed between firms and they behave like a monopoly and fix prices. Firms may also follow a price leadership model where firms in the industry would follow the pricing decisions of the firm chosen to be the price leader.

Non – Collusive behaviour (price rigidity)

For oligopolistic firms which are non – collusive, their prices tend to be rigid due to the kinked demand curve they possess.

Lastly, due to the airline firms' ability to set prices and segment their market, they are able to charge different prices to different groups of people.

3rd – degree price discrimination

With each different group having varying demand elasticities, the airline firms would be able to charge higher prices for the market segment with a lower elastic demand and lower prices for the market segment with a higher elastic demand in order to maximise profits by capturing a portion of the consumer surplus.

<u>Mark Scheme</u>

Level	Descriptors	Marks
L3	Well-developed MC = MR analysis **AND** at least 1 more other approach on how oligopolistic firms set prices..	7 - 10
L2	Under developed analysis on how firms set prices. Well analysed MC = MR approach only **(max 5 marks)** No MC = MR approach analysis **(max 6 marks)**	5 - 6
L1	Display some understanding of cost and revenue concepts.	1 – 4

b) Discuss if a merger between AMR Corp and US Airways Group Inc would benefit consumers more than producers. [15]

Suggested outline

	Positive effects	Negative effects	Evaluation
Effects on Consumers (i) price and output (ii) consumer surplus (iii) choice (iv) innovation	A merger between AMR Corp and US Airways may lead to substantial EOS à AC, AC falls by a large extent as Q rises, Pass cost savings to consumers è P falls à Higher consumer surplus A larger firm has more resources for innovation, e.g. invest in quality training to develop new/better quality services à increase consumer welfare. (Dynamic efficiency)	If EOS is not substantial, the fall in AC will not lead to P fall. If cost savings are not being passed on to the consumers, P may not fall. (May be aggravated by the need to advertise) Furthermore, with greater market power, the larger firm can restrict output to increase P thus consumer surplus falls. (Allocative inefficiency) Fewer choices within the industry for the consumers to select from. With less competition, complacency may result in X-inefficiency leading to higher AC and P. (X –inefficiency)	Depends on the level of competition in the industry after the merger. **Context:** Despite the merger, there would still be competition from rivals within the industry. The merger to form the world's largest airline will provide a rival to challenge mega airlines like Delta Air Lines and United Continental. Non – pricing tactics used by the firms to compete may benefit consumers ultimately.

	Positive effects	Negative effects	Evaluation
Effects on Producers (i) cost (ii) revenue (iii) profits	A larger firm due to a merger can enjoy more internal EOS (e.g. technical and financial EOS à give a brief explanation on what it means to reap technical/financial EOS)	A larger firm may produce beyond the MES and incur internal disEOS, (e.g. managerial disEOS as there could be communication breakdown and clash	It depends on whether the larger firm can capitalise on its greater resources to expand its market share and avoid possible disEOS.

	Positive effects	Negative effects	Evaluation
	and thus incur lower LRAC. A merger will allow the larger firm to remove the redundant departments/workers (e.g. combining the 2 accounting department into 1 accounting department) thus lowering cost further. This is known as **rationalization**. A larger firm will enjoy a greater market share and hence 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. With a fall in AC and a rise in TR, there will be an increase in profits.	of corporate culture Thus, LRAC may rise. High cost (e.g. legal fees, accountancy fees) may be incurred in the process of integration as well. If TR does not rise faster than TC, profits may fall.	

Overall conclusion:

A merger between AMR Corp and US Airways may not necessarily mean that consumers will always benefit more than producers.

If the merger is formed from the perspective of providing a rival to challenge the incumbent mega airline firms within the industry, consumers would generally benefit more due to the likeliness of non – pricing tactics that will be implemented by the firms to differentiate themselves.

However, merger is formed from the perspective to strengthen market power in the bid to lessen competition and create a 'monopoly' within the industry, then it would lead to substantially higher prices and less choices for consumers.

Mark Scheme

Level Marking	Descriptor	Marks
L3	For a well-balanced answer which provides a thorough analysis of the +ve and -ve effects of a merger on consumers and producers, applying to the context of the airline industry.	9 - 11
L2	Able to identify and examine both +ve and –ve effects of a merger on consumers and producers. Answers are largely theoretical and under developed.	6 – 8
L1	For an answer containing superficial description of the +ve and -ve effects of a merger on consumers or producers. Little reference to the given context, containing a gross amount of conceptual mistakes	1 - 5
E2	Well explained points of evaluation Candidates recognize that whether a merger would benefit consumers more depends on a set of condition. Arrive at a judgment.	3 - 4
E1	Stating points of evaluation. Points of evaluation not explained.	1 - 2

With the economy slowing, Singapore's employee confidence in the local job market has dipped to the lowest in the region. Almost half, 46 per cent, of the workers in Singapore said there are 'not enough' job opportunities here.

Source: Asiaone Business, March 2012

Analyse the possible sources of unemployment in Singapore and assess whether low unemployment should be the main macroeconomic objective of the Singapore government. [25]

Suggested outline

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, and there are a few main types of unemployment such as cyclical, structural, seasonal, and frictional unemployment. In Singapore, the three common and main types are cyclical, structural, and frictional unemployment.

Development:

Possible sources of unemployment

Cyclical unemployment

Demand-deficient unemployment or cyclical unemployment is a major cause of unemployment in Singapore because Singapore has a large external sector and is largely dependent on external demand for economic growth. For instance, in the contract manufacturing of electronics, Singapore exports heavily to the rest of the world. If international demand for Singapore's electronics exports falls, then firms producing those goods will face a lower demand. Hence, firms that face decreased demand for their goods and services might reduce the cost of production by reducing their output and employment.

Structural unemployment

As a result of globalisation, there is a lot of restructuring in Singapore and in the process structural unemployment might result in Singapore. First, Singapore has changed from a labour intensive to capital intensive economy, and thus different skills are required. Workers who do not have the appropriate training and expertise to move into a different industry are laid off, thus contributing to unemployment. 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 happens because it takes time for people to find new jobs when they change jobs or look for suitable jobs. Job creation and destruction creates the need for people to

look for jobs and for firms to look for employees, and as such there is a time lag. Also students who have finished studying and are looking for a job also tend to be frictionally unemployed

Should achieving low unemployment be the main macro objective?

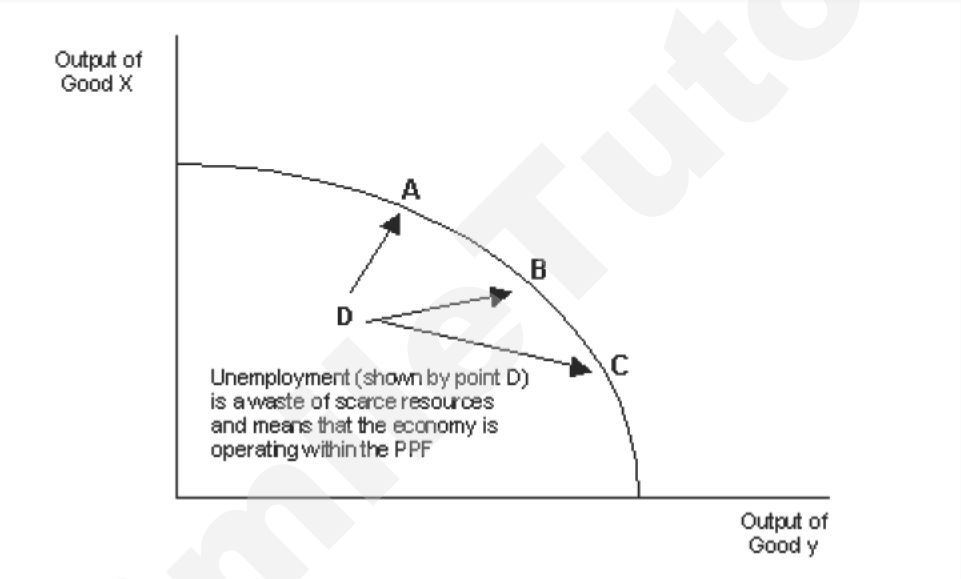
Thesis: Achieving low unemployment should be the government's main macroeconomic objective

1) Reasons for pursuit of low unemployment (Benefits)

- Low loss of goods and services

Unemployment causes a **waste of scarce economic resources** and reduces the long run **growth potential** of the economy. An economy with high unemployment is producing within its **production possibility frontier.** The hours that the unemployed do not work can never be recovered.

This results in **lower output and income** and hence a **lower material standard of living** for Singaporeans.



But if unemployment can be reduced, total national output can rise leading to an improvement in economic welfare.

- Fiscal benefits to government

High unemployment has an impact on government expenditure, taxation and the level of government borrowing each year

Low unemployment would result in **lower benefit payments** and **higher tax revenues**. When individuals are employed, not only do they pay taxes but they will not be entitled to unemployment benefits.

As they are spending more, they contribute more to the government in indirect taxes.

– Minimise deadweight loss of investment in human capital

Unemployment wastes some of the **scarce resources** used in training workers. Furthermore, workers who are unemployed for long periods become **de-skilled** as their skills become increasingly dated in a rapidly changing job market. This reduces their chances of gaining employment in the future, which in turn increases the economic burden on government and society.

- Minimise social costs

Rising unemployment is linked to **social and economic deprivation** - there is some relationship between rising unemployment and rising crime and worsening social dislocation (increased divorce, worsening health and lower life expectancy).

Areas of high unemployment will also see a decline in **real income** and **spending** together with a rising scale of relative poverty and **income inequality**. As younger workers are more geographically mobile than older employees, there is a risk that areas with above average unemployment will suffer from an ageing potential workforce - making them less attractive as investment locations for new businesses.

2 – How low unemployment can achieve other macroeconomic objectives

Higher levels of employment will lead to economic growth.

Economic growth is one of the key indicators economists use to assess a nation's economic well-being. Ceteris paribus, higher economic growth should lead to an increase in living standards. Higher real GDP per head leads to higher consumption and improvement in material well-being and hence SOL for the people.

Faster economic growth will lead to increase in tax revenue. The amount of tax collected is directly related to national income. For example, income and corporate tax will increase at a faster rate with an increase in the growth of national income. In addition, faster growth will reduce government expenditure and result in a budget surplus

A higher level of economic growth increases firms' and consumers' confidence. This allows firms to plan ahead & invest with greater confidence since the risk of doing business is reduced

Due to the costs and benefit mentioned above, there is a need for the Singapore government to keep unemployment rate low in order to avoid or minimize such costs.

For Singapore, rising structural unemployment has been a problem, with the unemployed being unable to fill job vacancies because they do not meet the skill requirements of the new jobs. The danger of labour mismatch has increased in recent years due to the fast pace of technological changes, and the increased need for higher skills and educational qualifications to perform the new jobs created. It is thus important for the Singapore government to prioritize low unemployment as one of our goals as well to ensure that her people's standard of living is not compromised

Anti – Thesis: Low unemployment should not be the government's main macroeconomic objective

Conflict of macroeconomic objectives

Low unemployment vs low inflation and healthy BOP

Low unemployment would imply higher national income levels for Singapore. If this is translated into higher import levels into Singapore, budget may worsen through the current account.

Persistent pursuit of low unemployment may lead to demand pull inflation, especially if potential economic growth is unable to keep up with actual economic growth. This is particularly bad for Singapore as higher general price levels of goods and services may erode Singapore's exports price competitiveness, adversely affect Singapore's BOP as well, due her high dependence on trade.

Other macroeconomic objectives are important as well

Low inflation is important due to the following benefits

1 - Boost business confidence and hence economic growth and employment

Firms (local or foreign) are able to plan ahead & invest in Singapore with greater confidence since the risk of doing business is reduced, fostering a business-friendly environment for the country. Low and stable demand-pull inflation also encourages firms to expand output as the rising demand could lead to higher profitability

These reasons would help to ensure high investment levels in Singapore, increasing AD and hence national income boosting actual growth. Employment opportunities are also created as firms demand for labour to meet the increasing production. In the long term, quantity of capital stock increase, raising productive capacity and AS allowing Singapore to experience non-inflationary sustained growth.

2 - Improvement in BOP and hence export-led growth

An inflation rate that is relatively lower than other competing countries will boost the economy's price competitiveness of domestic goods à improve export competitiveness à increase export earnings (PEDx >1) and lower import expenditure as domestic consumption switches away from imported goods & services à improve current account and hence the balance of payments position.

Low inflation rates also help to keep Singapore attractive as an investment destination to foreigners, promoting FDI inflows and hence improving the capital and financial account. This also helps to improve our BOP.

At the same time, keeping exports price competitive also helps to generate export-led growth. Low export prices boost our net exports and hence AD à promoting economic growth and ensuring low unemployment.

As a small and open economy, these are especially important to Singapore due to its high reliance on FDI as well as external demand (which accounts for 2/3 of total demand) as the main drivers of our economic growth.

3 - Minimise redistribution of income between groups of people

Low inflation helps to minimise the negative effects of redistribution of income between different groups of people. High inflation could lead to certain groups gaining at the expense of others e.g. fixed vs. variable income earners, borrowers vs. lenders etc.

For example, fixed vs. variable Income earners - Fixed nominal income receivers such as public sector employees and landlords will suffer the most in times of high inflation. Given a constant money income, an increase in the general price level will result in a fall in real income. On the other hand, variable income earners like insurance agents or property agents whose incomes are expressed as a percentage of the value of the work undertaken, may actually be able to earn a higher income obtain as insurance and property prices increase.

Thus low inflation is important in ensuring minimal redistribution of income from the fixed to variable income earners.

Healthy BOP is important too

A current account surplus is indicative of a healthy economy. It implies that the country is living within its means and that the goods and services produced are competitive internationally in terms of price or/and quality. A large, persistent and unplanned current account deficit is a serious problem and indicates the fundamental economic problem of earnings from exports being insufficient to pay for imports.

Given the characteristics of the Singapore economy with high reliance on external demand, it is thus important for the government to keep BOP in a healthy surplus in order to generate growth and sustain the economy.

Conclusion:

Whether low unemployment should be the main macroeconomic objective depends largely on the government's priorities at hand. If an economy is currently experiencing negative economic growth and large scale unemployment, then low unemployment and economic growth may be the more urgent objectives. If an economy is currently overheating, then price stability may be a more urgent objective. However, government when pursuing the objectives needs to be aware of the interconnectedness between the macroeconomic goals.

As unemployment remains low in Singapore during recent years, pursuit of higher employment levels should be a priority for the government to ensure Singapore's economic progress. At the same time, the government must also ensure prices are kept in check to ensure sustained economic growth.

Mark Scheme

Level	Understanding, Knowledge, Comprehension, Analysis	Marks
L3	For a competent and rigorous response that explains clearly the sources of unemployment in Singapore (cyclical, structural and frictional) and provides a balanced discussion on whether low unemployment should be a main objective weighing against the tradeoff that may result.	15-21
L2	For an answer that is generally lacking in scope or rigour. It may be: (i) unable to explain the sources of unemployment in Singapore clearly but is able to provide a competent and balanced discussion that addresses low unemployment as a main objective or (ii) able to explain the sources clearly but provides a lop-sided or underdeveloped discussion on low unemployment or (iii) able to demonstrate sufficient scope but insufficient depth	10-14
L1	A descriptive answer that lacks scope and depth, containing inaccuracies. A demonstration of the inability to interpret or grasp the requirements of the question.	1-9
Allow up to 4 additional 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

Singapore's inflation rate last month rose to the highest level since December 2008, adding pressure on the central bank to damp price gains by allowing greater currency appreciation. Private home prices rose to a record in 2010, while the cost of car-ownership permits surged as the economy expanded an unprecedented 14.7 percent.

Source: Bloomberg, January 2011

a) Explain what causes inflation in Singapore. [10]

<u>Suggested outline</u>

<u>Introduction:</u>

Define inflation: period of sustained and inordinate increase in the general price level.

Indicated by an increase in CPI, which measures the average price level of a basket of goods and services

2 main types of inflation: demand pull and cost-push

<u>Development:</u>

Demand – pull inflation

§ A situation where AD persistently > AS when the economy is near or at full-employment causing prices to be pulled upward.

Any ã in the components of AD will cause demand-pull inflation

E.g: ã C(due to ä income tax to ã Yd)

ã I (upsurge of business confidence)

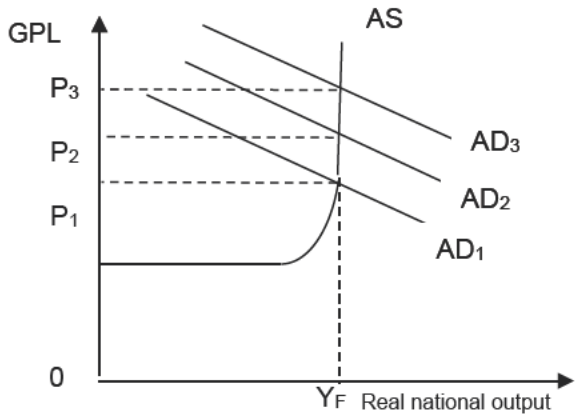
ã G

ã net exports (opening up of export markets)

Factors causing DD-pull inflation in Singapore:

- Healthy economic growth in USA, Eurozone and Japan as well as in Asia is the main factor impacting on demand pull inflation for Singapore. Healthy economic growth in these regions à higher income and hence purchasing power à higher expenditure by foreigners à boost export revenue à drive up AD and hence GPL
- Positive economic outlook with high growth rates of about 7.5% registered à attract greater inflow of FDI à drive up AD à rise in GPL
- Rising housing prices à wealth effect where households 'feel richer' and boost their confidence à higher consumption à rising AD à rise in GPL

Fig 1: Dd-pull inflation



Diagrammatical representation:

Figure 1 illustrates an ↑ in AD from AD_1 to AD_2 → excess demand → cannot be met as economy near/at full N → bid up prices of real output → GPL ↑

- A persistent ↑ in AD (sustained rightward shift in AD from AD2 to AD3) will generate a sustained & inordinate ↑GPL without any ↑ in real output

Inflationary Process:

- AD↑ from AD1 o AD2 → firms are able to sell more goods than they are producing → ↑DD for FOP → ↑wages and other factor incomes if economy is near or at Yf → ↑AD as consumption increases further from AD2 to AD3

- Process continues → inflationary spiral

Cost push inflation

- A situation when there is a sustained ↑ in the cost of production.

Factors leading to cost-push inflation in Singapore:

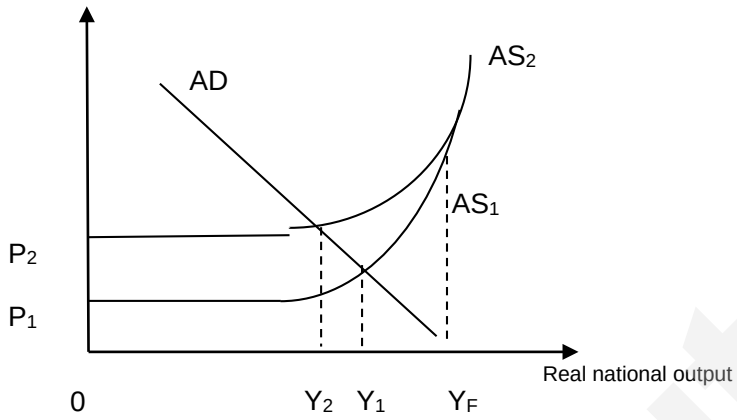
Imported inflation

- Rising cost of food (23.4% of CPI basket) due to supply shocks as a result of poor weather conditions and diversion of global food supply towards biofuel production
- Rising oil prices in the past few years (primarily due to rising demand) → rising fuel costs → rising cost of energy and hence cost of production → Rising transport costs due to public transport fare hikes

Other internal contributing factors include:

- Rising property rentals – rising cost of rentals for companies à rising cost of production
- Rise in indirect taxes E.g. GST rose from 5% to 7% à force firms' cost of production up à push up general price level

Fig 2: Cost – push inflation



Diagrammatical representation

Figure 2 shows the economy is initially at price P_1 & output Y_1. An ã in the cost of production will shift the AS curve to the left from AS_1 to AS_2. Consequently a persistent ã in costs will shift the AS curve leftwards resulting in a sustained ã GPL from P_1 to P_2 & output drops from Y_1 to Y_2.

Inflationary process

- Explain the spiral process arising from any 1 source:

E.g. Rising oil prices à AS falls from AS_1 to AS_2 à workers ask for ã wages **>** ã productivity so that unit cost of production ã and this will pass on to consumers in the form of ã price. ã Cost of living, trade unions again ask for higher wages to maintain real income. Again, cost of production ã and this is again passed on to consumers in the form of higher prices. So an inflationary wage-price spiral develops.

<u>Conclusion:</u>

In conclusion, high inflation brings about adverse consequences to the economy. The government should ensure low inflation to maintain the good health of the economy.

Mark Scheme

Level	Understanding, Knowledge, Comprehension, Analysis	Marks
L3	For a well-developed answer which explains **BOTH** demand – pull and cost push inflation, supported with appropriate diagrams.	7-10
L2	For a developed answer that explains either demand – pull **OR** cost push inflation or an undeveloped answer which explains BOTH demand – pull **AND** cost push inflation.	5-6
L1	For an answer that shows some knowledge of the causes of inflation. Smattering of points.	1-4

b) An increase in inflation levels is more likely to cause problems for the domestic than the external sector of the Singapore economy. Discuss. [15]

Suggested Outline

Introduction:

One of the macroeconomic aims of the Singapore government is to maintain price stability (low inflation levels) so as to create a conducive environment for investment, maintain export competiveness to sustain non – inflationary economic growth.

Development:

Effects of high inflation on Singapore's domestic sector

1 – Income redistribution

Some groups of people will become better off whereas some are made worse off. E.g. businessmen earn high profits while workers whose wages do not keep pace with the increase with general price levels will have lower real income levels. Hence there may be a widening of the income gap, which can potentially destabalize the economy.

2 – Lower savings rates

As the value of money falls with inflation, spending will increase and savings will fall. If inflation is high and savings are discouraged, the loanable funds available for investments will be reduced.

Singapore has a high savings rate which provides investors and the government with relatively cheap funds to invest in the country. With a fall in savings, investment levels and economic growth will be adversely affected.

3 – Reduce investors' confidence

High inflation levels will affect business confidence in Singapore due to uncertainty within the economy. Investors will set up firms in other countries where general price levels are lower.

Cost push inflation will shift the AS to the left, causing a fall in production, investment, employment and economic growth. Firms that cannot pass on the higher costs to consumers would have to

absorb the higher factor prices and might find it difficult to survive and hence result in business failures.

Effects of high inflation on Singapore's external sector

1 – Worsening of current account

Inflation results in a loss of international competiveness. Inflation poses a great threat to Singapore's export competiveness. If Singapore has a higher inflation rate than other competing countries, her goods and services will be deemed less attractive to consumers around the world in terms of price competiveness.

Singapore's exports will become relatively more expensive and imports will become relatively cheaper. Assuming PED of exports and imports are both elastic, exports earnings will fall while import expenditure will increase. This will worsen the BOP through the current account.

2 – Worsening of capital account

Cost push inflation means higher production cost. Firms will not be willing to invest and existing foreign firms may choose to relocate their production to other lower cost countries. Hence there will be an outflow of FDI, resulting in a long – term capital outflow.

High inflation rates will also lead to capital flight as people prefer to put their money in countries where the monetary situation is more stable, resulting in short – term capital outflow.

Capital outflows will worsen the BOP through the capital account.

3 – Depreciation of currency

As the demand for exports fall due to a loss in Singapore's export competiveness, demand for SGD would fall as well. At the same time, supply for SGD would increase in the foreign exchange market as Singapore's demand for imports would have increased. This will lead to an overall depreciation of the SGD.

Evaluation (Making a stand)

Singapore with little natural resources of her own and with a small domestic market, is very highly dependent on foreign markets for her exports of finished products and import of raw materials for its production processes as well as many final consumption goods. Also, Singapore is also very reliant on capital flows and FDI.

Since Singapore is such an open economy with high dependency on trade and FDI, ***inflation would cause more problems for her external sector.***

However, problems from the external sector will have spillover effects on the domestic sector. E.g. uncompetitive exports due to high inflation will lead to a fall in demand for exports,. Since Singapore is an export – led country, a fall in demand for exports may lead to an increase in cyclical unemployment in Singapore.

A fall in exports will lead to a fall in national income through the multiplier effect. This would trigger a fall in domestic production, employment and economic growth.

In general, an inflation rate of 2 – 3% would not cause much of a problem for the domestic or external sectors of the economy. In fact, mild demand – pull inflation is favourable to economic growth since the excess demand and the prospect of higher returns stimulate investment and production. Profits tend to be higher as production costs lag behind increase in product prices (due to contracts agreed upon earlier).

Nonetheless, inflation is of great concern to Singapore and therefore the government has to be vigilant in keeping inflation rates in check.

Mark Scheme

Level	Understanding, Knowledge, Comprehension, Analysis	Marks
L3	For a detailed analytical answer that dealt with **BOTH** domestic and external sectors of the Singapore economy.	9-11
L2	For an answer that tend to be balanced in coverage but undeveloped in nature.	6-8
L1	For an answer that focuses on the problems for either the domestic **OR** external sector of the Singapore economy.	1-5
Allow up to 4 additional marks for evaluation		
E2	For an evaluative assessment that shows why either the internal or external sector is more greatly affected.	3-4
E1	For an unexplained assessment, or one that is not supported by analysis.	1-2

(a) Explain how a global recession would affect the circular flow of income in an economy. [10]

(b) Discuss the relative effectiveness of demand-side and supply-side policies in sustaining economic growth in Singapore. [15]

Suggested Answer: **(a)**

Define recession

- A recession is defined as a period of two consecutive quarters of negative economic growth.
- Students can answer in the context of the 2008 global financial crisis or the 2010 Eurozone crisis. Due to the extent of these crises both had repercussions for all open economies including Singapore. The recession that ensued was global.

Define and explain the circular flow of Income in a 4-sector economy

- 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.
- Shows the flow of payments for products (goods and services) around the economy.
- Injection**:** 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: any part of income that is not passed on within the circular flow of income. Withdrawals include savings (S), taxes (T) and imports (M).
- 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.
- 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.
- 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.

$$S + T + M = I + G + X$$

Explain the impact of a global recession a country's circular flow of income

<u>Investment expenditure (I):</u>

- The level of investment expenditure falls due to pessimistic outlook by firms as lower profitability of investment projects is expected during the global recession.
- In addition, with banks unwilling to lend during the financial crisis for fear of high default risks, firms are unable to finance their investment project
- I falls

<u>Export expenditure (X):</u>

- The global recession leads to a lower level of economic activities worldwide and hence, falling income levels in many countries. With lower purchasing power by foreign consumers, coupled with the pessimistic outlook à demand for exports by a country is likely to fall, resulting in lower export expenditure for the country**.**

<u>Government expenditure (G):</u>

- During an economic recession, the government is likely to conduct an expansionary fiscal policy (i.e. increase G or reduce direct taxes) to stabilise the economy.

Conclusion

- During a global recession the level of injections is likely to decrease as the fall in I and X is too extensive to be offset by the rise in G.
- Firms' output decrease and in turn the firms' demand for factors of production from households decreases. Factor incomes of households decrease and size of circular flow of income decrease. Households' consumption expenditure will fall.
- As their income falls, households will save less, spend less on imported goods and services and less taxes. The size of withdrawals will fall.
- With the fall in consumption by household, firms will respond again with decreasing output.
- The process will stop when the initial fall injections in circular flow is equal to the fall in withdrawals.
- Size of circular flow of income would be reduced.
- There is a definite role for government to employ macroeconomic policies to cushion the adverse impact of the financial crisis.

Level	Description	Marks
L3	A well-developed explanation on how the financial crisis would affect the level of injections with a clear analysis on the impact circular flow of income.	7-10
L2	Under - developed explanation which is able to address the impact on the circular flow of income but lacking in scope or rigour. Candidates have demonstrated some understanding of the concept of circular flow of income.	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

(b)

Identify economic growth as the main concern of the Singapore government during an economic recession

- Two aspects of economic growth, namely, potential growth and actual growth. Actual growth refers to the rate of change in the volume of output produced within the economy, due to an increase in aggregate demand (AD); measured by the annual percentage increase in its real Gross Domestic Product (GDP). Potential growth refers to an increase in the productive capacity or potential output of an economy (i.e. increase in aggregate supply) →increase in full employment level of income.
- Economic stability of a country refers to both internal and external stability of the economy. Internal stability refers to maintaining low, stable inflation and low unemployment rate, while external stability, healthy balance of payments (BOP).
- Global economic recession → fall in global income à fall in demand for Singapore's exports à fall in AE and hence fall in national output, income, unemployment and BOP worsens→ fall in material aspect of standard of living of people in a country → need for government intervention in order to enhance economic growth and stability.

Demand-side Policies

Fiscal Policy (Expansionary)

Discretionary 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 the government raising expenditure and/or reducing taxes) can be used to stimulate growth.

For example, the government spends on infrastructure projects such as building new expressways; this becomes an injection into the circular flow of income. Also, the government may try to stimulate consumption and investment by reducing tax rates. Reduction in income tax would stimulate consumer spending through an increase in personal disposable income, whereas reductions in indirect taxation and corporate tax would enable a given disposable income to buy more goods and services for consumers; and to raise after-tax profits and thus encouraged private investment for producers, which are injections into the circular flow of income. This will in turn lead to an increase in AD and subsequently, real GDP by a multiple.

In the case of a small and open economy such as Singapore, which is highly import dependent, the size of the multiplier is small (about 1.05) because of the high mpm, since much of the increases in injection leaks out of the economy as imports. Due to policies such as the government imposed CPF (compulsory savings) scheme as well as the tendency of Asians to save a high proportion of their income, the mps in Singapore is also high. Hence, an increase in, say, government spending may not have a significant impact on income and employment. Given that Singapore's tax structure is one of the most competitive in the world, there is a limit as to how much the government could lower its tax rates further, without compromising on its tax revenue.
Therefore, the effectiveness of fiscal policy is limited. Thus multiplier could be significant in influencing the policies (such as fiscal policy) used to achieve growth in countries like Singapore.

Exchange rate policy:

Singapore adopted a zero-per cent appreciation path in a bid to balance its need to maintain net export levels with its need to prevent rising costs due to import reliance. Imports will not become much more expensive in terms of domestic currency as currency strength is kept at current level. Exports will be allowed to remain relatively affordable in terms of foreign currency in the light of falling incomes in other countries due to the crisis (which is important given our export-dependence) Thus, we are able to maintain AD and NY and prevent worsening of cyclical unemployment. Price levels are also prevented from rising higher.

In the long run, there is a need to return to the gradual, appreciating stance on exchange rate. Exchange rate appreciation increases the price of exports in foreign currency and reduces the price of imported goods. Singapore imports practically all of its raw materials. An appreciation of the Singapore dollar reduces the cost of the country's imported components which form the bulk of production costs for the Singapore manufacturers. This will ensure long-term economic growth, employment and stable prices in Singapore.

Also accept the explanation that Singapore could allow depreciation of the currency to encourage exports and thereby stimulating economic growth.

Supply-Side Policies

Supply-side policies are designed to shift the short-run and / or long-run AS to the right by improving the efficiency in the product and labour markets. These include reducing labour market rigidities and establishing pro-business environment.

During the recession, the Singapore government also adopted SS-side measures to improve growth and stabilise the economy. E.g.

Reducing labour market rigidities:

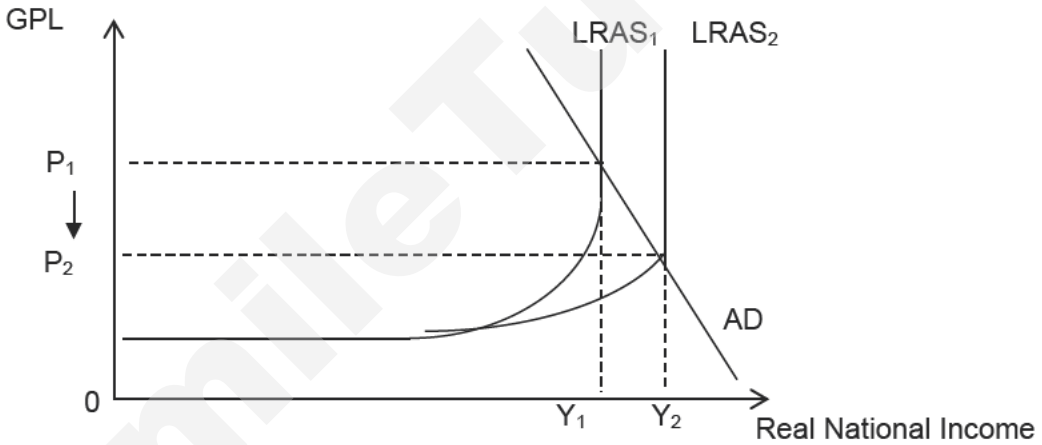
- Provide subsidies to firms to undertake education and training to increase labour productivity and mobility; (LRAS)
- Increase in employment benefits (Eg. Workfare bonus in 2009 budget) to increase incentive to work; (LRAS)

- Recommendations for workers to accept lower wages to reduce firm's costs and secure employment (SRAS)
- Job Credit Scheme – subsidy on labour cost of Singaporean worker; (SRAS)
- Such measures in the labour market have the effect of increasing quantity and quality of labour, raising productive capacity and AS.

Establish pro-business policies

- This means building up world class infrastructure enhancing capabilities (e.g. WiFi), investing in R&D etc. The government can increase AS via adoption of pro-competition policies such as passing of anti-trust laws, removal of barriers of entry to certain regulated industries, and increased spending on R & D in particular sectors such as the biomedical or manufacturing ones to maintain our comparative advantage.
- The above will serve to attract greater inflow of investments, leading to capital accumulation and enhancing our productive capacity.

Long run supply-side policies shift the AS curve to the right (LRAS1 to LRAS2) and hence, ensures sustained economic growth in the long run (from Y_1 to Y_2). This will also ensure the job opportunities are created and sustained in the long term. In addition, SS-side policies that increase AS would ensure that prices in the economy are kept low. This will enhance Singapore's export competitiveness and improves BOP via the current account. Thus, the aims of sustaining economic growth, internal and external stability in the economy are achieved.



Supply-side policies could be costly as it may involve government spending, worsening the budget position. Such deficits may have to be financed by higher taxes in the future which will reduce work incentives. In addition, its outcome is also difficult to predict as well. The effectiveness of supply-side policies depends highly on the attitude and receptivity of workers towards education and retraining.

Time period: SR vs LR

Demand-side policies will be more effective in the short run while supply-side policies to increase quality and quantity of resources will be more effective in the long run. Demand-side policies work directly at increasing AD via the increase in G and (X-M). Thus, its impact on economic performance is more likely to be felt in the short run. In addition, any increase in AD over a long period will result in inflationary pressure if AS does not increase correspondingly. Hence demand-side policies are likely to be more effective in the short run.

Supply-side polices are likely to affect the economy with longer and more variable lags as compared to demand-side policies. Hence they are more effective in the long run. For instance, the success of education and training policies would only yield results over a long period of time. On the other hand, demand-side policies can be observed to impact the economy over a shorter period of time and its

effectiveness can be enhanced if the government makes accurate estimates with updated and reliable information.

Nature of problem: Dd or SS-side?

Given that the recession that Singapore faced is caused by falling AD due to plunge in external demand, demand-side policies targeting at manipulating AD are more likely to be more effective than long-run supply-side policies. Singapore's exchange rate and fiscal policies directly target at the problem of a fall in external demand and thus AD. These policies are intended for a more immediate correction of the problem of slowdown in economic growth and employment and worsening BOP.

Supply-side policies, however, do not directly target at reversing the plunge in exports due to the global recession. Supply-side policies will first impact the economy via shifting the AS curve and hence increasing productive capacity of the economy. This will lower inflation rates and enhance Singapore's export competitiveness in the long run, thus achieving sustained growth, as well as internal and external stability.

Size of multiplier:

The effectiveness of demand – management policies in sustaining growth and stability would depend on the size of the multiplier which would depend the extent of the change in national income and hence growth and employment. Given that Singapore has very small k value due to the high import and savings leakage, any attempt to manipulate AD with the aim of increasing NI would be constrained by the small k. Hence effectiveness of demand-management policy would be limited unless AD is increased substantially. As such, the Singapore government has to rely on SS-side policies.

Size of domestic demand:

Singapore's high dependence on external trade whereby it accounts for about 2/3 of total demand in Singapore implies a small domestic demand that will limit the effectiveness of demand-side policies, such as that of fiscal policy. Demand management policy that is geared towards manipulating domestic demand of C, G and domestic I would have limited effectiveness. On the other hand, SS-side policies that are geared towards attracting FDI and enhancing export competitiveness may have a bigger impact on achieving growth and stability.

Conclusion

Singapore is a small and open economy. It has a high degree of openness to trade & capital flows. Hence, in the short run, demand-side policies are more effective in enhancing actual economic growth, controlling demand-deficient unemployment and improving balance of payments, while supply-side policies will be needed to bring about sustained economic growth and stability in the long run.

Level	Description	Marks
L3	A clear assessment of the effectiveness of policies to achieve economic growth in Singapore against a set of criteria within the context.	9-11
L2	A discussion on demand and supply side policies, but limited scope on policies to achieve economic growth in Singapore.	6-8
L1	Mere description of demand and supply side policies without economic analysis.	1-5
E2	Evaluation/judgement based on analysis	3-4
E1	Largely unexplained evaluation based on analysis	1-2

PRELIM EXAM 2013

Economics JC 2
H1 (8819)

PAPER 1

Monday
16 September 2013
14:00 – 17:00

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.

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.

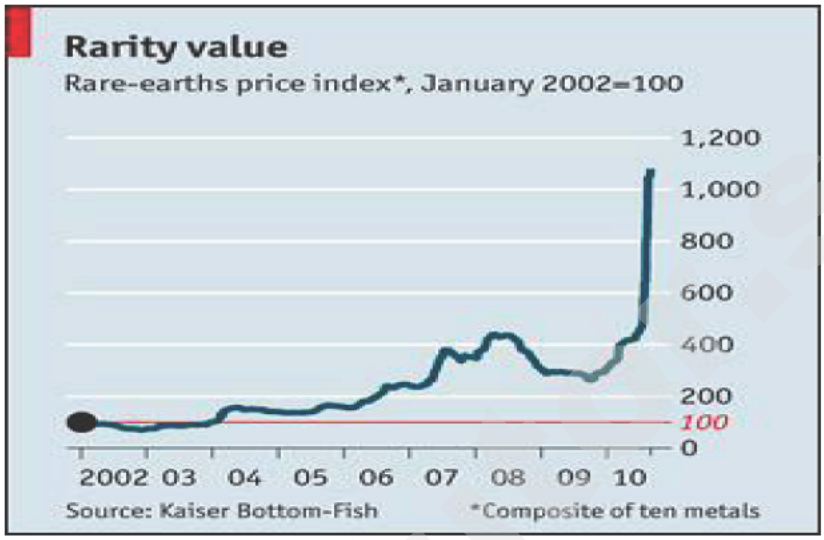
There are 8 printed pages including this cover page

Answer all questions in this section.

Question 1

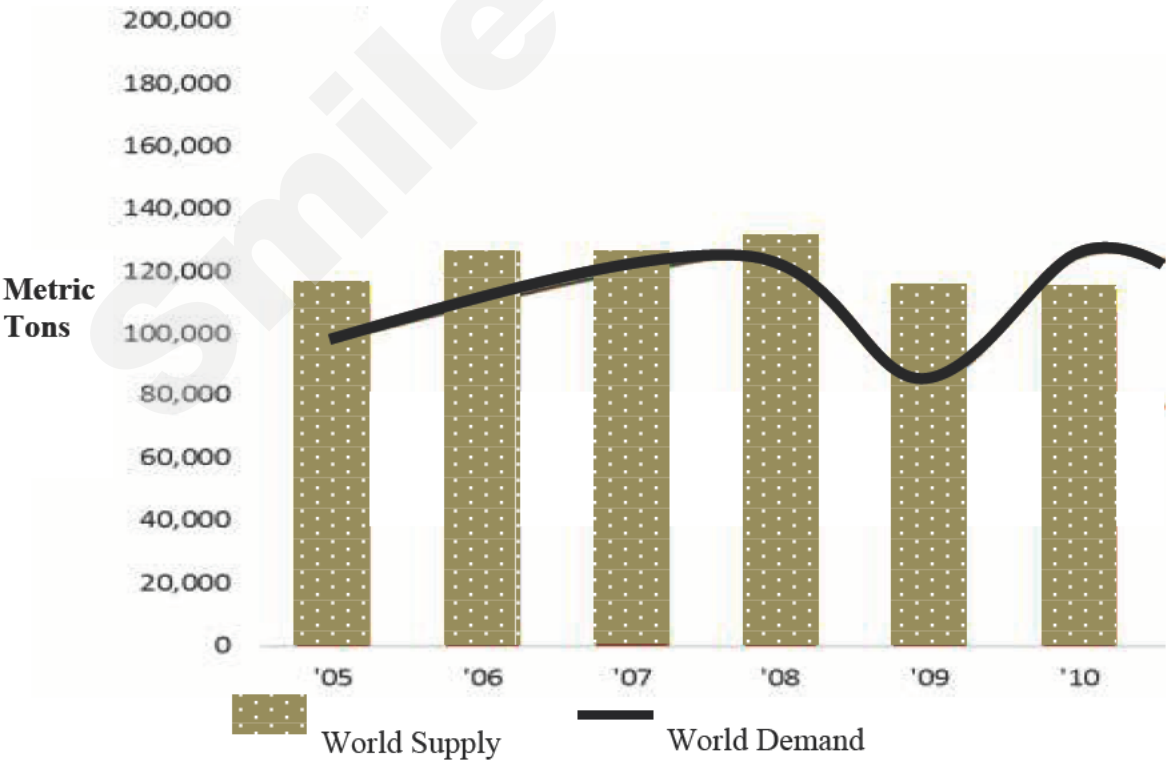
The Market for Rare Earth Metals

Figure 1: Global rare earth metals price index



Source: The Economist, 2 Sep 2010

Figure 2: Global Rare Earth Metals Supply and Demand 2005 - 2010



Source: Industrial Minerals Co. of Australia

Extract 1: China's grip on the world's rare earth market may be slipping

For the past two years, the world has had a rare earth problem. Rare earth metals are crucial for a wide range of electronics, from solar panels, fluorescent bulbs to iPod headphones to hybrid vehicles. And China produces 95 percent of the world's supply. So when China began sharply restricting exports in 2010 — allegedly to give its own industries an advantage — the global prices for rare earths skyrocketed. Bad news. Except now, it is looking like the rare earth crisis is receding.

Despite their colorful name, rare earth metals aren't actually all that rare. At one point or another during the twentieth century, Brazil, India, the United States and South Africa were all major producers. In the 1980s, China decided to ramp up production massively, driving out competitors and cornering the market. China managed to do this, in part, through preferential policies by the Chinese government and lax environmental standards. This quickly enabled China to become a dominant, low-cost producer of rare earths by the late 1990s.

In 2010, China decided to restrict its export quota by 40 percent. That helped drive prices up and suddenly made it economical for other countries to start boosting their own production again. Out in Mountain Pass, California, for instance, Molycorp is now reopening and expanding its massive rare earth metals mine. Many countries are also doing the same.

Meanwhile, Japan has rushed to reduce its dependence on rare earths over the past few years—especially since China has a habit of restricting exports every time the two nations get into a territorial spat. Panasonic has developed a technique to recycle neodymium from old electronic appliances. Honda is extracting rare earths from used car batteries. TDK Corp., which creates magnets for motors, now sprays dysprosium on its motors rather than mixing it in, in order to conserve.

Source: The Washington Post, October 19, 2012

Extract 2: The Case Against Lynas in Malaysia

If everything goes as planned, by September this year, the largest rare earth refinery in the world will start operating in Gebeng Industrial Zone, some 25 km away from Kuantan town, home to almost half a million people. This plant will cast a shadow over Kuantan town. Real estate price will plunge, residents who are able to relocate will flee and those who are not will be in constant fear of radiation exposure.

The authorities have learnt nothing from the Asian Rare Earth (ARE) debacle in Bukit Merah, Perak. The ARE plant was operated by Mitsubishi Chemical and it extracted rare earth from old tin mine slag. Unfortunately the waste contains high level of thorium, which is a perpetually radioactive substance because its half life is 14.05 billion years! The residents there blamed the plant for birth defects and eight leukemia cases, 7 of whom have since died. As a result of strong public opposition, the ARE was finally closed in 1992 and is currently undergoing a massive RM303 million cleanup.

Similarly, for the new rare earth refinery, the point of contention is the waste management. Lynas will import rare earth ores from Mount Weld in Australia to be processed in Gebeng. The finished products will be exported overseas while the radioactive waste dumped in Gebeng. From the press statements, one can surmise that the waste management is not even finalized yet.

Environmentalists contends that the much larger volume causes thorium levels to build up over time, to which Lynas has yet to provide any reply. Lynas also conveniently skipped the

issue of radon gas, another potent carcinogen, which is discharged when the ores are cracked. Finally, Lynas refuses to disclose whether they will process uranium bearing ores in Gebeng from their newly acquired Malawian mine in Gebeng.

Source: Malaysia Today, 05 May 2011

Extract 3: China's Rare Earth Industry and Export Regime

Over the past few years, the Chinese government has implemented a number of policies to tighten its control over the production and export of rare earths, which are important to a number of high technology industries, including renewable energy and various defense systems.

Moreover, many analysts contend that China's recent actions to consolidate its rare earth production and restrict exports are intended to promote the development of domestic downstream industries, especially those engaged in high technology and green technology industries, by ensuring their access to adequate and low-cost supplies of rare earths.

It is further argued that China's rare earth export policies are intended to induce foreign rare earth users to move their operations to China, and subsequently, to transfer technology to Chinese firms. This would aid to increase the productive capacity of China. China denies that its rare earth policies are political, discriminatory, or protectionist, but rather, are intended to address environmental concerns in China and to better manage and conserve limited resources. However, there could be adverse effect on the Chinese economy.

Source: Adapted from Congressional Research Service www.crs.gov

Questions

(a) With reference to the data

(i) Summarise the trends in global rare earth metals prices from 2007 to 2010 [2]

(ii) Prices of rare earth metals have changed differently for the period 2008-2009, and 2009-2010. Using demand and supply analysis, account for this difference. [4]

(iii) What can be inferred from extract 1 about the rare earth metals prices in 2011? [2]

(b) Explain why China adopted preferential policies for its producers of rare earth metals. [2]

(c) **(i)** With reference to the data, define and explain how negative externalities can arise in rare earth metals extraction. [4]

(ii) As a consultant economist, what options would you present to the Malaysian government for responding to the alleged negative externalities of rare earth metals extraction, and what would you recommend? Justify your answer. [8]

(d) China can only benefit from the implementation of export restrictions on rare earth metals. Discuss. [8]

[Total: 30 marks]

Question 2

India and its macroeconomic problems

Extract 4: Slowing down of the BRIC

Brazil, Russia, India and China, was acronymed into the BRIC in 2001 by Jim O'Neill, an investment banker from Goldman Sachs. In 2007 China's economy expanded by an eye-popping 14.2%. India managed 10.1% growth, Russia 8.5%, and Brazil 6.1%. The IMF now reckons China will grow by just 7.8% in 2013, India by 5.6%, and Russia and Brazil by 2.5%. So, what is ailing the BRIC and other emerging markets?

Firstly, the idea that emerging-market economies could fully decouple from economic weakness in advanced economies was far-fetched: recession in the eurozone, near-recession in the United Kingdom and Japan in 2011-2012, and slow economic growth in the United States were always likely to affect emerging-market performance negatively – via trade, financial links, and investor confidence.

Secondly, and most recent, factor is the US Federal Reserve's signals that it might end its policy of quantitative easing earlier than expected, and its hints of an eventual exit from zero interest rates. The era of cheap or zero-interest money that led to a wall of liquidity chasing high yields and assets – equities, bonds, currencies, and commodities – in emerging markets is drawing to a close.

These countries share other weaknesses as well: excessive fiscal deficits, external deficits, above-target inflation, and stability risk (reflected not only in the recent political turmoil in Brazil but also in India's political and electoral uncertainties). Thus, emerging economies with large twin deficits and other macroeconomic fragilities may experience further downward pressure on their growth rates.

Adapted from various sources

Table 1: BRIC's in 2011

Indicator - %	Brazil	Russia	India	China
Real GDP Growth	2.7	4.3	7.2	9.2
Inflation	6.6	8.4	8.6	5.4
Unemployment	6	6.5	9.8	4
Investment/GDP	20.6	23.2	34.4	48.3
Saving/GDP	18.4	28.6	31.6	51
Current Account/GDP	-2.1	5.5	-2.8	2.8
Budget Balance /GDP	-2.6	1.6	-8.7	-1.2

Source: The Economist, 29th September 2012

Extract 5: Rupee fall may have triggered inflation, but it also offers a way out of industrial decline

Every dark cloud has a silver lining. Nowhere is this saying more apt than in the case of the falling rupee. It has raised fears of a spike in already high inflation rates and decline in foreign investment flows. But it has simultaneously opened up new possibilities of boosting exports, making India's economy more competitive and aiding a manufacturing revolution. The opportunity offered by the rupee depreciation can be substantial, given that labour costs in China have risen sharply.

Current trends have already made India the cheapest source of auto components. Important industries that can leverage these trends include automobiles, IT, engineering, metals, pharmaceuticals, chemicals, textiles, leather and sports goods. Sustained growth of labour-intensive manufactured products offer great potential for absorbing the growing numbers of workers added to the labour force each year.

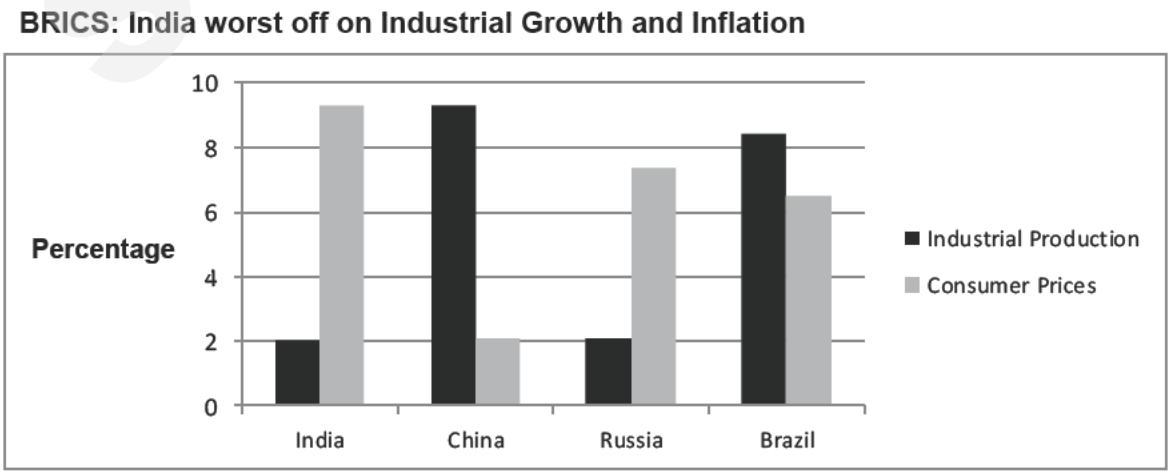
The rupee, which has been hurt by a record current-account deficit, has sunk 7.4 percent against the dollar in 2013. In July 2013, India stepped up efforts to help the rupee after its plunge to a record low. The RBI (Reserve Bank of India, India's Central Bank) raised bank rates by 2 percentage points, and plans to drain 120 billion rupees ($2 billion) through open market sales of government bonds. These actions of the RBI will lead to an increase in interest rates.

Finance Minister, Palaniappan Chidambaram, told reporters that "these measures in no way affect our commitment to growth. Measures are taken to quell excessive speculation and reduce volatility and stabilize the rupee."

Prasanna Ananthasubramanian, an economist at ICICI Securities Primary Dealership Ltd. in Mumbai exclaimed that "it's quite surprising that the central bank has used these measures to support the rupee at a time when the economy is in such a bad state." India's economy expanded 5 percent in the fiscal year ended March, the slowest since 2003, hurt by moderating investment, easing domestic demand and subdued exports.

Source: India Times, Aug 2013

Figure 3: The BRIC Growth and Inflation rate in March 2013



Source: The Economist and The Guardian 2013(Adapted)

Extract 6: FDI no panacea for ailing economy

In a bid to shore up India's flagging economy, the government on Tuesday announced opening up foreign direct investment (FDI) in 13 sectors, including petrol and natural gas, insurance, defence production and telecom. The truth is that FDI easing only makes it easier for foreign investors to put their money in India. It doesn't change the fundamentals that determine if they should put their money in India.

A liberal FDI regime can yield results only if domestic economy is revived. The investors, including Indian firms that have been growing in India for decades, are reluctant to risk money due to uncertainties of doing business in India. That Korean steel giant Posco walked out of the biggest FDI deal in Karnataka the day the government announced liberalization of FDI rules is a grim reflection of ground realities. To create an enabling investment atmosphere, the government must remove bureaucratic hurdles, adopt stable fiscal policies and a transparent tax regime. It should allow level playing field for Indian industry and fix a lock-in period for FDI so that money doesn't flow back easily.

Source: The New Indian Express, 18th July 2013

Questions

(a) Using Table 1, summarise the economic performance of India compared to that of China in 2011. [2]

(b) **(i)** Using a diagram, explain why the Indian Rupee appreciated after the Indian government raise the interest rates. [2]

(ii) Explain how this rise in the Indian rupee might affect prices of goods and services in India. [2]

(c) **(i)** Explain what is meant by the term 'downward pressure on their (BRIC) growth rates'. [2]

(ii) Using AS/AD analysis, explain two evidences contained in the data that could cause downward pressure on the growth rates of the BRIC in the near future. [6]

(d) With reference to the data where appropriate, assess whether on balance the Indian economy would benefit from its 'liberal FDI regime'. [8]

(e) The finance minister of India stated that raising bank rates and having open market sales have 'no way affect our commitment to growth'. Discuss the validity of this statement. [8]

[Total: 30 marks]

Section B

Answer **one** question from this section.

3 From June 1st 2013, there will be a cap imposed on the number of times financially vulnerable patrons visit a casino each month. Administered by the National Council on Problem Gambling (NCPG), the Casino Visit limit will complement the current Casino Exclusion system by providing another option for individuals and their families to control gambling habits.

- *Adapted from Channel News Asia 28th May 2013*

(a) Explain with examples, the factors affecting demand for and supply of gambling services in Singapore. [10]

(b) Discuss the view that this new policy of imposing a cap on the number of visits for financially vulnerable patrons is the best option available to tackle the problem of gambling addiction in Singapore. [15]

4 (a) Explain the likely causes of an appreciation of a country's exchange rate. [10]

(b) Assess the possible impact of an appreciation of a country's exchange rate on its economy. [15]

**********THE END**********

H1 Qn 1 CASE STUDY QUESTION

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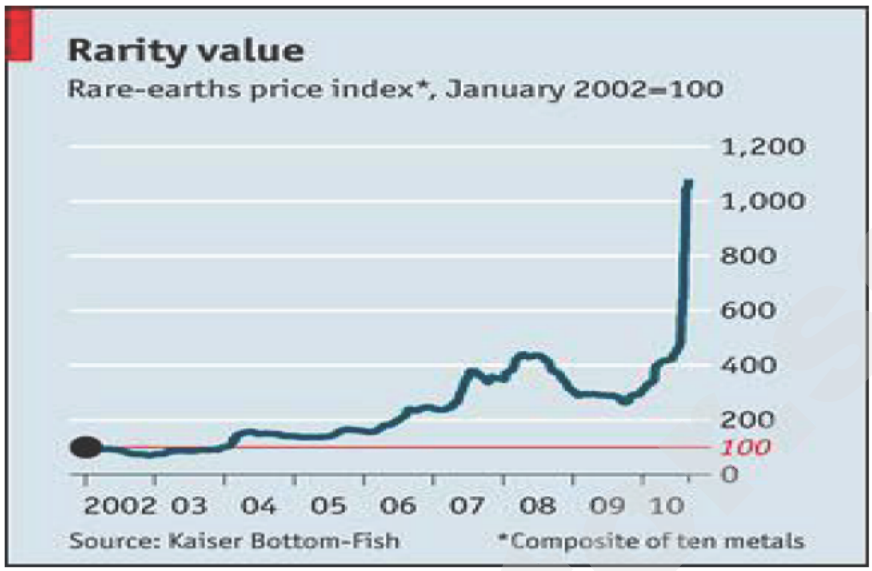
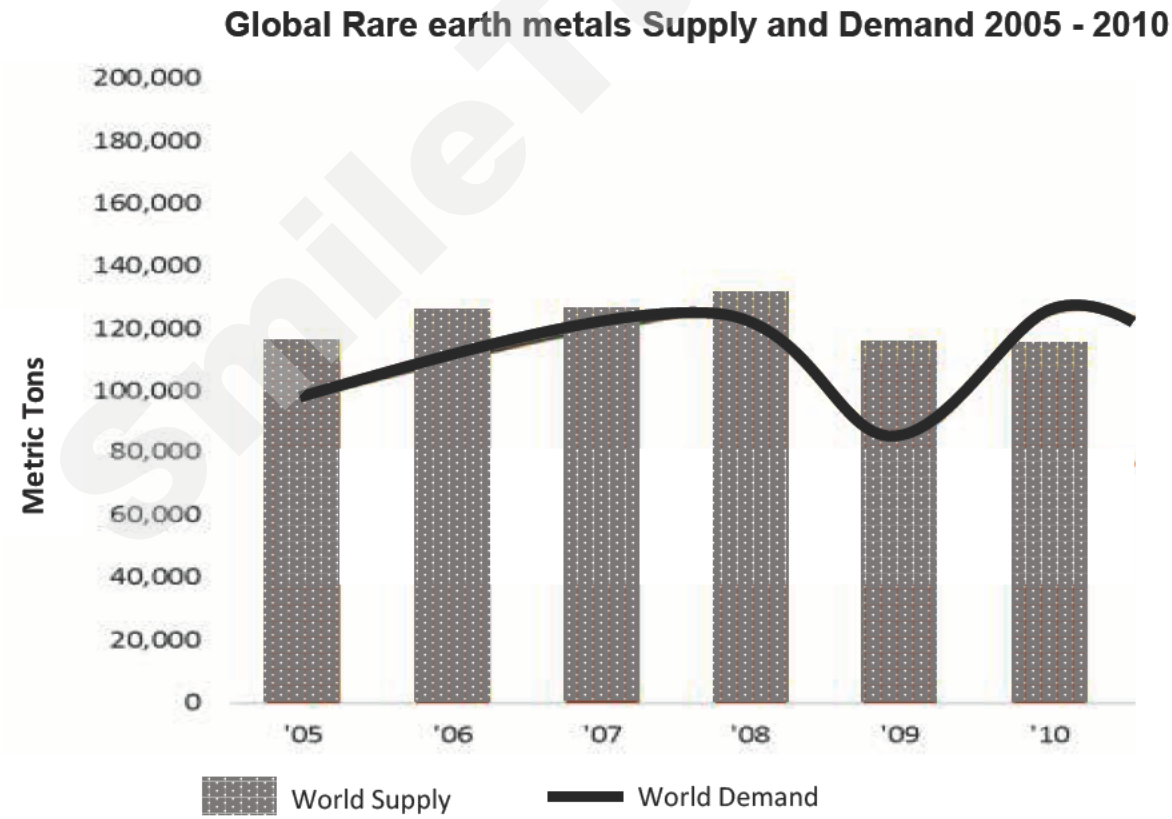


Figure 2



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Source: adapted from Congressional Research Service www.crs.gov

Questions

(a) With reference to the data

i. Summarise the trends in global rare earth metals price from 2007 to 2010 [2]

General Trend: rare earth metals price has been generally increasing from 2007 to 2010	1m (Compulsory)
Refinements: except for the period between 2008 and 2009 where the price fell Or there was a sharp increase in rare earth metals price between 2009 to 2010	1m (for any one refinement)

ii. Prices of rare earth metals have changed differently for the period 2008-2009, and 2009-2010. Using demand and supply analysis, account for this difference. [4]

Account for price fall from 2008-2009: From Figure 2, world supply decrease. World demand also decreased. However, world supply decrease by less than world demand. This would create a surplus in the market. Draw diagram to show the different magnitudes of the shift. Show price fall diagram.	1m for explanation of the shift in the curve, 1 m for linking to price fall
Account for price increase from 2009-2010: From Figure 2, world supply remained the same. World demand increased. This would create a shortage in the market. Draw diagram to show the different magnitudes of the shift. Show price rise diagram.	1m for explanation of the shift in the curve, 1 m for linking to price increase

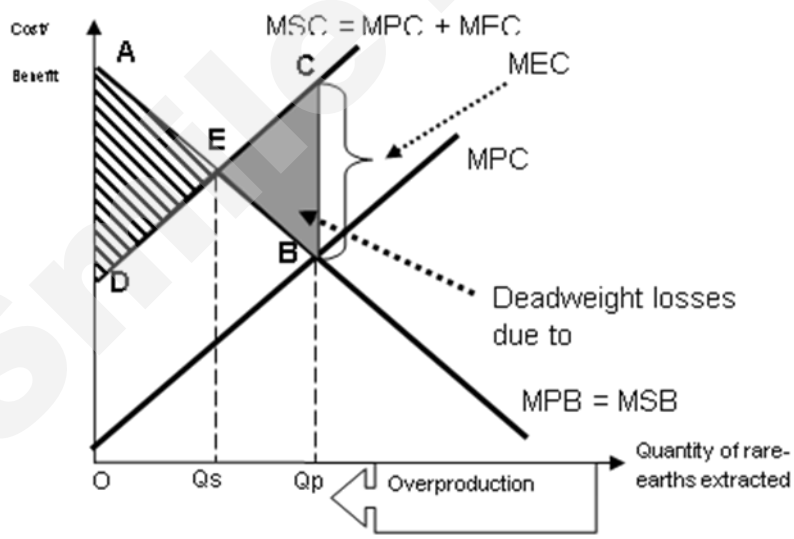
iii. What can be inferred from extract 1 about the rare earth metals prices in 2011? [2]

From extract 1: Demand for rare earth metals is expected to fall due to the recycling efforts to reuse the resource. Supply of rare earth metals is increasing with many countries also starting to produce them. Demand fall, supply increase, therefore price is predicted to fall in 2011.	1m for predicting price fall, 1 m for any reason.

(b) Explain why China adopted preferential policies for the producers of rare earth metals. [2]

With preferential policies, the producers will be able to produce the good with a lower opportunity cost, i.e. more productively efficient, and thus gain comparative advantage. This is beneficial to China as it will boost their trade, and attract FDI into the country to make use of these cheap resources.	2m
Or China wants to control the rare earth metals industry by being the world's largest producer of rare earth metals.	

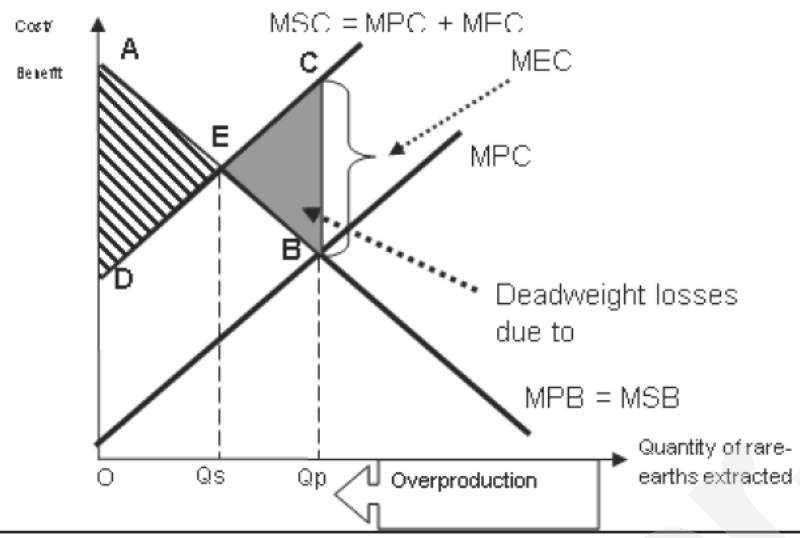
(c) i. With reference to the data, define and explain how negative externalities can arise in rare earth metals extraction. [4]

Negative externalities gives rise to external cost which arises when individual actions inflict costs upon a third party without the latter being compensated for. These are additional costs borne by people other than the producers or consumers directly involved in an economic activity.	1m for the definition of negative externalities
When producers extract rare earth metals, this process will impose an external cost on other people. For example, the waste from this extraction process contains high level of thorium which is radioactive(extract 2 para 2). This will lead to health problems like birth defects and leukemia, and lead to extra medical bills and costs on a third party. These external costs are not taken into account by the producers as they are only concerned with their own private costs and benefits from the extraction process. There is overallocation of resources to the extraction of rare earths metal with MSC > MPC. Diagram is optional but it is easier to show the negative externalities with the diagram. **Negative Externality in extraction of rare-earths metal**  	2m for explaining clearly what the external costs are using examples from the extract. 1m for describing MSC > MPC

ii. As a consultant economist, what options would you present to the Malaysian government for responding to the alleged negative externalities of rare earth metals extraction, and what would you recommend? Justify your answer. [8]

Show the diagram that reflects the negative externality in rare earth metals production.	

Negative Externality in extraction of rare-earths metal



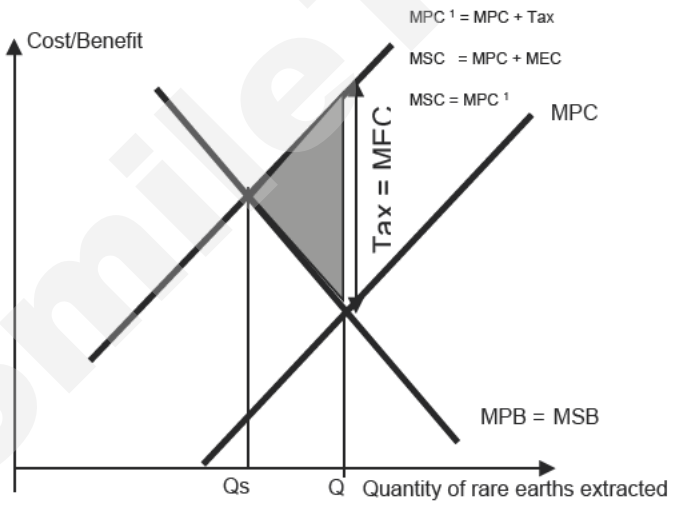
Goods that emit negative externalities in production would always be produced beyond the socially optimal level because of the presence of a deadweight loss (shaded area). As such any intervention devised to ensure that production occurs at the socially optimal level would internalise this externality. Several strategies that can do this are discussed below: -

At least 2 options. 1 compulsory tax option.

Each policy should be explained in detail with evaluative comments.

Conclusion and judgment (2m)

Option1: Tax on production



Imposition of Indirect Tax

The government may adopt the fiscal policy tool such as indirect tax to correct negative externalities. It might force firms to pay a fee or indirect tax on each unit of quantity produced corresponding to the MEC they exert on society (vertical MPC-MSC distance at Q).

An indirect tax charge on each unit of production has the same effect as an increase in the costs of production to the firms causing the externality. If this tax accurately reflects the MEC, firms in effect now have to pay for the use of (and harm caused to) the environment and their MPC will now coincide with the MSC.

Thus, the production cost of the firm now rises to MPC^1. The externality has then been 'internalised' i.e. taken into account by the firms in decision-making. As a result (of the decision-making adjustment), at output Q, MPC^1>MPB (and MSC>MSB), the firm would maximise its net private benefit if adjustments were made to re-establish private equilibrium (MPC^1=MPB) – until the point where the deadweight loss to society ceases to exist and net social benefit is also maximised (ie. output where MPC^1=MPB=MSC=MSB). With reference to Figure 3, the quantity being produced after the imposition (and internalisation) of the indirect tax now corresponds to the socially optimal level, Qs

Evaluation: Using taxation as an incentive to reduce or internalise the externality could be rather cumbersome, tedious and administratively costly. Furthermore the external costs incurred, is sometimes difficult to measure accurately. Under-taxation will not completely eliminate the deadweight loss to society and over taxation will lead to deadweight loss being created.

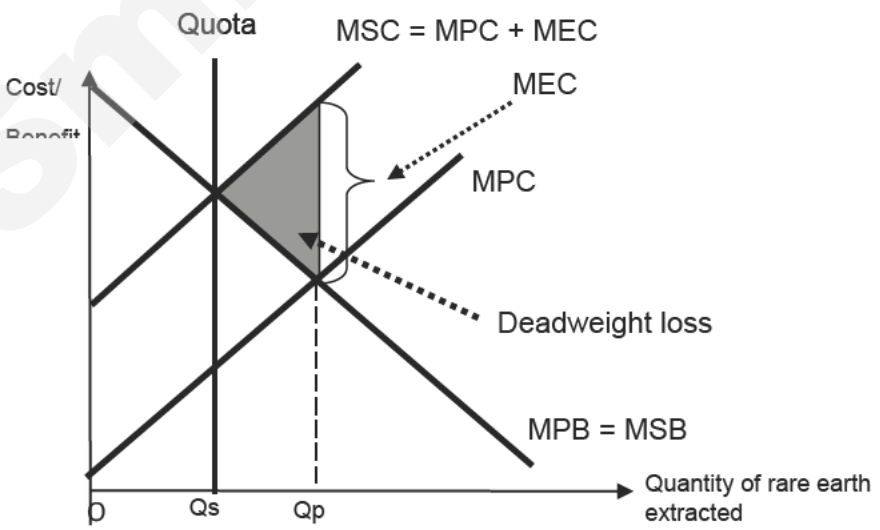
<u>Option 2: Legislation/Regulation</u>

These can take on various forms:

- minimum emission standards,
- maximum quantity extracted/sold,
- regulations governing production: Having more restrictions and rules on the production of rare earth metals.

All these are forms of command or control policies that have an effect on the market.

Imposition of a production Quota (Legal Limit)



Quantity Restrictions

One way the Malaysian government chose to reduce production is to impose a production quota equal to Qs on the quantity extracted

(assuming Qs is also the socially optimal level). With reference to the figure, if a quota is imposed, firms would have no choice but to limit the supply to Qs instead of Qp and the deadweight loss (shaded area) is eliminated. Evaluation: It incurs a compliance cost. The penalties for non-compliance must be sufficiently harsh and inspections must be sufficiently frequent and rigorous for the regulation to be an efficient means to reduce external costs. This however, implies the use of additional scarce resources which may pose a strain on the efficient resource allocation in other markets. Option 3: Permits to extract. Option 4 Total ban on production The Malaysian government can also ban extraction of rare earth metals and this will totally remove the externalities that arise. Evaluation: Due to a total ban, the loss in net social benefit could be bigger than the removal of the dead weight loss due to the externality. Option 5: Relocation to a place not near populated areas / not near residences.	
Recommended Policy: Malaysian government can consider tax on production together with regulations on location as they are relatively easier to administer and less costly to maintain, compared to quotas. In addition, tax will generate revenue for the Malaysian government and these could be used to cover any extra expenses used to regulate this industry. The total ban is not recommended as the loss in foreign direct investments is a greater loss than the dead weight loss from the externality.	

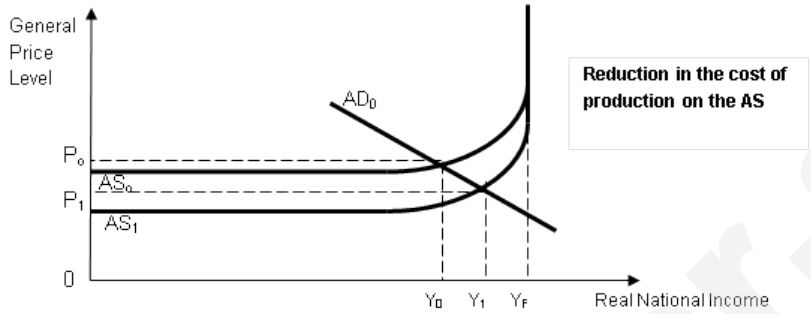
L1	Well explained one option, or 2 vaguely explained options. No diagrammatic illustrations	1-3
L2	At least 2 options. 1 must be a tax option. Each policy should be explained in detail. Must have at least one diagrammatic illustration.	4-6
E1	Clear judgement and justification of judgement made with proper conclusion	1-2

(d) China can only benefit from the implementation of export restrictions on rare earth metals. Discuss. [8]

This question requires a 2 sided approach to discuss the benefits and costs on China. Briefly describe how export restrictions work	
Thesis statement: China will benefit from the implementation of export restrictions on rare earth metals. Body 1: “intended to promote the development of domestic	3m for thesis

downstream industries, especially those engaged in high technology and green technology industries, by ensuring their access to adequate and low-cost supplies of rare earths." Extract 3
Elaborate and explain further

This will generally reduce the cost of production and increase the Aggregate supply. This can be show on the diagram where the SRAS shifts downward.



Impact on
Income: Rise in real national Income
Employment: As Y0 increase to Y1, there is more employment of resources on the economy, this adds on a positive effect on the economy.
Prices: Due to the increase in Aggregate Supply, the general price level decreased from P0 to P1. This cools down the economy and ensures prices remains fairly stable.

Body 2: "China's rare earth export policies are intended to induce foreign rare earth users to move their operations to China, and subsequently, to transfer technology to Chinese firms. This would aid to increase the productive capacity of China." Extract 3
Elaborate and explain further

This will cause the productive capacity to increase, thereby an increase in the Aggregate Supply. The LRAS will shift to the right.

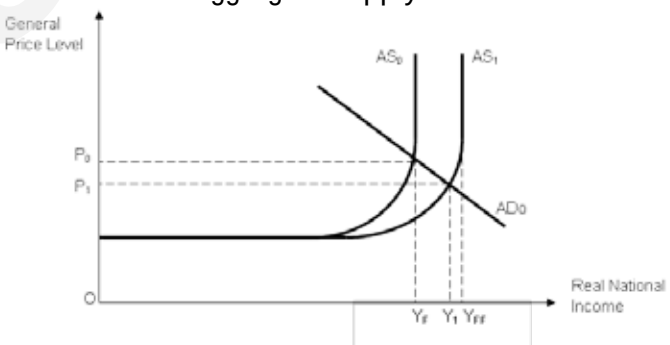


Figure 3: Increase in LRAS and Its Effects on Price and Income and Full Employment Level of National Income

Explain effects on Y, E, P

Anti-Thesis: China will not benefit from the implementation of	3m for anti-

export restrictions on rare earth metals. Body 3: In the short run, export restrictions have adverse effects on the Aggregate Demand. AD will rise slower, as exports of rare earth metals is regulated, thereby affecting the overall exports revenue of China. Diagram to show. In the long run, Japan, and other countries decrease demand due to methods to recycle rare earth metals from old electronic appliances, and used car batteries etc. Extract 1. Also, Supply will rise as there are other countries extracting rare earth metals too. Extract 1. This will hurt the China economy in the long run as exports will fall significantly. Body 4: Strain bilateral relationship with other countries. Volume of world trade, employment and incomes may fall. Export restrictions brings about retaliation from countries who are affected. Prices of rare earth metals would also rise. This leads to a reduction in the volume of world trade, employment and incomes. This may even result in worldwide depression.	thesis
Evaluation and Conclusion: As China wants to adopt a fast and strong economic growth, their policies would be aligned to achieving that. Moreover, with the huge benefits that can arise on the aggregate supply of China, the benefits arising from this export restrictions will greatly outweigh the costs incurred. However, in the longer run, there could be adverse effects due to decrease in demand, and increase in world (ex China) supply of rare earth metals.	Students need to form their own judgment and conclude accordingly, with justification (2m)

L1	One sided argument with little or no discussion on the possible disadvantages of export restrictions.	1-3
L2	Balanced argument with a clear development of the possible benefits and disadvantages of the export restrictions.	4-6
E1	Clear judgement and justification of judgement made with proper conclusion	1-2

2013 H1 Prelim CSQ 2 Suggested Answers

Extract 4: Slowing down of the BRIC

Brazil, Russia, India and China, was acronymed into the BRIC in 2001 by Jim O'Neill, an investment banker from Goldman Sachs. In 2007 China's economy expanded by an eye-popping 14.2%. India managed 10.1% growth, Russia 8.5%, and Brazil 6.1%. The IMF now reckons China will grow by just 7.8% in 2013, India by 5.6%, and Russia and Brazil by 2.5%. So, what is ailing the BRIC and other emerging markets?

Firstly, the idea that emerging-market economies could fully decouple from economic weakness in advanced economies was far-fetched: recession in the eurozone, near-recession in the United Kingdom and Japan in 2011-2012, and slow economic growth in the United States were always likely to affect emerging-market performance negatively – via trade, financial links, and investor confidence.

Secondly, and most recent, factor is the US Federal Reserve's signals that it might end its policy of quantitative easing earlier than expected, and its hints of an eventual exit from zero interest rates. The era of cheap or zero-interest money that led to a wall of liquidity chasing high yields and assets – equities, bonds, currencies, and commodities – in emerging markets is drawing to a close.

These countries share other weaknesses as well: excessive fiscal deficits, external deficits, above-target inflation, and stability risk (reflected not only in the recent political turmoil in Brazil but also in India's political and electoral uncertainties). Thus, emerging economies with large twin deficits and other macroeconomic fragilities may experience further downward pressure on their growth rates.

Adapted from various sources

Table 1: BRIC's in 2011

Indicator – (%)	Brazil	Russia	India	China
Real GDP Growth	2.7	4.3	7.2	9.2
Inflation	6.6	8.4	8.6	5.4
Unemployment	6.0	6.5	9.8	4.0
Investment/GDP	20.6	23.2	34.4	48.3
Saving/GDP	18.4	28.6	31.6	51.0
Current Account/GDP	-2.1	5.5	-2.8	2.8
Budget Balance /GDP	-2.6	1.6	-8.7	-1.2

Source: The Economist, 29th September 2012

Extract 5: Rupee fall may have triggered inflation, but it also offers a way out of industrial decline

Every dark cloud has a silver lining. Nowhere is this saying more apt than in the case of the falling rupee. It has raised fears of a spike in already high inflation rates and decline in foreign investment flows. But it has simultaneously opened up new possibilities of boosting exports, making India's economy more competitive and aiding a manufacturing revolution. The opportunity offered by the rupee depreciation can be substantial, given that labour costs in China have risen sharply.

Current trends have already made India the cheapest source of auto components. Important industries that can leverage these trends include automobiles, IT, engineering, metals, pharmaceuticals, chemicals, textiles, leather and sports goods. Sustained growth of labour-intensive manufactured products offer great potential for absorbing the growing numbers of workers added to the labour force each year.

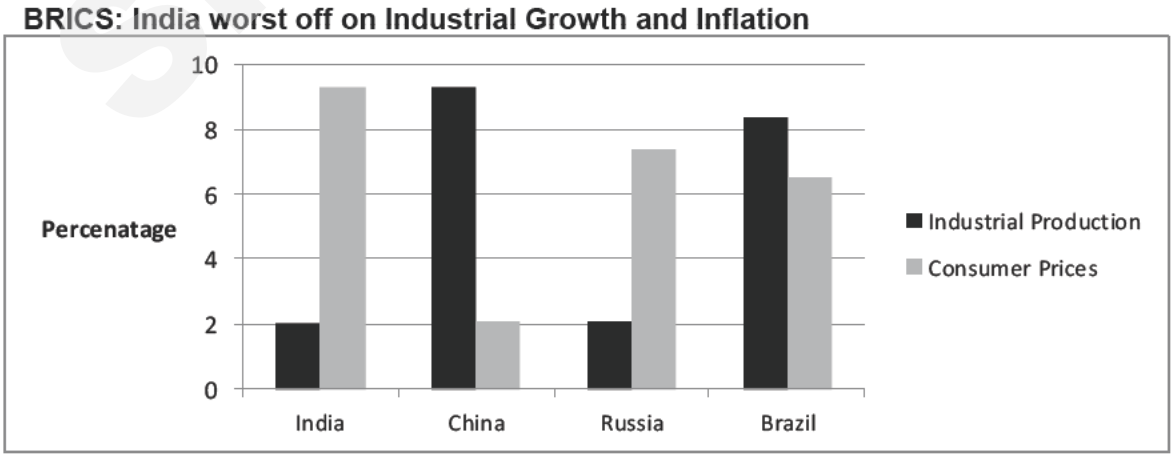
The rupee, which has been hurt by a record current-account deficit, has sunk 7.4 percent against the dollar in 2013. In July 2013, India stepped up efforts to help the rupee after its plunge to a record low. The RBI (Reserved Bank of India, India's Central Bank) raised bank rates by 2 percentage points, and plans to drain 120 billion rupees ($2 billion) through open market sales of government bonds. These actions of the RBI will lead to an increase in interest rates.

Finance Minister, Palaniappan Chidambaram, told reporters that "these measures in no way affect our commitment to growth. Measures are taken to quell excessive speculation and reduce volatility and stabilize the rupee."

Prasanna Ananthasubramanian, an economist at ICICI Securities Primary Dealership Ltd. in Mumbai exclaimed that "it's quite surprising that the central bank has used these measures to support the rupee at a time when the economy is in such a bad state." India's economy expanded 5 percent in the fiscal year ended March, the slowest since 2003, hurt by moderating investment, easing domestic demand and subdued exports.

Source: India Times, Aug 2013

Figure 1: The BRIC Growth and Inflation rate in March 2013



Adapted from The Economist and The Guardian 2012

Extract 6: FDI no panacea for ailing economy

In a bid to shore up India's flagging economy, the government on Tuesday announced opening up foreign direct investment (FDI) in 13 sectors, including petrol and natural gas, insurance, defence production and telecom. The truth is that FDI easing only makes it easier for foreign investors to put their money in India. It doesn't change the fundamentals that determine if they should put their money in India.

A liberal FDI regime can yield results only if domestic economy is revived. The investors, including Indian firms that have been growing in India for decades, are reluctant to risk money due to uncertainties of doing business in India. That Korean steel giant Posco walked out of the biggest FDI deal in Karnataka the day the government announced liberalization of FDI rules is a grim reflection of ground realities. To create an enabling investment atmosphere, the government must remove bureaucratic hurdles, adopt stable fiscal policies and a transparent tax regime. It should allow level playing field for Indian industry and fix a lock-in period for FDI so that money doesn't flow back easily.

Source: The New Indian Express, 18th July 2013

(a) Using Table 1, summarise the economic performance of India compared to that of China in 2011. [2]

(b) (i) Using a diagram, explain why the Indian Rupee appreciated after the Indian government raise the interest rates. [2]

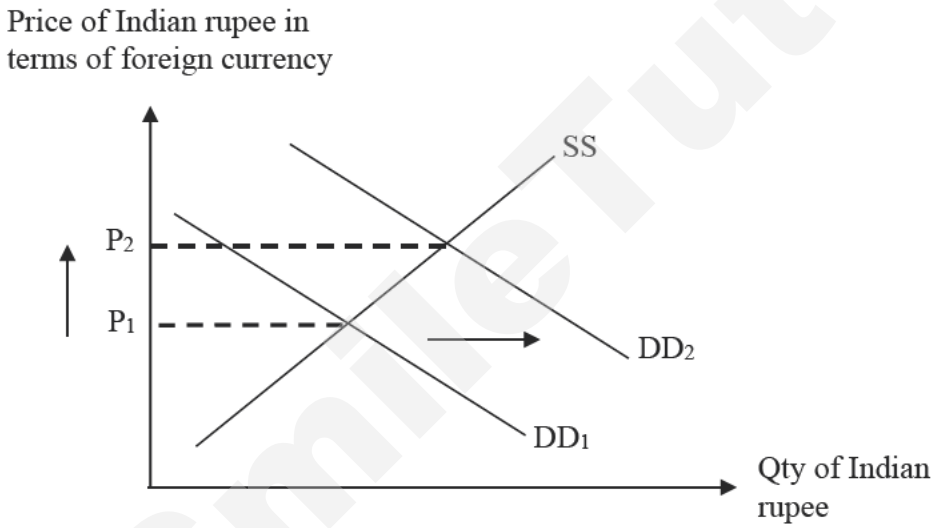
(ii) Explain how this rise in the Indian rupee might affect prices of goods and services in India. [2]

(c) (i) Explain what is meant by the term 'slower growth'. [2]

(ii) Using AS/AD analysis, explain two evidences contained in the data that cause growth rate of BRIC to slow down in the near future. [6]

(d) With reference to the data where appropriate, assess whether on balance the Indian economy would benefit from its 'liberal FDI regime'. [8]

(e) The finance minister of India stated that raising bank rates and having open market sales have 'no way affect our commitment to growth'. Discuss the validity of this statement. [8]

a	**Using Table 1, summarise the economic performance of India compared to that of China in 2011**	**2m**
	In 2011, both India's and China's real GDP growth was positive but China's GDP was growing at a higher rate than that of India. India's unemployment rate was at 8.6% which was more than twice the rate of China's unemployment rate at 4%. **[1m]** **Note: Use of other indicators such as the inflation rate or the current balance is acceptable.** China performed better than India in both aspects (real GDP and unemployment rate). **[1m]**	
bi	**Using a diagram, explain why the Indian rupee appreciated after the Indian government raise the interest rates.**	**2m**
	India govt Raise i/r → Hot money flows into India to get a better return →DD for Indian rupee rises (as shown in the figure below) → Indian Rupee appreciated **[1m]** Explanation indicating a fall in supply of Indian Rupee is also accepted. With rising interest rates in India, Indians would cut down their demand for foreign currency (reducing supply of Indian rupee) to take advantage of the relatively higher interest rates in India.  **Diagram** **[1m]**	
bii	**Explain how this rise in the Indian rupee might affect prices of goods and services in India.**	**2m**
	(Prices of goods and services in India are indicated by the GPL in India. Hence question requires students to link the appreciation of the Indian Rupee to changes in GPL. Note that GPL is determined by AS and AD) A rise in the Indian rupee will lead to a decrease in the price of India's imports (in terms of Indian rupee) and increase the price of India's exports (in terms of foreign currency). Prices of imported goods and services in Indian Rupee will be cheaper due to the stronger Rupee. This may lead to a fall in the price of imported factor inputs. The falling Cost of production leads to a rise in AS (Yf remaining unchanged). Hence, prices of goods and services in India will fall. **[2m]** **OR** Prices of exported goods and services in foreign currency will be more expensive due to the stronger Rupee. A rise in the price of India's exports in terms of foreign currency will lead to a	

	fall in quantity demanded of exports and hence, export revenue will fall. This will cause a fall in AD which will lead to GPL falling. **[2m]**	
ci	Explain what is meant by the term 'downward pressure on their (BRIC) growth rates'.	**2m**
	'downward pressure on their (BRIC) growth rates' implies falling growth rates and not necessarily negative growth rates. The implication of falling growth rates is GDP is increasing **(1m)** at a decreasing rate **(1m)**.	
cii	Using AS/AD analysis, explain two evidences contained in the data that could cause downward pressure on the growth rates of the BRIC in the near future.	**6m**
	Evidence 1: Recession in the eurozone, near-recession in the United Kingdom and Japan in 2011-2012 [3m] -Countries in Eurozone face recession à Falling income à Falling purchasing power and they will demand less of BRIC's exports **[1m]** -UK and Japan are at risk of entering into a recession à consumers are pessimistic of the future à may rather save then to spend à UK and Japan consumers spend less on imported goods and thus, they will demand less for BRIC's exports **[1m]** - BRIC's export revenue falls à (X-M) falls, ceteris paribus - AD will thus fall and this will lead to a fall in GDP which will cause growth rate of BRIC to slow down in 2013 *(downward pressure on their growth rates).* **[1m]** *Students can also make use of AD/AS diagram to explain the fall in AD leading to downward pressure on growth rates of the BRIC in the near future.* **Evidence 2: Excessive fiscal deficit [3m]** Fiscal Deficit à government's total expenditures exceed the revenue that it generates **[1m]** In order to finance its expenditure in the future or to reduce the excessive fiscal deficit, the government has to increase tax so as to raise revenue. **[1m]** Hence, an increase in tax (e.g. corporate and income tax) will lead to a fall in purchasing power and hence a fall in investment and consumption expenditure. AD will thus fall and this will lead to a fall in GDP which will cause growth rate of BRIC to slow down in 2013*(downward pressure on their growth rates).* **[1m]** *Students can also make use of AD/AS diagram to explain the fall in AD leading to downward pressure on growth rates of the BRIC in the near future.* *Note: Other evidences in Extract 4 e.g. quantitative easing in the US are also accepted.*	
d	**With reference to the data where appropriate, assess whether on balance the Indian economy would benefit from its 'liberal FDI regime'.**	**8m**
	<u>i) Explain briefly what is India's 'liberal FDI regime"</u> - Refers to the "opening up foreign direct investment (FDI) in 13 sectors, including petrol and natural gas, insurance, defence production and telecom" as mentioned in Extract 6. - This leads to liberalising laws and regulations governing FDI policy which "makes it easier for foreign investors" to set up and own companies in India. - The aim of this policy is to attract capital inflow to help boost India's "flagging economy". <u>ii) Indian economy COULD benefit from its 'liberal FDI regime' as it helps to achieve macroeconomic objectives</u> **a) Promote Economic Growth** - Increase in FDIs will increase I which will lead to increase in AD since AD= C+I G + (X-M).	

This means AD curve shift to the right from AD0 to AD1 and there will be increase in RNY from Y0 to Y1 and this will lead to actual growth in India.

- Increase in FDI could also lead to transfer of technology and skills, when a new MNC is introduced into the country, new equipment and foreigners would be coming along to train the locals on the operation of the new equipment and maybe better methods of production that could be more efficient in terms of resource allocation or resource usage. This would then convert into increase in productive capacity and this would then cause the LRAS to shift to the right from LRAS0 to LRAS1. This would cause the general price level to fall from P0 to P1 and the real national income to increase from Y0 to Y1. In addition, there is increase in full employment from Yf0 to Yf1 and there will be increase in potential growth. Thus, economic growth is promoted in India.

b) Increase Employment

- Increase in FDI will help generate employment as there will be an increase in production of goods and services when MNCS are set up in India. An increase in production of goods and services would mean that there is a need to employ more workers since labour is a derived demand. Thus, this leads to more jobs being created in India.

c) Improve BOP

- Increase in FDIs will lead to long term capital inflow which involves the purchase of real assets such as manufacturing plant and equipment. This will help improve capital account of India and improve India's BOP position.

<u>ii) Indian economy MAY NOT benefit from its 'liberal FDI regime' as there are **other factors** which will determine the decision of foreign investors to invest in India and thus FDIs may not increase much and there could be **negative effects** of a "liberal FDI regime"</u>

a) FDI may not increase much due to

i) Poor economic outlook in India

- India's poor economic performance as mentioned in Extract 5 where there is "falling rupee" and 'record current account deficit' due to falling exports would lead to "uncertainties of doing business in India' (Extract 6 para 2). As business spending in the private sector is guided by profits, generally the higher the expected returns on investments, the higher would be the investment levels. However, due to the problems faced by India's economy, there will be slower economic growth in India as India is expected to grow by only 5.6% in 2013 as compared to 10.1% in 2011. As such foreign investors may be pessimistic about India's future, i.e. it expects future demand for its goods and their prices to rise very slowly, and they are less inclined to invest. Thus, a liberal FDI policy will be effective "only if domestic economy is revived" as mentioned in Extract 6 para 2.

ii) Poor business environment

- Indian economy may not benefit from its liberal FDI regime if the government does not provide "enabling investment atmosphere" in India for the foreign investors. In India, there is still "bureaucratic hurdles", lack of "stable fiscal policies and a transparent tax regime" which are crucial to attract FDI. Foreign investors will have to worry about red tape and other bureaucratic inefficiencies when conducting business as there will be hassles in which administrative matters are handled. As such, this will slow down business operation, increase cost of production and affect profits earned by the foreign investors. Stable fiscal policies such as transparent tax regime and tax incentives are also

	important in attracting FDIs. Foreign investors will be more willing to invest if there are sound political infrastructure and policy-making procedures. **b) Negative impacts of high FDI** **i) Demand-pull inflation** - If India experiences excessive FDI, it may lead to rapid increase in AD and this may causes GPL to rise very quickly and the economy will be operating at full or close to full employment, leading to demand-pull inflation. **ii) Overly dependent on FDI** - There could be massive unemployment in the future if MNCs decide to pull their investment out of India which will lead to falling incomes for the locals. Thus, this will lead to fall in material standard of living as the Indian citizens will have now fall in purchasing power and they can consume less goods and services. **Note:** Other reasons such as possible consumer exploitation by giant MNCS or threatening of local jobs are also accepted. <u>iv) Evaluation: Take a stand on the extent of India benefiting form a 'liberal FDI regime'</u> - Indian economy would benefit from its 'liberal FDI regime' to a **limited extent** as foreign investors may not be attracted by such policy and thus FDIs will not increase significantly. Liberalizing FDI does not address the fundamental factors which will influence foreign investors in deciding whether to invest in India. It is not sufficient to rely only on a 'liberal FDI regime' to attract FDIs in India and boost its economy. In order to enjoy the economic benefits of the liberal FDI regime, the government must implement other supportive policies to attract FDIs as well as solve the domestic economic woes in India. Also, it is important to note that whether FDI policy is effective can also be influenced by external factors e.g. favorable changes in FDI policy elsewhere in other countries. Thus, there can be strong competition for FDIs from other emerging countries such as China and Brazil. Overall, India may experience some inflationary pressures in the short-run but India will have lower prices and enjoy other economic benefits in the long-run. **Marking Scheme**	
L2	Well-developed answer that thoroughly explains a two-sided answer of how India may or may not benefit from its 'liberal FDI regime'. Use of data to substantiate points.	**4-6**
L1	One-sided answer that focuses on either how India may or may not benefit from its 'liberal FDI regime' or two-sided answer that is sketchy or does not make reference to data provided.	**1-3**
E	A well-developed evaluative judgment on the extent of India benefiting form a 'liberal FDI regime'.	**1-2**

e	**The finance minister of India stated that contractionary monetary policy have 'no way affect(ed) our commitment to growth'. Discuss the validity of this statement.**	**8m**
	<u>i) Explain briefly what the statement is about.</u> - It means that adopting contractionary monetary policy by the central bank such as raising bank rates and having open market sales will not lead to fall in economic growth in India. - However, this will contradict with another view by an economist that is presented in Extract 5 which is that adopting contractionary monetary policy is "quite surprising" " when the economy is in such a bad shape", implying that the India's economic growth will be affected by the RBI's policy.	

ii) Thesis: Adopting contractionary monetary policy will **not affect economic growth a**s achieving stable exchange rates and prices will help promote economic growth

a) Promote exchange rate stability

- Adopting a contractionary monetary will "help quell excessive speculation and reduce volatility and stabilize the rupee" as stated in Extract 5 para 4. Having stable exchange rates is necessary to facilitate international trade and foreign direct investment. Falling exchange rates may signal to investors that the country is weakening this will discourage investment to take place in India. As mentioned in Extract 5 para 4, the rupee has been "plunged to "record low". As such, this will have negative impact on economic growth as investment is necessary to help boost India's economy. In addition, excessive speculation will be adverse for India's economy as it will lead to volatility and instability in the foreign exchange rate and this will affect trade and investment as well. It will be difficult to make business decisions due to excessive fluctuations in the exchange rate. Thus, there will be low investment as well which will affect economic growth.

b) Promote price stability

- In addition, falling Indian rupee will "raise fears of a spike in already high inflation rates" as stated in Extract 5 para 1. This is also supported by Figure 3 which shows that India have relatively high inflation rates in March 2013 which is close to 10% and it is the highest among the BRIC. A weaker exchange rate will mean that the price of imported raw materials and other factor inputs is relative more expensive and this will raise the cost of production of domestic firms who use imported sources. This will lead to fall in short-run aggregate supply and upward shift of SRAS from SRAS0 to SRAS1 (Yf Unchanged). This means that the real national income falls from Y0 to Y1 and GPL will rise from Po to P1. Thus, it is necessary for the government to step up efforts to help strengthen the rupee to ensure that India does not suffer from cost-push inflation as well as slower economic growth.

iii) Anti-thesis: Adopting contractionary monetary policy will affect economic growth as there will be fall in AD

a) Reduce consumption and investment

- Contractionary monetary policy will lead to fall in consumption and investment and fall in AD. Raising banks rates and having open market sales will lead to fall in money supply and rise in interest rates. When the central bank in India sells securities in the open market or increase the bank rate on loans to commercial banks, it will have the effect of lowering money. This fall in money supply (from M0 to M1) raises the interest rates (from R0 to R1). With higher interest rates, cost of borrowing rises and this reduces profitability, resulting in a fall in Investments. Furthermore, higher interest rates discourage consumption (C) as consumers may now choose to save more instead to earn the higher interest. The fall in I and C reduces the equilibrium level of national income (from Y0 to Y1). The contractionary monetary policy also tends to lower the general price level (from P0 to P1) as AD falls (from AD0 to AD1). Thus, contractionary monetary policy will lower economic growth in the country.

b) Reduce export competitiveness

- In addition, there are economic benefits if the government does not tighten its monetary policy and allows the Indian rupee to depreciate rather than appreciate. As mentioned in Extract 5 para 1, the falling rupee will open up "new possibilities of boosting exports, making India's economy more competitive". A weaker exchange rate would mean that

	exports are relatively cheaper and foreign households will buy more exports. Assuming that demand for exports is price elastic, it will lead to more than proportionate increase in quantity demanded for exports and export revenue will increase. - An increase in export revenue will mean AD will increase and AD curve will shift to the right from AD0 to AD1 and real national income will rise from Y0 to Y1. Thus, having a stronger exchange rate will mean that this will reduce India's export competitiveness which will affect its economic growth. - <u>iv: Conclusion: Take a stand on whether the statement is valid</u> Essentially, whether raising bank rates and having open market sales will affect India's commitment to economic growth will depend on the time period. In the short run, it is likely to see that there is a trade-off as having stable exchange rates and prices will be at the expense of slower economic growth rates. However, this short-term loss could be offset by long term gains and stability which is important to achieve sustained economic growth in the country. However, it is important for the government to adopt other policies such as supply side policies to increase economic growth in India besides stabilisng the exchange rates. **Marking Scheme**	
L2	Well-developed and balanced answer that thoroughly explains why the statement is valid or invalid.	**4-6**
L1	One-sided answer that focuses on either the statement is valid or invalid or two-sided answer that is sketchy or does not make reference to data provided.	**1-3**
E	A well-developed evaluative judgment on the validity of the argument.	**1-2**

2013 NYJC H1 Prelim Suggested Answers to Essays

3. From June 1st 2013, there will be a cap imposed on the number of times financially vulnerable patrons visit a casino each month. Administered by the NCPG, the Casino Visit limit will complement the current Casino Exclusion system by providing another option for individuals and their families to control gambling habits.

– Adapted from Channel News Asia 28th May 2013

a. Explain with examples, the factors affecting the demand for and supply of gambling services in Singapore. [10]

Synopsis: Candidates are to explain BOTH demand and supply factors that could affect the market for gambling services in Singapore. Please do note that the market for gambling services and the market for casinos are NOT the same. Candidates do not need to show the impact of the changes in the market as the question only requires an explanation of the factors thus just by stating the direction of the shift or movement along the Demand/ Supply curve would be sufficient. The demand and supply factors stated below are not exhaustive and any plausible and accurate explanation of the factors could also be accepted.

Possible Non-price Demand Factors:

(i) **Change in the income levels of people**: A RISE in affluence of the people in Singapore could lead to the demand for gambling services to increase. This is due to the fact that gambling services is a luxury service thus when people have a higher disposable income, they would consume more of it at all price levels. It would bring about a rightward shift of the demand curve since the rise in income levels is a non-price factor change.

(ii) **Change in the Government Policies**: An implementation of a new government policy to restrict the number of people entering the casino or any other gambling places could cause the Demand for gambling services to decrease. This could cause a leftward shift of the demand curve and it would mean that people would be demanding less of gambling services at all price levels.

Possible Demand Price Factor:

(i) **Change in the price of gambling services**: Due to a change in the cost of production of gambling services, it could cause a change in the price of gambling services. Assuming that the cost of production for gambling services were to increase, then there would be an upward movement along the demand curve.

Possible Non-price Supply Factors:

(i) **Change in price of factor inputs:** Due to a change in the cost of production, it could be seen that the supply of gambling services could be affected since the suppliers are now not able to produce as much gambling services. This would be a leftward shift of the SS curve. Example could be a possible increase in the wages for croupiers and also the price of plastic chips.

(ii) **Change in the number of gambling providers:** With an increase in the number of suppliers or gambling providers, it would cause a right shift of the SS curve. Though the number of legal casinos is controlled by the government, there are

still other illegal casinos around. Such as the increase in Casino cruises or illegal gambling dens.

Possible Supply Price Factors:

(i) **Change in the price of gambling services**: Due to any changes in the above demand non-price factors, it could affect the price of gambling services in Singapore. This could bring about a upwards or downwards movement along the SS curve.

Level	Descriptor	Marks
L3	Clear explanation of **BOTH** demand and supply factors with contextual examples. Accurate description includes the correct identifying of a shift or movement along the demand and supply curves. Any 2 demand AND 2 supply factors (both price and non-price factor allowed)	7-10
L2	Clear explanation with examples of Demand **OR** Supply factors with contextual examples. Or candidates who explained BOTH demand and supply factors with examples that are not in context or a weak explanation	5-6
L1	Mere listing of Demand and/or Supply factors	1-4

b. Discuss the view that this new policy of imposing a cap on the number of visits for financially vulnerable patrons is the best option available to tackle the problem of gambling addiction in Singapore. [15]

Synopsis: Candidates are required to examine how the new policy (ie a quota) set on the financially vulnerable people would useful. In this case, the students would first have to show how there is a market failure resulting from gambling on the financially vulnerable (hence the x-axis would require it to be for the financially vulnerable). After showing how the quota would be useful, the candidates would have to show the limitations and also the introduction of other policies that can be implemented. Limitations of the other policies and also a conclusion would be required.

Introduction

- Identify and define POSSIBLE sources of market failure: Demerit good and Negative externalities from consumption. (EITHER ONE will do)

Body

- Explain one source of market failure in the market for casinos
- Demerit Good: Explain why governments view casino gambling as a demerit good.
- In the free market, there will be an over-consumption of casino gambling as consumers may be unaware of the negative externalities associated with its consumption.
- Identify and explain that in the case of casino gambling:
- Private benefit (MPB): refers to the enjoyment, the excitement experienced of betting against the odds in the hope of winning, a reward that an individual can give oneself as often and as long as one likes.
- Private cost (MPC): refers to the cost of casino gaming chips needed to play the various casino games available including slot machines and table games such as roulette and baccarat, transportation and accommodation costs. Medical costs to

treat conditions related to physical health (eg. gastro-intestinal distress) as well as for psychiatric conditions (eg. preoccupation with casino gambling, feeling of loss of self-control).

- External Cost (MEC): refers to the cost imposed on third parties to play the various casino games available including family members and neighbours: the continued and increased frequency of casino gambling can cause hardship (emotional, physical and mental) to the family members and neighbours of the gambler.

- Figure 1 illustrates the divergence between marginal private cost and marginal social cost.

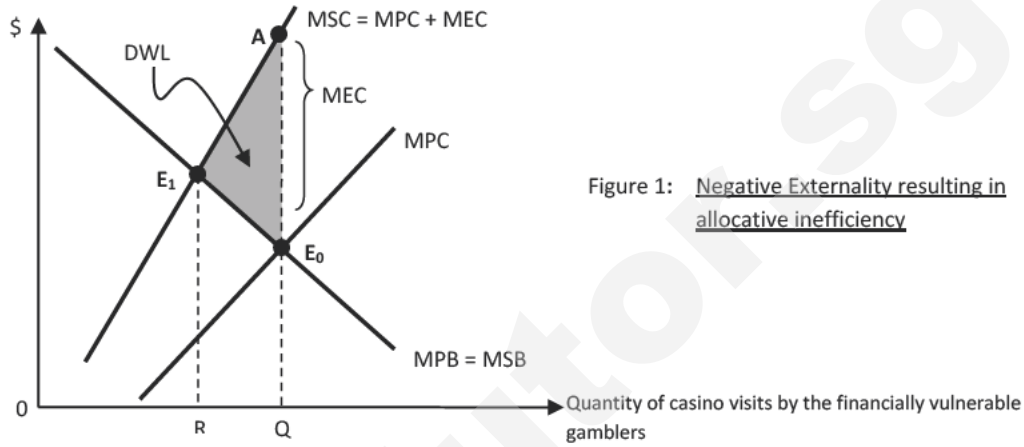


Figure 1: Negative Externality resulting in allocative inefficiency

Next, the student would have to show how the cap on the number of visits by financially vulnerable people could help to correct the market failure.

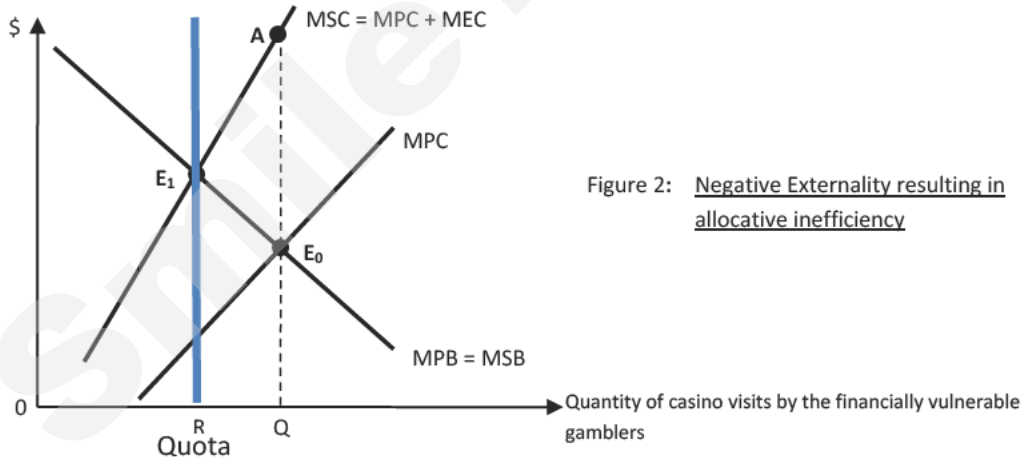


Figure 2: Negative Externality resulting in allocative inefficiency

Thus with the implementation of the quota, if the government were to be able to accurately place the quota at the quantity R, then the government would be able to force the financially vulnerable consumers to consume at where the socially optimal output is. The deadweight loss would also be eliminated.

Limitations of this policy are to be addressed as well in the answer.

(i) These limitations could be the quota not accurately set to the socially optimal level could either result in deadweight loss still present or the deadweight loss incurred due to loss of benefits from under-consumption.

(ii) Problem with the classification of the financially vulnerable people (in this case, the income bracket of the people to be deemed as financially vulnerable).

(iii) Not going to be well supported by people who are affected by this policy (government might lose popularity)

(iv) These people might go overseas to gamble instead. So if the government objective was to reduce gambling among the people, it was only able to reduce gambling IN Singapore but not elsewhere.

Thus, the candidate should examine the objective of the government. It is stated in the question that the policies should be gauged based on tackling the gambling addiction in Singapore. Hence the evaluation should be concerned about the gambling problem in Singapore, and not a specific target group only.

Current policies:

1) The forming of the NCPG (National Council on Problem Gambling) and Helplines and Help services
   Evaluation: A regulatory board to help implement policies for gamblers to seek help and provide assistance and resources for them.
   Limitation: It is still deemed to be passive and thus would either require the family members of the gamblers or the gamblers themselves to identify their problem before help can be rendered.

2) **Casino exclusion services**
   Evaluation: A ban is placed on the people who were either recommended by family members or by the gamblers themselves. Prevention of entry is imposed on the person identified thus would effectively stop the gambling addiction in Singapore for them. Limitations: It would be an issue of gambling in Singapore legal casinos that might be curbed but it is not possible to stop these people from gambling on casino cruises or illegal gambling dens. It is also only effective if the people at risk are accurately identified and these people are active in seeking help. There might be people who are at risk but tries to hide their addiction.

3) **$100 Casino entry levy**
   Evaluation: The $100 levy would be effective in increasing the marginal private cost of gambling for the gamblers. Thus for the people who are less affluent, the $100 could effectively deter them from gambling in the casinos in Singapore.
   Limitations: However, with the increasing affluence of the people in Singapore, the $100 might be deemed to be a small proportion of the income and also because gambling is an addiction, people may not be deterred by this policy.

4) **Education and Media Awareness**
   Evaluation: The root cause of gambling addiction is not curbed by the above policies. With education and advertisements, the children and people might be able to see the negative impacts that gambling might bring to their loved ones and themselves. Hopefully they would be more aware of these negative externalities and thus either quit gambling or reduce gambling.
   Limitations: It is a long term measure where the outcome would not be certain since it would depend on whether they are willing to accept the information and quit their addiction. Cost of the advertisements would also be high and this could mean opportunity costs for the government.

Conclusion would be that there are no "best" policies and in the preamble, it was already stated that the policies are meant to complement each other. Thus a combination of the policies used together would be able to cover more ground and hopefully have the greatest impact.

Mark Scheme

Level	Description	Marks
L3	For an answer that demonstrates **excellent knowledge about how the imposition of a cap works and** that the imposition of this new policy may not be the best solution to alleviate the social impact of casino gambling. At least 2 alternative policies should be discussed. **Excellent development and rigour** in economic analysis. Excellent knowledge when applying to the Singapore context with **good illustrative examples**	9-11
L2	For an answer that demonstrates **good knowledge** that the imposition of a cap may not be the best solution to alleviate the social impact of casino gambling. **Some development and rigour** in economic analysis. Good attempt in suggesting with elaboration on the use of at least 1 other policy. Evidence of sound knowledge when applying to the Singapore context. Max 7 marks if only one other policy is suggested and explained. Max 8 marks if two policies explained but both are in the similar category.	4-8
L1	For an answer that demonstrates **limited knowledge** that the imposition of a cap may not be the best solution to alleviate the social impact of casino gambling. Answer **lacks or shows limited application to Singapore context**. Some **conceptual errors** in the explanation, showing lack of understanding of the economic concepts.	1-3
Evaluation		**Marks**
E2	For a well-reasoned judgment on why the imposition of a cap may not be the best solution in alleviating the social impact of casino gambling,	3-4
E1	For a mainly unexplained judgment on whether the imposition of a cap is the best solution to alleviate the social impact of casino gambling.	1-2

2013 NYJC H1 Prelim Suggested Answers to Essays

4 (a) Explain the likely causes of an appreciation of a country's exchange rate. [10]

(b) Assess the possible impact of an appreciation of a country's exchange rate on its economy. [15]

Synopsis

The question is of the rather basic 'causes' and 'effects' type. It requires a good explanation of each of the causes of an appreciation of a country's e-rate. The assumption of a 'managed float' environment should be explicitly (or implicitly) made. Although not specifically asked for, some judgment should be made w.r.t. the most important or most likely cause.

In assessing the impact, the scope and limits of the issues addressed should be made clear. The impact could be limited to the KEIs (inflation, unemployment, growth, BoP) and both short term and long term effects should be examined. A judgment should be made w.r.t. the overall positive or negative effect.

Part a)

Intro	•Define exchange rates. •Outline how e-rates are determined.
(Px & Pm)	•Show how changes in Px affects the demand for a currency. •Sow how changes in Pm affects the supply of a currency.
(rel GPL)	•GPL# (UK) > GPL#(USA) a [Pr gds (UK)/ Pr gds (USA)] # a Dd £$ a (US$/£) $
Relative Income	•When a c'ty's income #v a v its Dm# a SScurrency# a (US$/£) $
Interest rates	• relative i/r a capital flow a Dd & SS (of currency) a Δ e-rates
Other causes	•Govt Expenditure (e.g. military expenditures) •Govt Policy (E-rate management Policies) •Govt Borrowing (incurring or servicing of external debs)
Conclusion	•Comment on the relative importance of these causes and the conditions underwhich their impact would be greatest.

Marking Scheme

Part a)

L1	Shows some knowledge of the causes of an appreciation. Unable to explain the mechanisms through which the causes work.	1-3m
L2	Shows an appreciation of how e-rates are determined. Understands the major causes of an appreciation. Is able to explain (not always accurately) the mechanisms through which the causes work. A good theoretical answer.	4-6m
L3	Is able to apply the explanations of the causes to contexts of his/her choosing. Is able to evaluate the relative importance of the different causes explained.	7-10m

Part b)

Intro	• Outline the indicators examined, growth, unemployment , inflation & BoP
Impact on AD	• (US$/£)↑ ⇨ (Px/Pm)↑ ⇨ Vx ↑ (Magnitude of the increase would depend on PEDx) , Vm↓ (PEDm would determine if Vm acually increases or decreases, assuming that PEDm>1)⇨ AD↑ • (US$/£)↑ ⇨ FDI↓ ⇨ AD↓ (NOTE: the effect of an rising e-rate and a high e-rate is very diff.) • (US$/£)↑ ⇨ (Px/Pm)↑ ⇨ Vx ↑ , Vm↓ ⇨ AD↑
Impact on AS	• (US$/£)↑ ⇨ Pr Md Raw mat↓ ⇨ CoP↓ ⇨ AS ↑ (shifts downward) [note: productive capacity is not affected) • (US$/£)↑ steady ⇨ Investor confidence ↑ ⇨ FDI ↑ ⇨ AS ↑ (shifts rightward in the LR)
O'all impact	• Current state of the economy • Openness of the economy
Conclusion	• Assessment of the possible impacts. • Most or least impactful.

L1	Has some knowledge of the impacts of an appreciation on the KEIs Largely unexplained links statements rather than explains.	1-4m
L2	Is able to identify key indicators to examine; Inflation, Unemployment, Growth & BoP. Explains, but not always accurately, the mechanism (channels) through which an appreciation impacts each of the indicators. Makes an assessment of the relative impacts, but is largely theoretical without much application to any contexts.	5-7m
L3	Clearly explains the mechanism through which an appreciation impacts each of the indicators. Makes an assessment of the impacts in different contexts.	8-11m
E1	Comes to a judgment w.r.t. the most important impact. (Conditional) OR is ranks the impacts in some form or other.	1-2m
E2	The judgment is supported by good reasoned analysis.	3-4m

PRELIM EXAM 2013

Economics JC2
H2 (9732)

PAPER 1

Monday
16 September 2013
14:00 – 16:15

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.

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 market for palm oil

Table 1: Palm oil in selected economies (million tonnes)

	Production		Consumption	
	2011/12	2012/13	2011/12	2012/13
Indonesia	25.9	31	7.1	2.9
Malaysia	18.2	19	3.0	2.1
Thailand	1.5	2.1	1.1	1.8
China	0	0	5.8	2.3
Nigeria	0.8	0.9	1.3	1.4
World Total	50.7	52	48.9	49

Source: United States, Department of Agriculture

Extract 1: Commodity Oils and Fats - Palm Oil

Palm oil is the vegetable oil produced in largest amount having pushed soybean oil into second place in 2004/05. Palm is generally the cheapest commodity vegetable oil and also the cheapest oil to produce and to refine. By reason of its availability and (relatively) low cost, it is an important component of the increasing intake of oils and fats in the developing world.

Malaysia and Indonesia are the dominant exporters of palm oil, exporting 91 percent and 70 percent, respectively, of the palm oil they produce. The major importing countries/regions are India, China and EU-27.

Palm oil is widely used in the food industry with, for example, palm olein used as a frying oil and palm stearin as hardstock in the production of spreads and cooking fats like cooking oil, margarine and shortening. In addition, palm oil is being used increasingly for non-food purposes.

Source: *James Hutton Institute, Scotland*, March 2013

Extract 2: Golden Agri-Resources Q2 earnings falls

Weaker palm oil prices sent earnings at Golden Agri-Resources down for the second consecutive quarter. Golden Agri said the lower second-quarter earnings were mainly due to a 25 per cent decline in average crude palm oil market prices.

Chief executive Franky Widjaja said in a statement: "Investing in the palm oil business is a long-term strategy and we will continuously strive to expand the size of our planted area and our downstream operations.

"As part of our value creation efforts, we also regularly evaluate acquisition opportunities."

The company said it will continue expanding its plantation area and milling capacity, as well as build up its distribution and logistics to reach more users.

Source: The Straits Times, August 2013

Extract 3: Slash-and-burn a way of life on Indonesia's Sumatra

While the blazes fuelled by pronounced drier weather last month cloaked Singapore and Malaysia in toxic haze and provoked howls of outrage from environmental groups, many on Sumatra, from plantation workers to villagers in Palalawan, Indonesia, are die-hard supporters of using fires to clear land.

It is the quickest and cheapest method of clearance for cultivation -- far less expensive than using mechanical excavators or bulldozers -- and the ash from fires is also a natural fertilizer.

The common acceptance of slash-and-burn clearances among smallholders suggests that blame is widely spread. Small farmers clearing their own land, people paid to quietly flick a match onto a concession owned by a big company, and major companies themselves are all starting fires, activists say.

The continued enthusiasm for slash-and-burn comes despite chronic health problems -- nearly 20,000 people in Riau suffered breathing difficulties in June due to the haze, according to a local health official.

Police have named 24 small farmers suspected of starting the fires. But proving who really set the fires is a daunting task for police in a huge province where using fires to clear land is part of life.

Some now argue that the law banning land clearance by fire is unrealistic and should be replaced with government-regulated controlled burning. "I believe law enforcement alone does not work," said Willem Rampangilei, the deputy minister for people's welfare in the national government. "We tried to stop the tradition but it's impossible."

Environmental groups such as Greenpeace insist the government must enforce existing laws banning slash-and-burn more effectively. "The continuing practice of clearing land with fire is just the tip of the iceberg of Indonesia's flawed natural resources management," said Yuyun Indradi, a forest campaigner with Greenpeace Indonesia.

Source: Channel News Asia, July 2013

Extract 4: A cloud over economic growth prospects

Singapore's worst-ever haze is casting a pall over not only its skyline, but also the prospects for its economic growth this year.

Economic watchers are starting to total up the possible damage to the Republic's economy. The sectors likely to be worst hit are tourism and services, as people stay indoors just as Singapore gears up for the annual summer holidays and the Great Singapore Sale. For every potential tourist who avoids Singapore, the economy will lose $1,500 - the estimated average tourist expenditure here, said CIMB economist Song Seng Wun.

If the smog lasts, the impact will also spread to other "outdoor" industries such as construction and ship building, Mr See said. Then there is the indirect impact on economic activity as people modify their usual behaviour as a result of the haze, said DBS economist Irvin Seah. Health-care costs will increase and productivity will suffer as a result of people taking leave, working less efficiently or leaving work earlier.

The pollution will hit tourism-related as well as construction industries in Singapore, which make up as much as 12 percent of the economy's GDP. A disruption for one week could cost the economy about $1 billion, Barclays economist Wai Ho Leong said.

In any case, most economists agree that the haze will prove more expensive to Singapore's economy this time. "The cost will most likely be worse than in previous episodes given the relative severity of the air pollution this time," said Mr Seah.

Various sources, June 2013

Extract 5: Haze had 'no clear impact' on Changi passenger traffic, retail and overall tourism sector.

Fears that the haze crisis last month would hit the tourism and retail sectors turned out to be unfounded. The Singapore Tourism Board (STB) has assessed that the recent haze situation has not significantly dented the overall tourism sector so far.

The Changi Airport Group (CAG) said the haze had "no discernible impact" on passenger and aircraft movements. In fact, passenger traffic at Changi Airport increased by 6.1 per cent last month compared to the same period last year, with the year's highest monthly figure so far of 4.67 million passengers passing through the airport.

Credit card company MasterCard said its cardholders spent US$797.4 million (S$1 billion) in Singapore between May 31 to June 30 — the first month of the Great Singapore Sale (GSS) — an increase of 12.4 per cent over the same period last year. Singapore-based MasterCard holders accounted for almost 70 per cent of the spending. Overall, the number of transactions also rose 17.1 per cent to about 6.4 million last month, compared to the same period last year.

Source: Today Online, July 2013

Questions

(a) **(i)** Why might changes shown in Table 1 have led to a fall in world price of palm oil? [1]

(ii) Given the information contained in Table 1, identify the country that has had the greatest impact on world prices. Justify your answer. [3]

(b) Using economic analysis, explain the relationship between:

(i) palm oil and soy bean oil [2]

(ii) palm oil and cooking oil [2]

(c) With reference to Extract 2:

(i) What can you conclude about the price elasticity of demand of palm oil? [2]

(ii) Suggest the type of economies of scale that can be experienced by Golden Agri-Resource. [2]

(d) Assess the measure undertaken by the Indonesian Government to correct the market failure caused by the clearing of plantations in Indonesia. [8]

(e) With reference to the data where appropriate, discuss the impact of the haze on the Singapore economy. [10]

[Total: 30marks]

Question 2

India and its macroeconomic problems

Extract 6: Slowing down of the BRIC

Brazil, Russia, India and China, was acronymed into the BRIC in 2001 by Jim O'Neill, an investment banker from Goldman Sachs. In 2007 China's economy expanded by an eye-popping 14.2%. India managed 10.1% growth, Russia 8.5%, and Brazil 6.1%. The IMF now reckons China will grow by just 7.8% in 2013, India by 5.6%, and Russia and Brazil by 2.5%.
So, what is ailing the BRIC and other emerging markets?

Firstly, the idea that emerging-market economies could fully decouple from economic weakness in advanced economies was far-fetched: recession in the eurozone, near-recession in the United Kingdom and Japan in 2011-2012, and slow economic growth in the United States were always likely to affect emerging-market performance negatively – via trade, financial links, and investor confidence.

Secondly, and most recent, factor is the US Federal Reserve's signals that it might end its policy of quantitative easing earlier than expected, and its hints of an eventual exit from zero interest rates. The era of cheap or zero-interest money that led to a wall of liquidity chasing high yields and assets – equities, bonds, currencies, and commodities – in emerging markets is drawing to a close.

These countries share other weaknesses as well: excessive fiscal deficits, external deficits, above-target inflation, and stability risk (reflected not only in the recent political turmoil in Brazil but also in India's political and electoral uncertainties). Thus, emerging economies with large twin deficits and other macroeconomic fragilities may experience further downward pressure on their growth rates.

Adapted from various sources

Table 1: BRIC's in 2011

Indicator – (%)	Brazil	Russia	India	China
Real GDP Growth	2.7	4.3	7.2	9.2
Inflation	6.6	8.4	8.6	5.4
Unemployment	6.0	6.5	9.8	4.0
Investment/GDP	20.6	23.2	34.4	48.3
Saving/GDP	18.4	28.6	31.6	51.0
Current Account/GDP	-2.1	5.5	-2.8	2.8
Budget Balance /GDP	-2.6	1.6	-8.7	-1.2

Source: The Economist, 29th September 2012

Extract 7: Rupee fall may have triggered inflation, but it also offers a way out of industrial decline

Every dark cloud has a silver lining. Nowhere is this saying more apt than in the case of the falling rupee. It has raised fears of a spike in already high inflation rates and decline in foreign investment flows. But it has simultaneously opened up new possibilities of boosting exports, making India's economy more competitive and aiding a manufacturing revolution. The opportunity offered by the rupee depreciation can be substantial, given that labour costs in China have risen sharply.

Current trends have already made India the cheapest source of auto components. Important industries that can leverage these trends include automobiles, IT, engineering, metals, pharmaceuticals, chemicals, textiles, leather and sports goods. Sustained growth of labour-intensive manufactured products offer great potential for absorbing the growing numbers of workers added to the labour force each year.

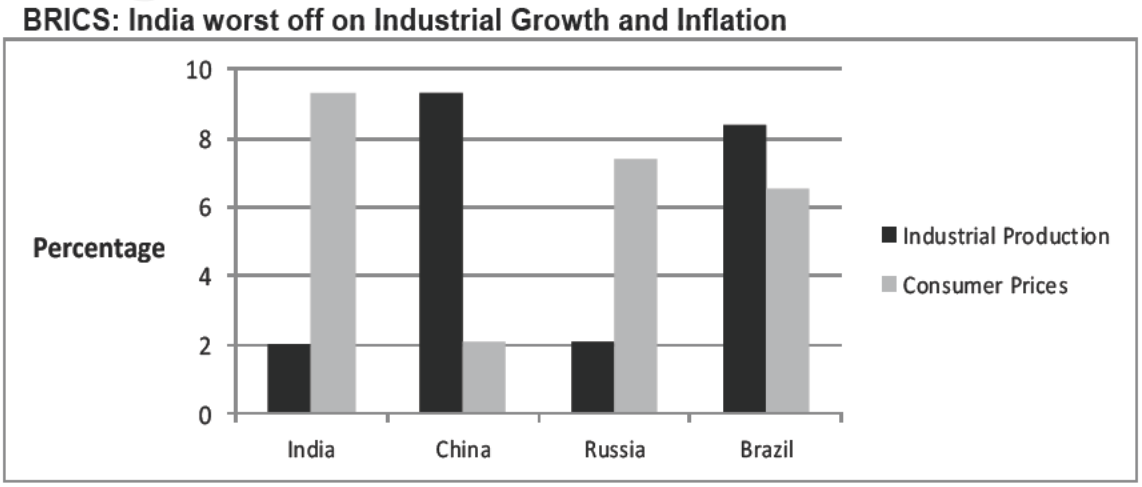
The rupee, which has been hurt by a record current-account deficit, has sunk 7.4 percent against the dollar in 2013. In July 2013, India stepped up efforts to help the rupee after its plunge to a record low. The RBI (Reserved Bank of India, India's Central Bank) raised bank rates by 2 percentage points, and plans to drain 120 billion rupees ($2 billion) through open market sales of government bonds. These actions of the RBI will lead to an increase in interest rates.

Finance Minister, Palaniappan Chidambaram, told reporters that "these measures in no way affect our commitment to growth. Measures are taken to quell excessive speculation and reduce volatility and stabilize the rupee."

Prasanna Ananthasubramanian, an economist at ICICI Securities Primary Dealership Ltd. in Mumbai exclaimed that "it's quite surprising that the central bank has used these measures to support the rupee at a time when the economy is in such a bad state." India's economy expanded 5 percent in the fiscal year ended March, the slowest since 2003, hurt by moderating investment, easing domestic demand and subdued exports.

Source: India Times, Aug 2013

Figure 1: The BRIC Growth and Inflation rate in March 2013



Adapted from The Economist and The Guardian 2013

Extract 8: FDI no panacea for ailing economy

In a bid to shore up India's flagging economy, the government on Tuesday announced opening up foreign direct investment (FDI) in 13 sectors, including petrol and natural gas, insurance, defence production and telecom. The truth is that FDI easing only makes it easier for foreign investors to put their money in India. It doesn't change the fundamentals that determine if they should put their money in India.

A liberal FDI regime can yield results only if domestic economy is revived. The investors, including Indian firms that have been growing in India for decades, are reluctant to risk money due to uncertainties of doing business in India. That Korean steel giant Posco walked out of the biggest FDI deal in Karnataka the day the government announced liberalization of FDI rules is a grim reflection of ground realities. To create an enabling investment atmosphere, the government must remove bureaucratic hurdles, adopt stable fiscal policies and a transparent tax regime. It should allow level playing field for Indian industry and fix a lock-in period for FDI so that money doesn't flow back easily.

Source: The New Indian Express, 18th July 2013

Questions

(a) Using Table 1, summarise the economic performance of India compared to that of China in 2011. [2]

(b) **(i)** Using a diagram, explain why the Indian Rupee appreciated after the Indian government raise the interest rates. [2]

(ii) Explain how this rise in the Indian rupee might affect prices of goods and services in India. [2]

(c) Using AS/AD analysis, explain two evidences contained in the data that could cause downward pressure on the growth rates of the BRIC in the near future. [6]

(d) With reference to the data where appropriate, assess whether on balance the Indian economy would benefit from its 'liberal FDI regime'. [8]

(e) The finance minister of India stated that raising bank rates and having open market sales have 'no way affect(ed) our commitment to growth'. Discuss the validity of this statement. [10]

[Total: 30 marks]

************THE END************

Micro Case Study 1:

Table 1: Palm oil in selected economies (million tonnes)

	Production		Consumption	
	2011/12	2012/13	2011/12	2012/13
Indonesia	25.9	31	7.1	2.9
Malaysia	18.2	19	3.0	2.1
Thailand	1.5	2.1	1.1	1.8
China	0	0	5.8	2.3
Nigeria	0.8	0.9	1.3	1.4
World Total	50.7	52	48.9	49

Source: United States, Department of Agriculture

Extract 1: Commodity Oils and Fats- Palm Oil

Palm oil is the vegetable oil produced in largest amount having pushed soybean oil into second place in 2004/05. Palm is generally the cheapest commodity vegetable oil and also the cheapest oil to produce and to refine. By reason of its availability and (relatively) low cost, it is an important component of the increasing intake of oils and fats in the developing world.

Malaysia and Indonesia are the dominant exporters of palm oil, exporting 91 and 70%, respectively, of the palm oil they produce. The major importing countries/regions are India, China and EU-27.

Palm oil is widely used in the food industry with, for example, palm olein used as a frying oil and palm stearin as hardstock in the production of spreads and cooking fats like cooking oil, margarine and shortening. In addition, palm oil is being used increasingly for non-food purposes.

Source: *James Hutton Institute, Scotland* , March 2013

Extract 2: Golden Agri-Resources Q2 earnings falls

Weaker palm oil prices sent earnings at Golden Agri-Resources down for the second consecutive quarter. Golden Agri said the lower second-quarter earnings were mainly due to a 25 per cent decline in average crude palm oil market prices.

Chief executive Franky Widjaja said in a statement: "Investing in the palm oil business is a long-term strategy and we will continuously strive to expand the size of our planted area and our downstream operations.

"As part of our value creation efforts, we also regularly evaluate acquisition opportunities."

The company said it will continue expanding its plantation area and milling capacity, as well as build up its distribution and logistics to reach more users.

Source: The Straits Times 3 August 2013

Extract 3: Slash-and-burn a way of life on Indonesia's Sumatra

While the blazes fuelled by pronounced drier weather last month cloaked Singapore and Malaysia in toxic haze and provoked howls of outrage from environmental groups, many on Sumatra, from plantation workers to villagers in Palalawan, Indonesia, are die-hard supporters of using fires to clear land.

It is the quickest and cheapest method of clearance for cultivation -- far less expensive than using mechanical excavators or bulldozers -- and the ash from fires is also a natural fertiliser.

The common acceptance of slash-and-burn clearances among smallholders suggests that blame is widely spread. Small farmers clearing their own land, people paid to quietly flick a match onto a concession owned by a big company, and major companies themselves are all starting fires, activists say.

The continued enthusiasm for slash-and-burn comes despite chronic health problems -- nearly 20,000 people in Riau suffered breathing difficulties in June due to the haze, according to a local health official.

Police have named 24 small farmers suspected of starting the fires. But proving who really set the fires is a daunting task for police in a huge province where using fires to clear land is part of life.

Some now argue that the law banning land clearance by fire is unrealistic and should be replaced with government-regulated controlled burning. "I believe law enforcement alone does not work," said Willem Rampangilei, the deputy minister for people's welfare in the national government. "We tried to stop the tradition but it's impossible."

Environmental groups such as Greenpeace insist the government must enforce existing laws banning slash-and-burn more effectively. "The continuing practice of clearing land with fire is just the tip of the iceberg of Indonesia's flawed natural resources management," said Yuyun Indradi, a forest campaigner with Greenpeace Indonesia.

Source: Channel News Asia, 04 July 2013

Extract 4: A cloud over economic growth prospects

Singapore's worst-ever haze is casting a pall over not only its skyline, but also the prospects for its economic growth this year.

Economic watchers are starting to total up the possible damage to the Republic's economy. The sectors likely to be worst hit are tourism and services, as people stay indoors just as Singapore gears up for the annual summer holidays and the Great Singapore Sale. For every potential tourist who avoids Singapore, the economy will lose $1,500 - the estimated average tourist expenditure here, said CIMB economist Song Seng Wun.

If the smog lasts, the impact will also spread to other "outdoor" industries such as construction and ship building, Mr See said. Then there is the indirect impact on economic activity as people modify their usual behaviour as a result of the haze, said DBS economist Irvin Seah. Health-care costs will

increase and productivity will suffer as a result of people taking leave, working less efficiently or leaving work earlier.

The pollution will hit tourism-related as well as construction industries in Singapore, which make up as much as 12 percent of the economy's GDP. A disruption for one week could cost the economy about $1 billion, Barclays economist Wai Ho Leong said.

In any case, most economists agree that the haze will prove more expensive to Singapore's economy this time. "The cost will most likely be worse than in previous episodes given the relative severity of the air pollution this time," said Mr Seah.

Various sources, 23 & 24 June 2013

Extract 5: Haze had 'no clear impact' on Changi passenger traffic, retail and overall tourism sector.

Fears that the haze crisis last month would hit the tourism and retail sectors turned out to be unfounded. The Singapore Tourism Board (STB) has assessed that the recent haze situation has not significantly dented the overall tourism sector so far.

The Changi Airport Group (CAG) said the haze had "no discernible impact" on passenger and aircraft movements. In fact, passenger traffic at Changi Airport increased by 6.1 per cent last month compared to the same period last year, with the year's highest monthly figure so far of 4.67 million passengers passing through the airport.

Credit card company MasterCard said its cardholders spent US$797.4 million (S$1 billion) in Singapore between May 31 to June 30 — the first month of the Great Singapore Sale (GSS) — an increase of 12.4 per cent over the same period last year. Singapore-based MasterCard holders accounted for almost 70 per cent of the spending. Overall, the number of transactions also rose 17.1 per cent to about 6.4 million last month, compared to the same period last year.

Source: Today Online, 24 July 2013

Questions:

(a) (i) Why might changes shown in Table 1 have led to a fall in world price of palm oil? [1]

(ii) Given the information contained in Table 1, identify the country that has had the greatest impact on world prices. Justify your answer. [3]

(b) Using economic analysis, explain the relationship between

(i) palm oil and soy bean oil

(ii) palm oil and cooking oil [4]

(c) With reference to Extract 2,

(i) what can you conclude about the price elasticity of demand of palm oil? [2]

(ii) suggest a possible type of economies of scale that could be experienced by Golden Agri-Resources. [2]

(d) Assess the measure undertaken by the Indonesian Government to correct the market failure caused by the clearing of plantations in Indonesia. [8]

(e) Discuss the impact of the haze on the Singapore economy. [10]

End of Paper

Questions:

(a) (i) Why might changes shown in Table 1 have led to a fall in world price of palm oil? [1]

Skill requirement:

- *Students need to explain that at the market level, the fall in world price would occur when the demand rise was exceeded by the supply rise*

Suggested response:

- *Increase in demand or world consumption (by 0.2% or 0.1 mil tonnes) is lower than Increase in supply or world production (by 2.56% or 1.3 mil tonnes)*

Markers comments:

- *Tendency for students to only focus on supply changes – ignored the conceptual fact that prices are determined market demand and supply exerting their independent influence.*
- *The unit of measure of data used cannot be discounted. The unit used (million tonnes) makes the 0.1 mil tonne demand change a significant change to mention/give attention to – hence demand is not constant.*

(ii) Given the information contained in Table 1, identify the country that has had the greatest impact on world prices. Justify your answer. [3]

- *Indonesia. (1 mk)*
- *Most significant increase in world production (& share) coupled with the most significant world consumption fall*
- *Supply reasons: (1 mk)*
  - *Significant share of world production (abt 50.4% growing to 59.6% of world output)*
  - *Greatest increase in production output (by 19.7% or 5.1 million tonnes)*
- *Demand reasons: (1 mk)*
  - *Most significant fall in share of world consumption (from 14.5% to 5.9%)*
  - *Significant fall in domestic consumption (by 59% or 4.2 million tonnes)*

(b) Using economic analysis, explain the relationship between [4]

(i) palm oil and soy bean oil

- *Substitutes in demand*
- *Most profitable commodity oil and fats due to its cheap price and wide usage in the food industry*
  - *"cheapest available commodity vegetable oil" and "important component of the increasing intake of oils and fats in the developing world" (Ext 1)*

(ii) palm oil and cooking oil

- *Derived demand*
- *Input used in the production of "cooking fats like cooking oil" (Ext 1)*

(2 mks for each relationship identification & explanation)

(c) With reference to Extract 2,

(i) what can you conclude about the price elasticity of demand of palm oil? [2]

- *Evidence:*
  - *"Weaker palm oil prices sent earnings…down"*
  - *"lower second-quarter earnings were mainly due to a 25 per cent decline in average crude palm oil market prices."*
- *Conclusion: PED of palm oil is inelastic (PED<1)*

(ii) suggest a possible type of economies of scale that could be experienced by Golden Agri-Resources. [2]

- *Marketing economies- "build up its distribution and logistics to reach more users".*
- *Technical economies - "expanding its plantation area and milling capacity"*
  (2 mks for any one of the above with an explanation showing how cost per unit of production will fall with increased output)

(d) Assess the measure undertaken by the Indonesian Government to correct the market failure caused by the clearing of plantations in Indonesia. [8]

- *Activity: Slash-and-burn clearing of plantations caused a harmful effects of pollution (negative externality) to Indonesians & neighbouring regions (Extract 3)*
- *Measure undertaken: Legislated prohibition (ban) on clearing plantations by fire & legal action/penalty imposed for contravention (Supporting diagrams)*
- *Measures undertaken is effective:*
  - *Prohibition Is easy to follow – social optimal level of pollution by fire could be achieved*
  - *Clearly defned property ownership rights to land and concessions makes identifying contravening parties easily identifiable*
- *Measures undertaken is ineffective:*
  - *Poor governance and enforcement action – "flawed natural resource management" by the government*
  - *Enforcement nightmare due to the vastness of land ("huge province", Ext 3) and difficulty in "proving who really set the fires" before legal action can be undertaken.*
  - *Slash-and-burn is a customary practice & the fixed mindset of the general population are deeply ingrained as well as the practice being a cheaper alternative than environmentally friendly practices – making the ban difficult to enforce and eradicate*
- *Judgement/Conclusion – Measure undertaken may be inadequate due to the frequency of occurrence over the last few years. Need for complementary measures be undertaken either by the Indonesian government alone or in collaboration with reagional governments.*

Level	Descriptors	Marks
L1	Description of the market failure caused by the slash-and-burn clearing of plantations with a mere identification of the measure undertaken by the government.	1 – 3
L2	Described the market failure caused by the slash-and-burn clearing of plantations with a two-sided evaluation of the measure undertaken.	4 – 6
E	Reasoned conclusion/judgment of the effectiveness of the measure undertaken	1 – 2

(e) With reference to the data where appropriate, discuss the impact of the haze on the Singapore economy. [10]

- *Third parties to the slash-and-burn plantation clearing practices in Indonesia in the region would be expected to incur a financial burden/costs on their economy due to the haze and resource-scare Singapore economy is no exception*

1) Economic Growth

AD = C+I+G+(X-M)

(i) *Tourism and retail services (C & X-M)*
- *Loss of tourism dollars (average $1500 per person) as tourists may be avoid the region during the summer holiday period and go to other tourist destination beyond the affected region as reflected by lower passenger traffic through the airports*
- *F&B Sectors & Hotel Industry will be greatly affected.*
- *Lost of tourism revenue potential during the mid-year Great Singapore Sale as tourists stay indoors*

(ii) *Other outdoor industries - Construction and shipbuilding (I)*
- *Compulsory stop-work rule when the air quality deteriorates below a certain level may lower output levels due to work disruption*
- *The direct impact of the haze (of the activities above) may adversely affect the sectors' approximate annual contribution of 12% of GDP.*

(iii) *Healthcare costs (C)*
- *People may take exaggerated efforts to protect them from the poor air quality by incurring unnecessary medical treatment or expenditure on medical products (Consumption on masks, air purifiers, medical services, etc increases)*

AS may fall if haze is prolonged due to:
- *People adversely affected by the poor air quality are more likely to seek medical treatment which may be followed by medical or early leave from work*
- *Workers in the outdoors may work at a slower rate to minimise exertion and this inturn reduces work efficiency and productivity*

2) Inflation:

If the haze is prolonged and persistent and consumers' confidence is affected, AD falls, the GPL will fall.

3) Unemployment

If the haze is prolonged and persistent, unemployment may occur in tourism, F&B sectors and hotel industry.

4) BOP & its components
- *If tourism is adversely affected, may lead to BOT via the current account*
- *If investor confidence is adversely affected leading to investments outflow or capital flight, may lead to worsening of capital account.*

5) *Equity Issues*

Labour in tourism, F&B, Hotel sectors will be adversely affected while those in medical, pharmacy and healthcare industry may see a boom.

The adverse effect of the haze may not be so detrimental due to:

(i) *Tourism and retail services*

- *"not significantly dented the tourism sector"*
- *increased in passenger traffic at Changi Airport (6.1%) compared to the same period the year before*
- *highest monthly (4.67 mil) passenger traffic passing through the airport for the year*
- *increased in GSS receipts (12.4%) in the first month and 17.1% overall spending over the same period in the previous year – of which almost 70% are Singapore-based consumers*
- *Even if a wide range of economic activities were affected in June 2013, the setback may be made up by the level of economic activities that could be generated in the remaining months of the year, if haze is temporary.*

(2) Demand and consumption of medical, pharmacy and healthcare products will increase.

- *Conclusion – The impact on the Singapore economy of the haze is only short term as it is temporary. If haze is persistent, problem will be worse and more significant.*

Level	Descriptors	Marks
L1	Superficial one-sided description of the impact of the haze on the Singapore economy with limited referencing to the case material	1 – 4
L2	Detailed one-sided description of the impact of the haze on the Singapore economy with appropriate reference to the material; or Two-sided description of the impact on the economy that lacked detailedness despite appropriate mention of case study evidence.	5 – 8
L3	Two-sided detailed description of the impact of the haze on the Singapore economy with appropriate mention of case study evidences as well as other appropriate information.	
E	Reasoned conclusion/judgment of the foreseeable impact of the haze on the Singapore economy	1 – 2

Question 2

India and its macroeconomic problems

Extract 6: Slowing down of the BRIC

Brazil, Russia, India and China, was acronymed into the BRIC in 2001 by Jim O'Neill, an investment banker from Goldman Sachs. In 2007 China's economy expanded by an eye-popping 14.2%. India managed 10.1% growth, Russia 8.5%, and Brazil 6.1%. The IMF now reckons China will grow by just 7.8% in 2013, India by 5.6%, and Russia and Brazil by 2.5%. So, what is ailing the BRIC and other emerging markets?

Firstly, the idea that emerging-market economies could fully decouple from economic weakness in advanced economies was far-fetched: recession in the eurozone, near-recession in the United Kingdom and Japan in 2011-2012, and slow economic growth in the United States were always likely to affect emerging-market performance negatively – via trade, financial links, and investor confidence.

Secondly, and most recent, factor is the US Federal Reserve's signals that it might end its policy of quantitative easing earlier than expected, and its hints of an eventual exit from zero interest rates. The era of cheap or zero-interest money that led to a wall of liquidity chasing high yields and assets – equities, bonds, currencies, and commodities – in emerging markets is drawing to a close.

These countries share other weaknesses as well: excessive fiscal deficits, external deficits, above-target inflation, and stability risk (reflected not only in the recent political turmoil in Brazil but also in India's political and electoral uncertainties). Thus, emerging economies with large twin deficits and other macroeconomic fragilities may experience further downward pressure on their growth rates.

Adapted from various sources

Table 1: BRIC's in 2011

Indicator – (%)	Brazil	Russia	India	China
Real GDP Growth	2.7	4.3	7.2	9.2
Inflation	6.6	8.4	8.6	5.4
Unemployment	6.0	6.5	9.8	4.0
Investment/GDP	20.6	23.2	34.4	48.3
Saving/GDP	18.4	28.6	31.6	51.0
Current Account/GDP	-2.1	5.5	-2.8	2.8
Budget Balance /GDP	-2.6	1.6	-8.7	-1.2

Source: The Economist, 29th September 2012

Extract 7: Rupee fall may have triggered inflation, but it also offers a way out of industrial decline

Every dark cloud has a silver lining. Nowhere is this saying more apt than in the case of the falling rupee. It has raised fears of a spike in already high inflation rates and decline in foreign investment flows. But it has simultaneously opened up new possibilities of boosting exports, making India's economy more competitive and aiding a manufacturing revolution. The opportunity offered by the rupee depreciation can be substantial, given that labour costs in China have risen sharply.

Current trends have already made India the cheapest source of auto components. Important industries that can leverage these trends include automobiles, IT, engineering, metals, pharmaceuticals, chemicals, textiles, leather and sports goods. Sustained growth of labour-intensive manufactured products offer great potential for absorbing the growing numbers of workers added to the labour force each year.

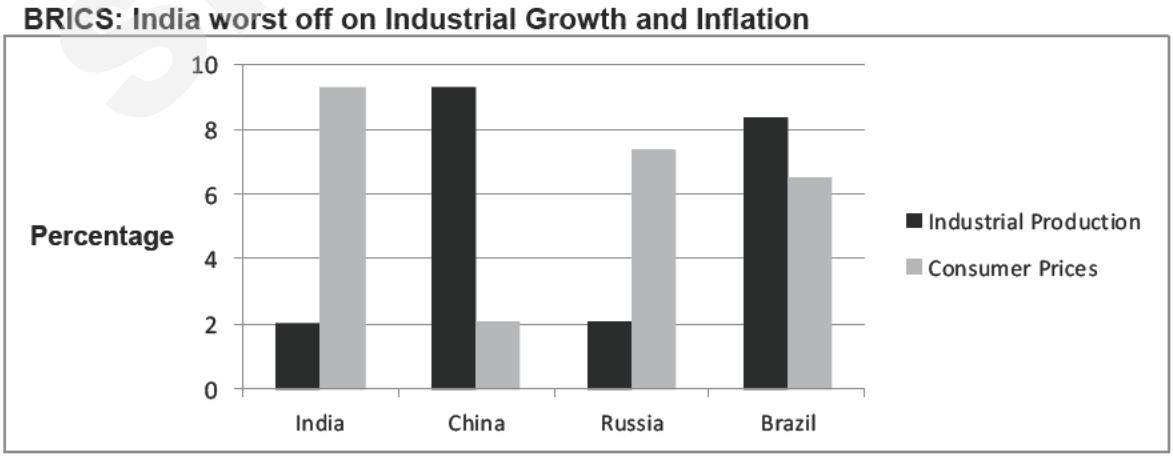
The rupee, which has been hurt by a record current-account deficit, has sunk 7.4 percent against the dollar in 2013. In July 2013, India stepped up efforts to help the rupee after its plunge to a record low. The RBI (Reserved Bank of India, India's Central Bank) raised bank rates by 2 percentage points, and plans to drain 120 billion rupees ($2 billion) through open market sales of government bonds. These actions of the RBI will lead to an increase in interest rates.

Finance Minister, Palaniappan Chidambaram, told reporters that "these measures in no way affect our commitment to growth. Measures are taken to quell excessive speculation and reduce volatility and stabilize the rupee."

Prasanna Ananthasubramanian, an economist at ICICI Securities Primary Dealership Ltd. in Mumbai exclaimed that "it's quite surprising that the central bank has used these measures to support the rupee at a time when the economy is in such a bad state." India's economy expanded 5 percent in the fiscal year ended March, the slowest since 2003, hurt by moderating investment, easing domestic demand and subdued exports.

Source: India Times, Aug 2013

Figure 1: The BRIC Growth and Inflation rate in March 2013



Adapted from The Economist and The Guardian 2013

Extract 8: FDI no panacea for ailing economy

In a bid to shore up India's flagging economy, the government on Tuesday announced opening up foreign direct investment (FDI) in 13 sectors, including petrol and natural gas, insurance, defence production and telecom. The truth is that FDI easing only makes it easier for foreign investors to put their money in India. It doesn't change the fundamentals that determine if they should put their money in India.

A liberal FDI regime can yield results only if domestic economy is revived. The investors, including Indian firms that have been growing in India for decades, are reluctant to risk money due to uncertainties of doing business in India. That Korean steel giant Posco walked out of the biggest FDI deal in Karnataka the day the government announced liberalization of FDI rules is a grim reflection of ground realities. To create an enabling investment atmosphere, the government must remove bureaucratic hurdles, adopt stable fiscal policies and a transparent tax regime. It should allow level playing field for Indian industry and fix a lock-in period for FDI so that money doesn't flow back easily.

Source: The New Indian Express, 18th July 2013

H2 Questions

(a) Using Table 1, summarise the economic performance of India compared to that of China in 2011. [2]

(b) **(i)** Using a diagram, explain why the Indian Rupee appreciated after the Indian government raise the interest rates. [2]

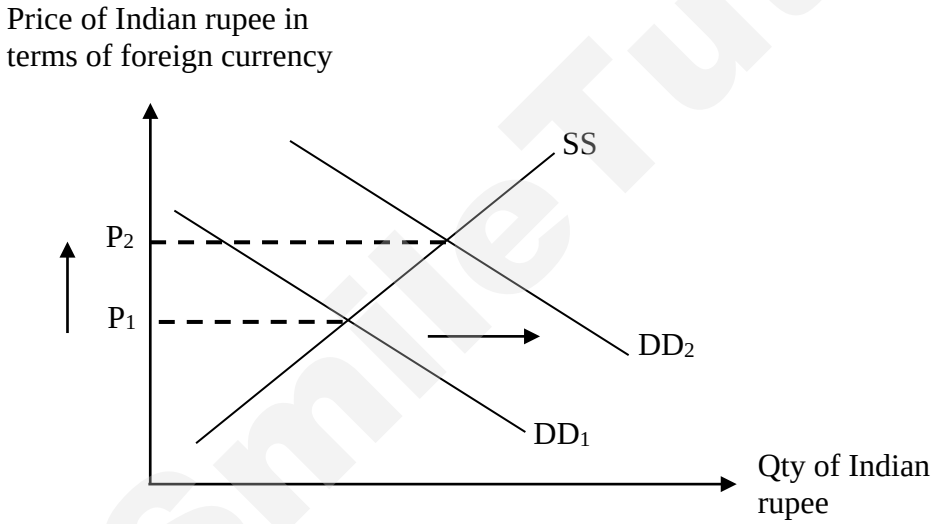
(ii) Explain how this rise in the Indian rupee might affect prices of goods and services in India. [2]

(c) Using AS/AD analysis, explain two evidences contained in the data that could cause downward pressure on the growth rates of the BRIC in the near future. [6]

(d) With reference to the data where appropriate, assess whether on balance the Indian economy would benefit from its 'liberal FDI regime'. [8]

(e) The finance minister of India stated that raising bank rates and having open market sales have 'no way affect our commitment to growth'. Discuss the validity of this statement. [10]

2013 NYJC Preliminary Exams Paper 1
Case Study Question 2 Suggested Answer

a	**Using Table 1, summarise the economic performance of India compared to that of China in 2011**	**2m**
	In 2011, both India's and China's real GDP growth was positive but China's GDP was growing at a higher rate than that of India. India's unemployment rate was at 8.6% which was more than twice the rate of China's unemployment rate at 4%. **[1m]** **Note: Use of other indicators such as the inflation rate or the current balance is acceptable.** China performed better than India in both aspects (real GDP and unemployment rate). **[1m]**	
bi	**Using a diagram, explain why the Indian rupee appreciated after the Indian government raise the interest rates.**	**2m**
	India govt Raise i/r à Hot money flows into India to get a better return à DD for Indian rupee rises (as shown in the figure below) à Indian Rupee appreciated **[1m]** Explanation indicating a fall in supply of Indian Rupee is also accepted. With rising interest rates in India, Indians would cut down their demand for foreign currency (reducing supply of Indian rupee) to take advantage of the relatively higher interest rates in India.  **Diagram** **[1m]**	
bii	**Explain how this rise in the Indian rupee might affect prices of goods and services in India.**	**2m**
	(Prices of goods and services in India are indicated by the GPL in India. Hence question requires students to link the appreciation of the Indian Rupee to changes in GPL. Note that GPL is determined by AS and AD) A rise in the Indian rupee will lead to a decrease in the price of India's imports (in terms of Indian rupee) and increase the price of India's exports (in terms of foreign currency). Prices of imported goods and services in Indian Rupee will be cheaper due to the stronger Rupee. This may lead to a fall in the price of imported factor inputs. The falling Cost of production leads to a rise in AS (Yf remaining unchanged). Hence, prices of goods and services in India will fall. **[2m]** **OR** Prices of exported goods and services in foreign currency will be more expensive due to the stronger Rupee. A rise in the price of India's exports in terms of foreign currency will lead to a	

	fall in quantity demanded of exports and hence, export revenue will fall. This will cause a fall in AD which will lead to GPL falling. **[2m]**	
c	**Using AS/AD analysis, explain two evidences contained in the data that could cause downward pressure on the growth rates of the BRIC in the near future.**	**6m**
	Evidence 1: Recession in the eurozone, near-recession in the United Kingdom and Japan in 2011-2012 [3m] -Countries in Eurozone face recession à Falling income à Falling purchasing power and they will demand less of BRIC's exports **[1m]** -UK and Japan are at risk of entering into a recession à consumers are pessimistic of the future à may rather save then to spend à UK and Japan consumers spend less on imported goods and thus, they will demand less for BRIC's exports **[1m]** - BRIC's export revenue falls à (X-M) falls, ceteris paribus - AD will thus fall and this will lead to a fall in GDP which will cause growth rate of BRIC to slow down in 2013 *(downward pressure on their growth rates).* **[1m]** *Students can also make use of AD/AS diagram to explain the fall in AD leading to downward pressure on growth rates of the BRIC in the near future.* **Evidence 2: Excessive fiscal deficit [3m]** Fiscal Deficit à government's total expenditures exceed the revenue that it generates **[1m]** In order to finance its expenditure in the future or to reduce the excessive fiscal deficit, the government has to increase tax so as to raise revenue. **[1m]** Hence, an increase in tax (e.g. corporate and income tax) will lead to a fall in purchasing power and hence a fall in investment and consumption expenditure. AD will thus fall and this will lead to a fall in GDP which will cause growth rate of BRIC to slow down in 2013*(downward pressure on their growth rates).* **[1m]** *Students can also make use of AD/AS diagram to explain the fall in AD leading to downward pressure on growth rates of the BRIC in the near future.* *Note: Other evidences in Extract 6 e.g. quantitative easing in the US are also accepted.*	
d	**With reference to the data where appropriate, assess whether on balance the Indian economy would benefit from its 'liberal FDI regime'.**	**8m**
	<u>i) Explain briefly what is India's 'liberal FDI regime"</u> - Refers to the "opening up foreign direct investment (FDI) in 13 sectors, including petrol and natural gas, insurance, defence production and telecom" as mentioned in Extract 3. - This leads to liberalising laws and regulations governing FDI policy which "makes it easier for foreign investors" to set up and own companies in India. - The aim of this policy is to attract capital inflow to help boost India's "flagging economy". <u>ii) Indian economy COULD benefit from its 'liberal FDI regime' as it helps to achieve macroeconomic objectives</u> **a) Promote Economic Growth** - Increase in FDIs will increase I which will lead to increase in AD since AD= C+I G + (X-M). This means AD curve shift to the right from AD0 to AD1 and there will be increase in RNY from Y0 to Y1 and this will lead to actual growth in India. - Increase in FDI could also lead to transfer of technology and skills, when a new MNC is introduced into the country, new equipment and foreigners would be coming along to train the locals on the operation of the new equipment and maybe better methods of production that could be more efficient in terms of resource allocation or resource usage. This would then	

convert into increase in productive capacity and this would then cause the LRAS to shift to the right from LRAS0 to LRAS1. This would cause the general price level to fall from P0 to P1 and the real national income to increase from Y0 to Y1. In addition, there is increase in full employment from Yf0 to Yf1 and there will be increase in potential growth. Thus, economic growth is promoted in India.

b) Increase Employment

- Increase in FDI will help generate employment as there will be an increase in production of goods and services when MNCS are set up in India. An increase in production of goods and services would mean that there is a need to employ more workers since labour is a derived demand. Thus, this leads to more jobs being created in India.

c) Improve BOP

- Increase in FDIs will lead to long term capital inflow which involves the purchase of real assets such as manufacturing plant and equipment. This will help improve capital account of India and improve India's BOP position.

iii) Indian economy MAY NOT benefit from its 'liberal FDI regime' as there are **other factors** which will determine the decision of foreign investors to invest in India and thus FDIs may not increase much and there could be **negative effects** of a "liberal FDI regime"

a) FDI may not increase much due to

i) Poor economic outlook in India

- India's poor economic performance as mentioned in Extract 7 where there is "falling rupee" and 'record current account deficit' due to falling exports would lead to "uncertainties of doing business in India' (Extract 8 para 2). As business spending in the private sector is guided by profits, generally the higher the expected returns on investments, the higher would be the investment levels. However, due to the problems faced by India's economy, there will be slower economic growth in India as India is expected to grow by only 5.6% in 2013 as compared to 10.1% in 2011. As such foreign investors may be pessimistic about India's future, i.e. it expects future demand for its goods and their prices to rise very slowly, and they are less inclined to invest. Thus, a liberal FDI policy will be effective "only if domestic economy is revived" as mentioned in Extract 8 para 2.

ii) Poor business environment

- Indian economy may not benefit from its liberal FDI regime if the government does not provide "enabling investment atmosphere" in India for the foreign investors. In India, there is still "bureaucratic hurdles", lack of "stable fiscal policies and a transparent tax regime" which are crucial to attract FDI. Foreign investors will have to worry about red tape and other bureaucratic inefficiencies when conducting business as there will be hassles in which administrative matters are handled. As such, this will slow down business operation, increase cost of production and affect profits earned by the foreign investors. Stable fiscal policies such as transparent tax regime and tax incentives are also important in attracting FDIs. Foreign investors will be more willing to invest if there are sound political infrastructure and policy-making procedures.

b) Negative impacts of high FDI

i) Demand-pull inflation

- If India experiences excessive FDI, it may lead to rapid increase in AD and this may causes GPL to rise very quickly and the economy will be operating at full or close to full employment, leading to demand-pull inflation. Give that figure 1 shows that India is facing relatively high inflation rates in March 2013(close to 10%) and highest among the BRIC

	nations, an increase in FDI will indeed worsen the inflation rates in India. **ii) Overly dependent on FDI** - There could be massive unemployment in the future if MNCs decide to pull their investment out of India which will lead to falling incomes for the locals. Thus, this will lead to fall in material standard of living as the Indian citizens will have now fall in purchasing power and they can consume less goods and services. **Note:** Other reasons such as possible consumer exploitation by giant MNCS or threatening of local jobs are also accepted. <u>iv) Evaluation: Take a stand on the extent of India benefiting form a 'liberal FDI regime'</u> - Indian economy would benefit from its 'liberal FDI regime' to a **limited extent** as foreign investors may not be attracted by such policy and thus FDIs will not increase significantly. Liberalizing FDI does not address the fundamental factors which will influence foreign investors in deciding whether to invest in India. It is not sufficient to rely only on a 'liberal FDI regime' to attract FDIs in India and boost its economy. In order to enjoy the economic benefits of the liberal FDI regime, the government must implement other supportive policies to attract FDIs as well as solve the domestic economic woes in India. Also, it is important to note that whether FDI policy is effective can also be influenced by external factors e.g. favorable changes in FDI policy elsewhere in other countries. Thus, there can be strong competition for FDIs from other emerging countries such as China and Brazil. Overall, India may experience some inflationary pressures in the short-run but India will have lower prices and enjoy other economic benefits in the long-run. **Marking Scheme**	
L2	Well-developed answer that thoroughly explains a two-sided answer of how India may or may not benefit from its 'liberal FDI regime'. Use of data to substantiate points.	**4-6**
L1	One-sided answer that focuses on either how India may or may not benefit from its 'liberal FDI regime' or two-sided answer that is sketchy and does not make reference to data provided.	**1-3**
E	A well-developed evaluative judgment on the extent of India benefiting form a 'liberal FDI regime'.	**1-2**
e	**The finance minister of India stated that raising bank rates and having open market operations have 'no way affect(ed) our commitment to growth'. Discuss the validity of this statement.**	**10m**
	<u>i) Explain briefly what the statement is about.</u> - It means that adopting contractionary monetary policy by the central bank such as raising bank rates and having open market sales will not lead to fall in economic growth in India. - However, this will contradict with another view by an economist that is presented in Extract 7 which is that adopting contractionary monetary policy is "quite surprising" " when the economy is in such a bad shape", implying that the India's economic growth will be affected by the RBI's policy. <u>ii) Thesis: Adopting contractionary monetary policy will **not affect economic growth as** achieving stable exchange rates and prices will help promote economic growth</u> **a) Promote exchange rate stability** - Adopting a contractionary monetary will "help quell excessive speculation and reduce volatility and stabilize the rupee" as stated in Extract 7 para 4. Having stable exchange rates is necessary to facilitate international trade and foreign direct investment. Falling exchange rates may signal to investors that the country is weakening this will discourage investment to take place in India. As mentioned in Extract 7 para 4, the rupee has been "plunged to "record low". As such, this will have negative impact on economic growth as investment is	

necessary to help boost India's economy. In addition, excessive speculation will be adverse for India's economy as it will lead to volatility and instability in the foreign exchange rate and this will affect trade and investment as well. It will be difficult to make business decisions due to excessive fluctuations in the exchange rate. Thus, there will be low investment as well which will affect economic growth. On the other hand, ensuring exchange rate stability will attract FDIs and this will lead to increase in both actual and potential growth.

b) Promote price stability

- A falling Indian rupee will "raise fears of a spike in already high inflation rates" as stated in Extract 7 para 1. This is also supported by Figure 1 which shows that India have relatively high inflation rates in March 2013 which is close to 10% and it is the highest among the BRIC. A weaker exchange rate will mean that the price of imported raw materials and other factor inputs is relative more expensive and this will raise the cost of production of domestic firms who use imported sources. This will lead to fall in short-run aggregate supply and upward shift of SRAS from SRAS0 to SRAS1 (Yf Unchanged). This means that the real national income falls from Y0 to Y1 and GPL will rise from Po to P1. Thus, it is necessary for the government to step up efforts to help strengthen the rupee to ensure that India does not suffer from cost-push inflation as well as slower economic growth.
- In addition, ensuring price stability will boost investor's confidence and firms are more willing to invest because there is more certainty about future planning and firms will be able to predict their future revenue and costs. This will increase the rate of capital formation and promote economic growth and productivity.

<u>iii) Anti-thesis: Adopting contractionary monetary policy will affect economic growth as there will be fall in AD</u>

a) Reduce consumption and investment

- Contractionary monetary policy will lead to fall in consumption and investment and fall in AD. Raising banks rates and having open market sales will lead to fall in money supply and rise in interest rates. When the central bank in India sells securities in the open market or increase the bank rate on loans to commercial banks, it will have the effect of lowering money. This fall in money supply (from M0 to M1) raises the interest rates (from R0 to R1). With higher interest rates, cost of borrowing rises and this reduces profitability, resulting in a fall in Investments. Furthermore, higher interest rates discourage consumption (C) as consumers may now choose to save more instead to earn the higher interest. The fall in I and C reduces the equilibrium level of national income (from Y0 to Y1). The contractionary monetary policy also tends to lower the general price level (from P0 to P1) as AD falls (from AD0 to AD1). Thus, contractionary monetary policy will lower economic growth in the country.

b) Reduce export competitiveness

- In addition, there are economic benefits if the government does not tighten its monetary policy and allows the Indian rupee to depreciate rather than appreciate. As mentioned in Extract 7 para 1, the falling rupee will open up "new possibilities of boosting exports, making India's economy more competitive". A weaker exchange rate would mean that exports are relatively cheaper and foreign households will buy more exports. Assuming that demand for exports is price elastic, it will lead to more than proportionate increase in quantity demanded for exports and export revenue will increase.
- An increase in export revenue will mean AD will increase and AD curve will shift to the right from AD0 to AD1 and real national income will rise from Y0 to Y1. Thus, having a stronger exchange rate will mean that this will reduce India's export competitiveness which

	will affect its economic growth. <u>iv: Conclusion: Take a stand on whether the statement is valid</u> Essentially, whether raising bank rates and having open market sales will affect India's commitment to economic growth will depend on the time period. In the short run, it is likely to see that there is a trade-off as having stable exchange rates and prices will be at the expense of slower economic growth rates. However, this short-term loss could be offset by long term gains and stability which is important to achieve sustained economic growth in the country. Thus, the statement is indeed valid in the long-run. In addition, it is important for the government to adopt other policies such as supply side policies to increase economic growth in India besides stabilisng the exchange rates. **Marking Scheme**	
L3	Well-developed and balanced answer that thoroughly explains why the measures by the Indian government will both affect and not affect their commitment to growth.	**7-8**
L2	Detailed one-sided answer or skimpy two-sided answer about the validity of the stamen.	**4-6**
L1	One-sided sketchy answer that focuses on either the statement is valid or invalid	**1-3**
E	A well-developed evaluative judgment on the validity of the argument.	**1-2**

PRELIM EXAM 2013

JC2 Economics
H2 (9732)

Paper 2 - Essay

Tuesday
24th September 2013
8:00 – 10:15 **TIME** : 2 hours 15 mins

INSTRUCTIONS TO CANDIDATES

- Do not open this paper until you are told to do so.
- Attempt 3 questions, with at least one from each section.
- 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.
- Write your name, class and name of economics tutor in the space provided on the writing paper.
- **Circle the questions you have attempted in the table below, and attach this paper to the front of your answer scripts.**

Name:_____ **Class:**_____

Tutor's Name:_____

Question	Marks	Question	Marks
1		4	
2		5	
3		6	
Total:	**/ 75**		

There are 2 printed pages including this cover page

Answer **three** questions in total

Section A

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

1 Developments in modern technology such as faster broadband and internet connections, and the ease of creating e-books, have had major impacts on the demand for and supply of print and non-print materials.

(a) Explain how the markets for print and non-print materials might be affected by these developments. [10]

(b) Assess the relevance of price elasticity of demand, income elasticity of demand and cross elasticity of demand to a publisher of print materials who aims to increase sales revenue. [15]

2 'Oligopoly is the best market structure that is able to achieve efficiency, equity and innovation.' Discuss. [25]

3 (a) Explain why government intervention is advocated in the markets for public goods and demerit goods. [10]

In Singapore, museums offer free entry to Singapore citizens and Permanent Residents. However, New York's Metropolitan Museum of Art charges a recommended entrance fee of US$25.

(b) Assess the economic case for these two approaches. [15]

Section B

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

4 Labour productivity is the most important influence on macroeconomic outcomes. Discuss. [25]

5 a) Explain how changes in investment expenditure results in a larger change in national income. [10]

b) Discuss the view that a large increase in national income is often but not always desirable. [15]

6 "The United Kingdom is in recession and its trade deficit ballooned to its highest level since modern records began, sparking concerns among prominent economists."

The Guardian Aug 2012 (Adapted)

a) Explain the impact of a worsening trade deficit on an economy. [10]

b) Assess whether exchange rate policy is the most effective policy to solve United Kingdom's problems. [15]

NYJC Econs Prelim
Paper 2 Suggested Answer

1) Developments in modern technology such as faster broadband and internet connections, and the ease of creating e-books, have had major impacts on the demand for and supply of print and non-print materials.

a. Explain how the markets for print and non-print materials might be affected by these developments. [10]

b. Assess the relevance of price elasticity of demand, income elasticity of demand and cross elasticity of demand to a publisher of print materials who aims to increase sales revenue. [15]

##

1a. Explain how the markets for print and non-print materials might be affected by these developments. [10]

Synopsis: Students are required to look into the factors that affect the demand and supply of print and non-print materials. Assumptions are needed to effectively explain how the demand or the supply curves should shift and/or pivot. Concepts of elasticity have to be introduced and applied to a range of types of print and non-print material for different groups of people.

Introduction: Developments in modern technology resulted in faster broadband and internet connection and the greater ease of creating and distributing e-books. One major consequence of a rise in the internet is the increasing availability of books, magazines, newspapers and other materials on the internet.
Definitions: Demand – the desire, willingness and ability of consumers to purchase materials at a particular price at a particular point of time. Supply – the desire, willingness and ability of producers to make specific quantities of materials available to consumers at a given price at a given point of time.

Effects on market for Print & Non-print Materials –

- **Demand** – tech savvy consumers – demand for print materials fall, easy access to information gathering and downloading thus the presence of strong attractive substitutes that are available that is more portable and updated – demand for non-print material will rise
  - Non-tech savvy consumers - demand for print materials remain the same whilst demand for non-print materials will not be demanded by this group of consumers due to their preferences – demand of non-print materials may increase for the tech-friendly ones
  - Changes in demand – shifting of demand curve – magnitude of change may differ
- **Supply** – producers of print materials will lower supply of print materials and increase the supply of non-print materials. Packaging and marketing of print materials may change ie the inclusion of non-print supplement on to the book as an incentive to purchase the print materials. Supply of print material may fall with those of non-print materials will rise. A shifting of the supply curve will result.
- **Market equilibrium** – students are to draw and explain diagram for both print and non- print materials, showing also the magnitude of change. Effects of these demand and supply shifts will affect the price – price changes will be indeterminate depending on the magnitude of change but quantity demanded would fall for print materials and rise for non-print materials.
- **Market resources** – resources will be shifted and channelled to the production and supply of non-print materials rather than to print materials. Resources used from related markets of materials eg paper, binders, ink etc, would have to be altered and shifted to other markets.

Conclusion

Knowledge, Understanding, Application, Analysis		
L3	For an answer that provides a thorough explanation of how markets are influenced and affected for print and non-print materials in both the short run and the long run.	**9-10**
	For an answer that provides a good explanation of how the markets for print and non-print materials are affected by technological developments on its price and quantity	**7-8**
L2	For an answer that provides an undeveloped explanation of how the markets of print and non-print materials are affected by technological developments and its effects on price and quantity.	**6**
	For an answer that explains only demand and supply changes as a result of developments in technology OR For an answer that states demand and supply changes with some explanations and diagrams drawn	**5**
L1	For an answer that shows some knowledge of the market effects of print and non-print materials.	**1-4**

##

b. Assess the relevance of price elasticity of demand, income elasticity of demand and cross elasticity of demand to a publisher of print materials to increase sales revenue. [15]

Synopsis: Students are to explain and illustrate how the concepts of PED, YED and XED can be used by the publisher in his decision making process wrt pricing, advertising and promotions, product packaging and design, R&D and innovation. Students are to illustrate their explanation with relevant diagrams.

Introduction: A producer's primary objective is to profit maximise! His actions and decision making tends thus to focus on his main objective of business. There are several tools that will help him make right decisions and amongst some are the concepts of price, income and cross elasticities of demand for his product/s. The product focus here is print materials including those of books (textbooks, reference books, novels, comics), magazines, journals and brochures.

Definitions: PED, YED, XED
Explain the concepts of PED, YED, XED briefly.
Objective: to take action so as to increase sales revenue of the company
To make use of the concept of:

- **PED** – facilitates in printers' or retailers' -
  - **Pricing policy** to generate more revenue –
    - if demand is price elastic eg for Reference books, Journals, Industry magazines, prices should aim to be reduced so that revenue will be increased. Diagram to illustrate.
    - if demand is price inelastic eg for school texts, university texts, professionals' key references, - prices of such print materials should be increased so as to increase revenue. Diagram to illustrate.
    - if texts are unique eg instructional manuals for medications, computers or home appliances; brochures for housing or car launches; prices should be kept high to maximise revenue as they are necessary and will have to be done so as to promote the product to be sold.
    - this concept however may not be relevant for the publisher as his actions would affect profits more than that of revenue.
  - **Advertising and promotion to generate more revenue-**

to generate more sales and impact the lifestyle conscious consumers.
        - if demand is price inelastic – informative advertising is undertaken to ensure that consumers are aware of the unique features and necessity the ownership of the print version of the material.
    - **Product packaging and design-**
        - Cover pages and designs of both price elastic and inelastic printed materials have to be attractive so as to be able to catch the eye of the consumer.
    - **R & D and Innovation-**
        - firms in the print industry are required to be up-to-date and innovative due to the large number of firms within the industry and the relative ease of entry into the industry of new entrants.

- **YED** – allows publisher and its printer to understand effect of income changes on the demand for texts and other print materials so as to determine his actions wrt pricing, promotion and advertising.
    - **Advertising and promotions –** this concept could be applied when the timing of the advertising or promotion is scheduled. When YED is positive, strategies may be scheduled during paydays or bonus payouts. When YED is negative, expenditures on advertising could be channelled to R&D for better revenue generation.

- **XED –** allows better understanding of the relationship between print, non-print and related products for better product decision making strategies.
    - **Pricing policy –** concept allows the producer to gauge the level of competition open to him and thus decide on the pricing strategy to use so as to maximise revenue on his print material sales. If there are no substitutes, pricing can be high so as to increase revenue, but if there are many substitutes via non-print materials, then the product needs to be made unique so as to ensure continued demand for it. Knowledge of XED is thus used to manipulate the pricing situation to affect one's advantage.
    - **Advertising, promotions and R&D –** knowledge of this concept allows the producer to decide on the level of persuasiveness its advertising and R&D actions that could or has to be done so as to increase its revenue.

- The concepts of PED, YED, XED may at times not so relevant to publisher – when price elasticity is high, a price reduction may lead to price wars to the benefit of consumers and not to producers. Its relevance and importance to the publisher thus is dependent on publishers' business objectives.

- However, there are **other tools are also required** to facilitate publishers' accurate decision making – namely: consumer market behaviour, firms' cost structure, speed of technological development in the print industry, advertising and promotional responses….

Conclusion

	Knowledge, Understanding, Application, Analysis	
L1	Generalized discussion of the concepts of PED, YED, XED with little or no or incorrect analysis of their effects on producer revenue is given. No or limited application to specific print material markets.	1 - 5
L2	Analysis of the magnitude and direction of changes in PED, YED, XED of relevant print material products and their resulting effects on sales revenue earned. Sufficient application to specific print product markets are given.	6 – 8
L3	Detailed and thorough analysis of the magnitude and direction of changes that could take place on print material products and their resulting market outcomes, with consideration of PED, YED and XED of products. Close application to specific print product markets are given.	9 – 11
E1	Evaluative statements on the desirability of the concepts, without justification.	1 – 2

	based on time periods considered and assumptions made.	

2) 'Oligopoly is the best market structure that is able to achieve efficiency, equity and innovation.' Discuss. [25]

Synopsis: Essay should include a comparison of the different market structures in the achievement of efficiency, equity and innovation and conclude which is the best market structure for each of the different features. It should be known that the no market structure type is able to achieve all 3 of efficiency, equity and innovation.

Introduction: Market structure is the interconnectedness of characteristics of a market such as the number and relative strength of consumers and producers, the degree and forms of competition, the extent of product differentiation and the ease of entry into and exit from the market. There are basically 4 types of market structures, namely, perfect competition, monopolistic competition, oligopoly and monopoly. Each type is unique and possess characteristics that are distinct and unique.

Definition: market structure, oligopoly, efficiency particularly allocative efficiency equity, innovation
State characteristics of different market structures.

To achieve Efficiency:

- Define efficiency –
  - Productive efficiency – any point along the LAC – as such all market structure types are able to achieve this form of efficiency in the LR. However in the SR only PC can achieve this.
  - Allocative efficiency – achieved when P=MC – all are not able to achieve this except for the PC firm and the firms who are welfare maximising. diagrams
  - The oligopolist thus would not be the best producer in this area of efficiency unless he is a welfare maximiser.
  - The extent of ability to set P>MC lowered for the MC firm as compared to Oligopoly who has a higher degree of allocative inefficiency

To achieve Equity:

- Define equity – relations and perceptions of fairness in distribution of resources, providing for the needs of the lower income group
  - PC markets with their characteristics of perfect knowledge, no barriers to entry, identical product and the perfectly elastic demand curve is able to achieve equity of profits in the LR through normal profits earned by their firms.
  - All firms in the SR are able to earn superN, N or subN profits depending on their ability to manage their costs. Equity of profits can thus be achieved and enjoyed in the LR only by PC and MC markets.
  - Equity is also seen in third degree price discrimination when the market with PED>1 (lower income group) is charged lesser. Or government regulation for provision of class C wards in hospitals.
  - Cross subsidization by the richer consumers for the poorer consumers.

To achieve Innovation:

- Define innovation - is the application of new solutions that meet new requirements, inarticulate needs, or existing market needs. This is accomplished through more effective products, processes, services, technologies, or ideas that are readily available to markets, governments and society.
  - Ability to innovate – the larger the firm size, the greater the ability and capacity of the firm to engage in R&D that will lead to the firms' effectiveness and efficiency to innovate. Thus the oligopolist would be most innovative as compared to the MC or monopolist.

innovate.

- Oligopolies have the following merits – ability to gain EOS, greater productivity/output, price rigidity and non-price competition – these encourage innovation so as to ensure its profitability and market share. Due to the small number of firms in the industry, R&D and innovation is necessary to keep abreast and capture new markets. High BTE allows innovative actions to have more long lasting effects on profits and market share. Unlike those of MC where BTE are low, innovations could be easily copied and improved upon, rendering expenditures on R&D not profitable and ineffective.

- Oligopolies have flaws thus is not the best structure that possess all features of efficiency, equity and innovation in comparison with the other market structural types – it is not allocatively efficient due to market imperfections, presence of market power results in oligopolist's ability to transfer consumers' surplus to producers' surplus thus worsening equity.
- Comparison with PC –
  - efficiency – PC firms are allocatively and productively efficient due to the perfectly elastic demand curve of the PC firm where P=MC when the firm profit maximises.
  - equity – PC firm promotes equity as they all earn normal profits in the LR due to no BTE
  - innovation – PC firms lack ability and incentive to engage in innovation and R&D due to characteristic of perfect knowledge

	Allocative Efficiency (P=MC, consumer welfare maximized, no DWL)	Equity (Fairness in distribution of resources, measured by LR normal profits)	Innovation (Dynamic efficiency)
Perfect Competition	Present as P=MC, no DWL	Equity present LR Normal profits	No innovation No funds available, homogenous products
Monopoly	Absent as P>MC, DWL present	No equity LR Supernormal profits, exploitation possible especially with PD	Innovation possible Funds available but no incentive as only seller in market
Oligopoly	Absent as P>MC, DWL present	No equity LR Supernormal profits	Innovation present Incentive to innovate especially if product is differentiated, and funds are available
Monopolistic Competition	Absent as P>MC, DWL present altho' smaller	Equity likely LR Normal profits, some exploitation possible	Some innovation Incentive to innovate to compete & product differentiation present but no funds available

*All firms have productive efficiency as they produce on a point on their LRAC in the LR, unless they are complacent and there is x-inefficiency (like in monopoly or some oligopoly)

Conclusion – there is thus no best market structure that possesses all criteria – criteria statement and focus is thus important so as to help decide which should be the best type of market structure for that particular criteria type.

	Knowledge, Understanding, Application, Analysis	
L3	Demonstrates excellent knowledge regarding the characteristics and behaviour of oligopolistic market structures and able to explain how oligopoly may/may not be able to attain efficiency, equity and innovation and explanation is well developed with comparisons of at least two other market structures with relevant examples. Demonstrates sound knowledge regarding the characteristics and behaviour of oligopolistic market structures and able to explain how oligopoly may/may not be able to attain efficiency, equity and innovation. Explanation is well-developed.	18-21m 15-17m
L2	Demonstrates adequate knowledge regarding the characteristics and behaviour of oligopolistic market structures and able to explain how oligopoly may/may not be able to attain efficiency, equity and innovation. Students must also compare with at least one other market structure type with relevant examples illustrated. (either PC or MC)	10-14m
L1	Demonstrates little knowledge regarding the characteristics and behaviour of oligopolistic market structures and able to briefly explain how oligopoly may/may not be able to attain efficiency, equity and innovation but is limited and underdeveloped	1-9m
E2	Able to explain these conflicts and provide a value judgement regarding the issue in question	3-4m
E1	Able to provide evaluative comments regarding the conflicts between the microeconomic aims	1-2m

3) a. Explain why government intervention is advocated in the markets both for public goods and for demerit goods. [10]

Synopsis:

Government intervention is needed due to the market failures arising from the existence of public goods and demerit goods. As both sources of market failure cause deadweight loss on society, intervention by the government is aimed at improving society's welfare. Candidates would have to link that the MAIN reason for government intervention in these two markets are due to the deadweight loss that is being created.

As such, candidates are expected to explain and illustrate how public goods and demerit goods lead to loss of society's welfare. The characteristics of public goods will need to be elaborated to show how the market is failed due to the non-provision of such goods. Demerit goods being deemed to be socially undesirable and hence usually has presence of negative externalities would also need to be shown how it causes market to fail.

Suggested Answer:

Introduction:

1. Define public goods -goods with the characteristics of non-rivalry, non-excludability, collective consumption and free rider problem.
   - Examples could be street lighting & national defence

2. Define demerit goods - goods that the government deemed socially undesirable and they are goods which the government feels are bad for the people but they will over-consume.
   - Examples of such goods are cigarettes, alcohol or harmful drugs.

Summary of the Nature of the Goods:

Public goods (National Defence)	**Demerit goods (Cigarettes)**
Non-rival in consumption	Rival in consumption
Non-excludable in consumption	Excludable in consumption
Free rider problem	No free rider problem
MC of providing the service is zero	MC of providing the service is positive
Indivisible	Divisible

A comparison of the two goods is not required. Candidates need to only define public goods and demerit goods with explanation of the characteristics.

How public goods cause markets to fail:

- Candidates would need to emphasise that the reason why the non-provision of public goods would be due to the deadweight loss that is caused due to the fact that public goods have a significant amount of external benefits that would be lost if it is not provided. (deadweight loss incurred)
- Private sector will not be willing to provide such goods because the 'non-excludability' characteristic of public goods gives rise to the free rider problem. Non excludability makes it difficult for firms to charge consumers who cannot be excluded in the consumption of the good.
- At the same time, consumers are not willing to reveal their true preference of consuming the good as they will be able to free ride.
- Hence producer will not want to produce the good (supply zero) and consumers will probably claim that their demand is zero. This results in production being zero!

Public goods are vital or essential to the nation especially in keeping law and order, and the provision of public goods also helps in maximum utilisation of such goods as everyone, including the poor, can enjoy the benefits of these goods.

Provision of public goods may result in positive externalities which are not remunerated (MSB>MPB), and in the free market which is profit-driven, no resources will be allocated to the production of public goods. Hence the nature of public good causes markets to fail.

Demerit good are deemed socially undesirable by the government. They usually create the presence of negative externality. In consuming any good, the 1st party would seek to maximise their Net Private benefit. This output corresponds to Qp, where the 1st party equates MPB to MPC (Draw diagram and explain with some examples). The consumption/production of the good by the 1st party will lead to negative cost to the 3rd party (eg breathing difficulties to people around the smoker). This results in the divergence between the Private cost (costs to 3rd party) and the Social Cost (private costs to 1st party and external costs to 3rd party). Diagrammatically this is reflected by a divergence between MPC and MSC (such that MSC>MPC).
The socially optimal output is Qs where Net Social Benefit (NSB) is maximised. NSB is maximised when MSB =MSC. {Note the MSB=MPB, it is assumed that there are no external benefit involved!) Since Qp > Qs, the market is over consuming cigarettes. Thus the market has failed. The overconsumption leads to the inability to maximise NSB. This result in a deadweight loss (identify on diagram).
Alternatively, consumers tend to over consume demerit goods too because they may not understand or are aware of the external costs that accompany their consumption. They have imperfect knowledge and information of the consequences of their actions on their welfare.

L 1	Mere listing of the characteristics of public and demerit goods with zero or very brief explanation of how they cause markets to fail without relation to the need for government intervention	1 - 4
L 2	Able to explain in detail the main characteristics of public and merit goods using examples, with some valid reasons on how they cause markets to fail hence the need for government intervention.	5 - 6
L 3	Able to explain in detail the main characteristics of public and merit goods using examples, with thorough explanation of the reasons on how they cause markets to fail and would thus require the government to intervene.	7 - 10

New York's Metropolitan Museum of Art charges a recommended entrance fee of US$25.
Assess the economic case for these two approaches. [15]

Synopsis:

- ***For this question, it is important to note that the target group for the consumers are the Singaporeans and PR of Singapore enjoying the complete subsidy for museum entry versus Americans who have to pay USD$25 to enter the museum. Students are expected to distinguish the various approaches towards the target group mentioned in the question. Namely, providing free entry to national museums in Singapore and the relatively high prices charged for the museums in America (New York). Students should be able explain the varying degree of government intervention is dependent on the perceived positive externalities that these goods provide and provide limitations of the various measures adopted by the governments. The focus of this question is the extent of the external benefits that both are supposed to exhibit. Hence in this case, for Singapore, entry to museums are private goods with positive externalities but because of the large significant amount of external benefits, the government deems the good to be socially desirable and hence a merit good.***

  For America, though it is a private good with positive externalities as well, the extent of the external benefit may be taken as negligible or close to zero, hence it is NOT a merit good. The issue here would be the basis of government intervention (amount of external benefit from the good) and whether it may incur a greater welfare cost in the case of non-intervention.

Suggested Answer:

- Candidates are to identify that the museum is a private good that is excludable (the possible selling of tickets could exclude people who do not pay entry fee) and has rivalry in consumption (an exhibit could be crowded by people that causes a person behind to not have a clear view).

- **Distinguish** the various approaches by the governments – providing for free (in the case of Singapore) & no intervention (in the case of New York, America).

- In Singapore, the services (museum service) are perceived to be private with a large significant positive externality, hence are **merit goods**, while in New York, they are only deemed as **private goods** with negligible positive externalities.

- **Define** and **justify** why museums are classified as merit goods in Singapore.

- **Use of diagrams** to compare the varying amount of positive externalities between museums (significantly large) and hence **explain** why Singapore government would choose to provide the museum visits for free.

- Provide **limitations** of the measures:
  Free of charge – over-consumption, incur government expenditure (budget constraint) and opportunity costs of the funds from government
- In New York, the goods are perceived to be private good.

- **Define** private good and **explain** why the government in America chose not to intervene as the positive externalities are perceived to be negligible.
- Limitation:
  - Under-consumption of the goods, hence lower level of welfare for the economy
- **Conclusion (Judgment):**
  - Interventions by governments depend on the welfare benefits/costs incur by the goods on society which is perceived differently for different countries.
  - Degree of intervention will depend on the costs and benefits of the measures adopted in relation to the perceived deadweight loss incurred by the society.

by the society (when there is no intervention), interventions by governments are justified (case of Singapore).

- However, if the net costs of intervention is perceived to be greater than the deadweight loss incurred, then such interventions may not be necessary (case America) as any measures implemented tend to provide a larger welfare loss to society.

Level	Descriptors	Marks
L1	Identify and explain the two approaches that the two governments are taking for the two countries. Diagrams are drawn to explain the market failure but with no link to context.	1 – 5
L2	Identify and distinguish with weak justification the two approaches the government are taking for the museum visits. Diagrams are drawn and explained with link to the context.	6 – 8
L3	Identify and distinguish with strong justification for the two approaches the government. All the diagrams must be drawn and the justification of the approach to be shown on the diagram.	9 - 11

E1	Mainly unexplained judgement or reasoned conclusion, with little or no evaluation of the approaches taken by the government	1 - 2
E2	Judgement based on analysis, with sound evaluation of the approaches by the government.	3 - 4

Discuss. **[25]**

Intro

- Explain the macroeconomic outcomes –Sustained Gr, Price stability, Low rate of Un, Fav BOP
- Explain Lab productivity –amount of output that a worker produce in a given amount of time.

Body

Thesis: **Labour productivity is the most important influence on macroeconomic outcomes**

- **Explain impact of labour productivity increase on economic growth**
  ↑ inlabour productivity à ↑ in the capacity of the economy to produce output i.e. more output can be produced at full employment level à ↑ **in potential economic growth (Draw LRAS shift)**
  ↑ in labour productivity à lower per unit labour cost à lower cost of production (SRAS shift right) à more attractive to FDI(**I**↑ à AD increases and shifts to the right) à further increase productive capacity if FDI bring with them better technology/management practices etc. à **higher actual and potential economic growth (as both AD and AS increase)**

- **Explain impact of labour productivity increase on Employment**
  Producers able to produce more gds & service à Dd for FOPs ↑ à Dd for lab ↑ à Emp↑. Also inflow of FDI creates further employment opportunities in LR à **increase in employment**

- **Explain impact of labour productivity increase on price stability**
  Explain how labour productivity growth allows the economy to grow without causing inflationary pressure.
  Labour productivity growth à ↑ in SRAS (because of the lower cost of production) as well as ↑ in LRAS eases the inflationary pressure and helps to achieve **Price Stability**

- **Explain how increase in labour productivity may improve the BOP**
  ↑ in labour productivity à lower per unit cost of producing the output à improvement in cost competitiveness and thus international competitiveness à improvement in current account balance
- Inflow of FDI also improves the capital account position à **overall BOP improvement**

Anti-thesis: Improving labour productivity may not be the most important influence on macroeconomic outcomes because

- **it may not lead to achieving all the macro goals and**
- **other factors may have more important influence**

1. Some workers may suffer unemployment
   - The increases in labour productivity may not be homogeneous .Workers who are unable to increase their productivity sufficiently because of the lack of skills may become retrenched.
   - Similarly, when labour productivity increases workers become more efficient and firms may hire less labour which may lead to loss of jobs.
2. Long term measure
3. Depends on mind set of workers
4. Other factors can also have more imp influence (for example Inv Exp↑ or Govt exp↑) or Productivity improvement in other FOPs like capital,
   [**Explain two alternative factors influencing the macro outcomes]**
   When Inv exp ↑ à AD↑ à Actual growth à Ceteris.paribus à higher employment .

Helps to achieve price stability à affects export competitiveness à affects BOP favorably

5. The outcomes may also be affected by Govt Policy decisions.[Explain any contextual example]

Synthesis:

Labour productivity is an important influence on macroeconomic outcomes and improving it is important and will help a country to achieve her macroeconomic goals. However, such a long-term measure should be complemented with concurrent implementation of demand-management and other supply-side policies.

However, whether labour productivity is the most important influence on macroeconomic outcomes or not depends on other factors like the nature of the economy ,the state of the economy (the current macroeconomic issues that the country is facing during the particular time) etc.

Nature of the economy

The relative increase in labour productivity when compared to other countries

If other countries also increase their productivity and if their productivity rates are higher, then FDI and therefore real NY may not increase as much.

State of the economy

- If the economy is facing other major issues like demand pull inflation or recession Government must decide on specific policies targeted at solving that problem instead of using mprovement of labour productivity as its policy tool.
- If the economy is facing a combination of macroeconomic issues, a combination of policies would be required to address the various issues.

Conclusion

The conclusion MUST address the requirement of the question, which is to discuss whether labour productivity is the **mos**t important influence on macroeconomic outcomes or not.

Knowledge, Application, Understanding and Analysis		
L3	· For a comprehensive and well-balanced answer that clearly explains how improving labour productivity can help a country to achieve its macroeconomic goals, **and** · that an increase in labour productivity may not always address all the macro outcomes **and** · How other factors can influence the macro outcomes. · **Excellent rigour in economic analysis and development.** · **Excellent diagrams drawn which are well explained.** · **Excellent attempts at contextualisation.**	15 – 21m
L2	For an answer that explains how increase in labour productivity may address all the macro outcomes without **either** discussing how lab pdtivity may not address all outcomes **or not** discussing how other factors may affect the outcomes or sketchy explanation of the counter arguments.	9 – 14m
L1	For a one-sided answer that briefly explains how improving labour productivity can help a country to achieve its macroeconomic goals. OR A sketchy two sided answer.	1 – 8m
E2	For well-reasoned judgment on the extent to which labour productivity is the most important influence macroeconomic outcomes .	3 – 4m
E1	For a mainly unexplained judgment on whether labour productivity is the most important influence macroeconomic outcomes .	1 – 2m

5 a) Explain how changes in investment expenditure results in a larger change in national income. [10]

b) Discuss the view that a large increase in national income is often but not always desirable. [15]

(a) Suggested answer:

*The process that is required here is the **multiplier process** by which the increase in investment expenditure leads to a larger change in national income. The multiplier process will cause the initial increase in investment expenditure to result in a larger change in national income. The **k** value will then determine the extent of the change in national income caused by the change in investment expenditure. As such, students are expected to provide a detailed **explanation** of the multiplier process by which the increase in investment expenditure can lead to a larger change in national income using **appropriate examples** and **illustrations**.*

- Define investment expenditure
- Define national income
- Explain the multiplier process using appropriate examples
- In order to illustrate the workings of the multiplier process, certain assumptions should be made. Firstly, assume an open economy which is initially in equilibrium with a government sector, and that the mpc = 0.5, and hence mpw = 0.5 (assume mps = 0.2, mpt = 0.1 and mpm = 0.2). We also assume that investment is autonomous.
- Assume **autonomous expenditure** rises by $100m (e.g. D I = $100m).

The effect on National Income is shown in the table below

Round	Y △	C △	S △	T △	M △
1	100	50	20	10	20
2	50	25	10	5	10
3	25	12.5	5	2.5	5
4	12.5	6.25	2.5	1.25	2.5
Total	**200**	**100**	**40**	**20**	**40**

When a firm builds a factory, investment expenditure increases by $100m, which immediately raises the national income of the economy by $100m. The immediate effect is incomes of factory builders and suppliers of raw materials increase by $100m. These builders will consume 0.5 (mpc) of their change in income i.e. $50m (mpc x DY), save 0.2 (mps) of the DY i.e. $20m (mps x DY), pay 0.1 of the DY in taxes i.e. $10m (mpt x DY) and spend 0.2 of DY on imports i.e. $20m (mpm x DY).

To meet the rise in the $50m of domestic consumption, producers will increase output as well as employment. The recipients of this $50m of income i.e. producers of these goods and services in the second round, will spend $25m (0.5 x DY) on domestic goods, save $10m (0.2 x DY), pay $5m (0.1 x DY) in taxes and spend $10m (0.2 x DY) on imports.

The process will continue, with each round of domestic consumption on goods being the next round of income for the producers of these goods. Thus a long chain of extra income, extra consumption, extra saving, extra taxes and extra import expenditure is set up. The process will come to an end when when the change in withdrawal is $100m i.e D W (i.e. D S+D T+D M) = $100m, (same as the initial injection of $100m) and J=W (condition to obtain equilibrium) is reached once again.

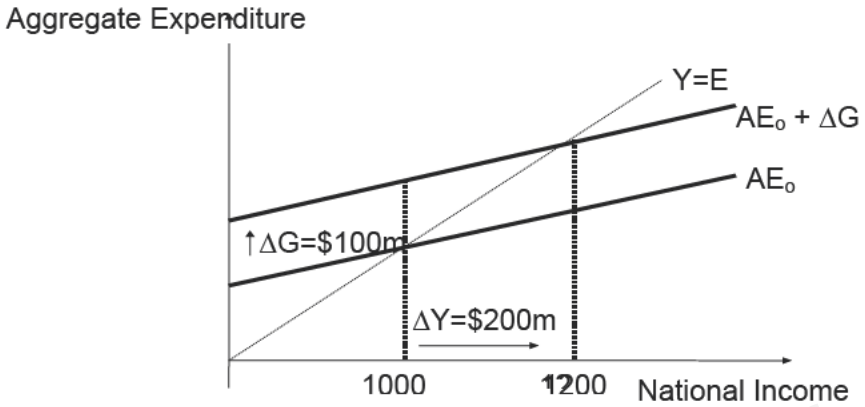
- The final change in Y is obtaind by:

  △ Y =△ AE * K

  △ Y = $100 * 2 where△ AE= $100m and k =1/mpw or

  k = 1/ (0.50) = 2

- Thus an extra investment expenditure of $100m has created $200m of income which is higher than the initial amount of $100m.
- Assume that the initial Y is $1000m and with the change of Y of $200m, the new equilibrium national income is at $1200m now.



Changes in Equilibrium due to changes in investment

- Conclusion
  - The initial increase in investment expenditure would result in a larger change in national income due to the multiplier process.
  - The extent of the increase in the change in national income is dependent on the k value.
  - With a larger value of k, the initial increase in investment expenditure will result in a much larger change in national income.
  - For example, if the k value is not 2 but 4, the initial increase of $100m would result in a much larger change in national income to $400m
    (Δ Y = Δ AE * K = $100 * 4 = $400)
  - **Thus, the k value would determine the extent of the change in national income with the multiplier process in place.**

  - The value of k would then be dependent on the mpc, mps, mpt and mpm.
  - These marginal propensities depend on the nature of the economy (whether big or small , whether import dependent or not , mind-set of people regarding savings and consumption , Government policy determining tax rates & savings pattern etc).

Level	Descriptors	Marks
L3	Excellent explanation the multiplier process with good examples and clear illustrations to show the process that result in a larger change in national income. Extent of the increase in the national income is well explained using different k values.	7-10
L2	Clear explanation of the multiplier process with relevant examples and illustrations used to show the process that result in a larger change in national income as a result of an increase in investment expenditure.	5-6
L1	Superficial explanation of the multiplier process with little or no example to illustrate the working of the process that caused an initial increase in investment expenditure to result in a larger change in national income.	1-4

b) Discuss the view that a large increase in national income is often but not always desirable. [15]

Intro:

Explain increase in national income means achieving economic growth (restricting the definition to material income provides more scope for the 'discussion' later)
Economic growth can be actual growth and potential growth. Explain that a large increase in national income is equivalent to targeting a high rate of economic growth compared to normal economic growth rate.
To achieve actual growth the economy must have excess capacity given any increase in AD. To achieve potential growth, the economy must expand the quantity and quality of its resources, improve the level of technology so as to increase the overall productive capacity of the economy and sustain the actual growth without causing a rise in general price level.

Body:

Point of View 1:
Achieving a large increase in national income is desirable.
Explain how a large increase in national income can be achieved through the large increase in Consumption, Investments, Government Expenditure or (X-M) ↑ thereby increasing the AD of the economy. Through the multiplier process, the real national income will thus grow quickly provided the economy has excess capacity and it is not at its full employment level of output yet. This can be further enhanced if the economy is also experiencing overall increase in productive capacity.

Discuss why this large increase in national income is desirable.

- Improvement in material SOL
- Ability to achieve other macroeconomic objectives eg: Internally: low unemployment rates because greater demand for resources and labour. Greater output can also ensure price stability. Externally: Growth can increase the ability to export, and if exports are competitive, this may improve BOT.
- High growth will mean the economy is very healthy and optimistic. This will attract a lot of FDI into the economy. Increase in FDI will lead to even higher growth, and also this increase in productive capacity will result in potential growth as well.

Point of view 2: Large increase in national income is not desirable.
Large increase in national income has its limitations and may have negative impact on the economy.

- Explain how large increase in national income, if it is actual growth, and the economy is reaching its full capacity, could easily result in rising prices without any increase in output. Show diagram. This could lead to demand pull inflation. Explain further why this is bad for the country.
- With growth, level of income rises. This would mean higher purchasing power and more people may buy imported G&S of higher quality and variety. This may make the balance of trade to worsen, and may even affect the BOP assuming capital account is unchanged. Explain why this is bad for the country.
- High rates of economic growth could result in huge income disparity where people in the industries that resulted in this high growth rates could see a quick high increase in income while those working in the other industries not related to this growth may see stagnant incomes, leading to a widening income gap.
- High rates of economic growth could lead to structural unemployment. If the economic growth is due to industralisation and manufacturing, people in the primary sector could face structural unemployment as they do not have the skills to enter these industries.
- High rates of growth results in higher level of productive activities. This often results in higher level of negative externality. Such spillover effects on third parties can result in lower consumer well-being. (Decrease in non-material SOL instead).
- Non material costs of growth (e.g. pollution, social costs like loss of traditional culture etc)

Summary and Conclusions

The desirability of 'large increases' in national income depends of a myriad of conditions and considerations.

1. **Source of the large increase**

- If the large increase in NY is driven by increases in 'C' rather than 'I' it would likely be rather inflationary and temporary because productive capacity is not enhanced.
- If the large increase in NY is driven by increases in 'I' rather than 'C' the large increase would be more sustainable and thus more desirable. The sustained growth in this case is achieved by increases in productive capacity that accompanies the increased in AD.

Evaluation: However, the increases in 'I' need to be appropriate to the nature and the state of the economy. For example, investments in 'labour saving' equipment that may increase productivity in an economy that has surpluses of labour and high levels of unemployment may only serve to exacerbate the situation and thus not be desirable.

2. **Non-material costs of growth:**

- The value that a society places on these non-material costs will impact the desirability of growth. A society that values their 'clean air' or 'cultural traditions' very highly may deem large increases in NY as undesirable.

3. **Current state of the economy:**

- Depends on whether the country has any other macroeconomic problems. Eg huge government debts? High Inflation rates? High unemployment rates? BOP deficit? These may affect the overall picture and lead to a different conclusion.
- Government objectives: Depends on what the government chooses to focus on as a macroeconomic objective. Some governments chooses to focus more on price stability, some prefer to focus on trade.

L3	Excellent and very well developed two sided discussion and very good examples relating to any economy and illustrating with relevant and clear concepts.	9-11
L2	Clear and developed two sided discussion with use of tools of analysis and some examples used on whether large increase in national income are often, but not always, desirable, or very well developed one sided discussion with tools of analysis and relevant examples.	6-8
L1	One sided discussion or superficial two side discussion on whether large increase in national income is desirable or not desirable. Mere stating of points without elaboration.	1-5
E2	Judgement based on sound economic analysis on the extent of the statement's validity using broad evaluation points to elaborate.	3-4
E1	Many unexplained judgement on the view of large increase in national income.	1-2

6 "The United Kingdom's is in recession and its trade deficit ballooned to its highest level since modern records began, sparking concerns among prominent economists."

The Guardian Aug 2012 (Adapted)

a) Explain the impact of a worsening trade deficit on an economy. (10)

b) Assess whether exchange rate policy is the most effective policy to solve United Kingdom's problems. (15)

Synopsis:

The context here implies a focus on the negative impact (cue words; 'concerns', 'worsening', 'problems'). The policies addressed, which must include ERP, should be policies that are targeted at UK's problems. However, some awareness of the potential positive impacts of a trade deficit should also be demonstrated.

In part a) the explanation of the impact would require a thorough and systematic explanation of the impact channels (with analytical/theoretical support). Some assessment of the different impact scenarios should be made. The cue word 'worsening' implies a trade deficit of some duration, and this should be addressed in a good answer.

In part b) the 'problems' should be clearly identified (would be suggested by what was answered in part a). How effective ERP is at tackling the problems would need to be clearly explained before assessing the effectiveness of alternative policies (at least 2 more). A comparative assessment of the policies explained is expected.

Part a)

Intro	•Define key terms/concepts: 'trade deficit' ⇨ current account of the BoP. Scope of essay: 'impact'⇨ inflation, unemployment & growth. •Set Context: Developing Ecy and Ecy w poor growth.
Body 1 (Internal)	•Body 1 (Primary channel through which a 'trade deficit' affects the KEIs.) •{(X-M)<0} ⇨ AD↓ ⇨ Ye↓ ⇨ UnNt↑, GPL↓. (inflation, UnNt, growth) • Other effects : income inequality may worsen .
Body 2 (External)	•BoP (worsens), •Exchange rate (depreciates)
Body 3 (Possible +ve impact)	•For a developing country. •High inflationary.
Conclusion	•Summative conclusion

L1	Demonstrates knowledge of the impacts on the KEIs but is unable to explain the channels through which they occur.	1-3m
L2	Is able to explain some of the channels through which the impacts were transmitted, using ec theory. Some understanding and ability to use the AD/AS model should be evident. However, contextual setting would be largely absent. (Note: Reward scripts that show analytical ability rather than knowledge. Thus, showing the channels through which at least 2 impacts are made would be sufficient to reach this level)	4-6m
L3	Clearly explains the channels through which the impacts are made, with good use of the AS/AD model, set in a context (not necessarily the UK). Shows awareness of the conditions affecting the magnitude of the impacts.	7-10m

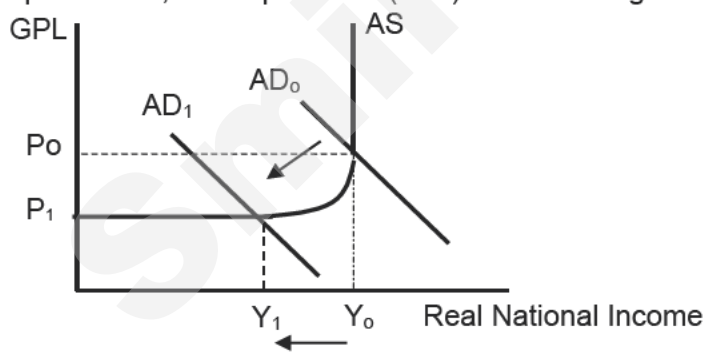
Part b)

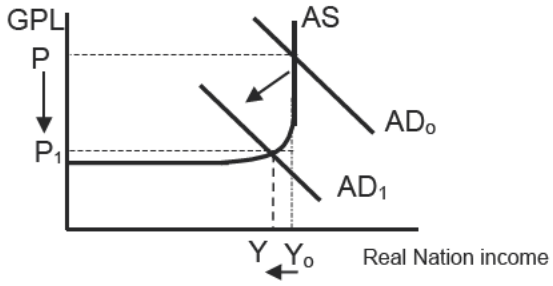
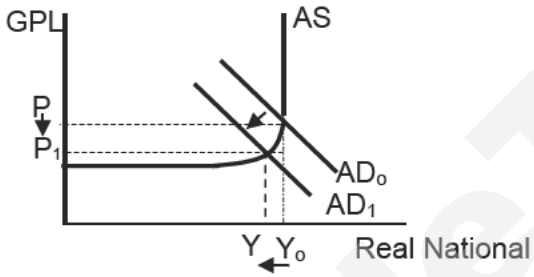
Intro	•Define the 'problems'; recession and trade deficit. Define the ERP, FP and MP, Protectionist policies. Outline the objective of the government. •Scope, Limited to these problems,
Body 1 (How ERP can work)	•(US$/£)↓ ⇨ PrX↓ ⇨ X revenue↑ ⇨ (X-M)↑ ⇨ AD↑ ⇨ Ec Growth↑ ⇨ UnNt↓ • (US$/£)↓ ⇨ Pm↑ ⇨ M expr ↓⇨ (X-M)↑ ⇨ AD↑ ⇨ Ec Growth↑ ⇨ UnNt↓
Body 2 (Limitations of ERP)	• Marshal -Lerner condition • Investor confidence weakens (FDI↓) • Does not address domestic source s sources of weak AD or productive capacity.
Body 3 (DD side policies)	•DD side Policies & •limitations
Body 4 (LR-SS side policies)	•LR-SS side polices •Limitations
Body 5 (Protectionist policies)	•Protectionist policies •Limitations
Conclusion	• Judgment

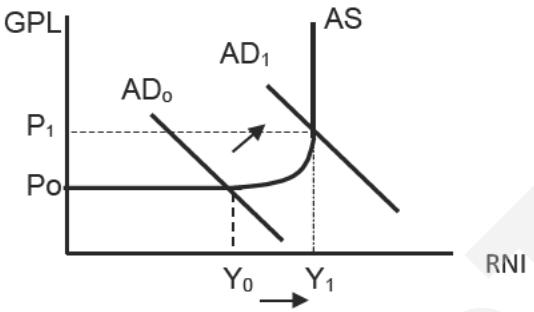
L1	Some knowledge of the 'problems', incomplete understanding of the mechanism through which ERP works. Little or no knowledge/understanding of the alternative policies.	1-4m
L2	Clearly identifies 'problems', (-ve growth & trade deficit) Explains how ERP can address these economic problems. Explains how alternative policies (at least 2) can address the economic problems. Comparisons are stated rather than explained. {Good one-sided or weak 2-sided}	5-7m
L3	Clear explanation of the workings of ERP to solve UKs 'problems', which are clearly outlined. Clear explanation of the workings of at least 2 alternative polices. Shows good understanding of the limitations of these alternative policies examined. Explains the Comparisons of policies examined based on defined criterion. Shows good contextual applications (e.g. conditional effectiveness of the policies examined)	8-11m
E1	Comes to a simple judgment, based on considerations of effectiveness, time-lag, side-effects etc.	1-2m
E2	Substantiates the judgment with analytical support.	3-4m

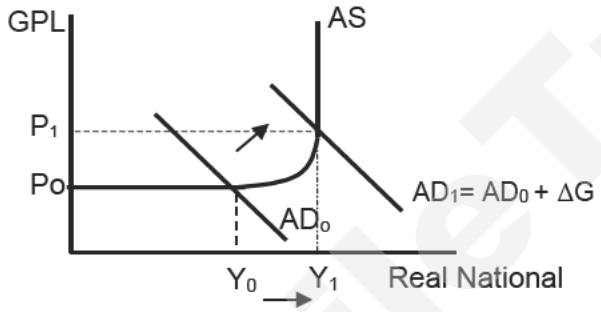
2013 Prelim P2 Qn 6 Suggested Essay

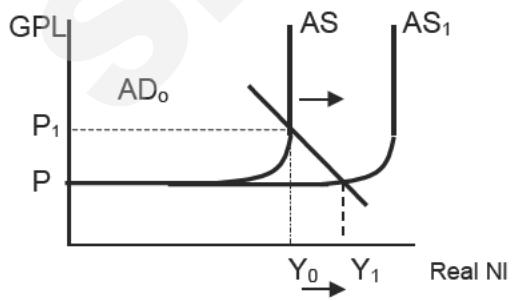
6		"The United Kingdom's is in recession and its trade deficit ballooned to its highest level since modern records began, sparking concerns among prominent economists." *The Guardian Aug 2012 (Adapted)*	
	a)	Explain the impact of a worsening trade deficit on an economy.	(10)
	b)	Assess whether exchange rate policy is the most effective policy to solve United Kingdom's problems.	(15)

a)	Explain the impact of a worsening trade deficit on an economy.	(10)
Introduction	A trade deficit occurs when a country's export revenues are less than its import expenditures. It is sometimes called a country's 'balance of trade', which, technically, refers only to the visible balance of a country's current account. A trade deficit means that a country is, on balance, spending more buying goods from abroad than it is earning selling goods overseas. The impact of this deficit on the economy can be examined by looking at its impact on inflation, unemployment and growth. The nature and severity of this impact would depend on the current health of the economy, the duration of this 'worsening' deficit and the stage of development of the economy in question. In my analysis of the impacts I will assume that the only economic change is the trade deficit and that all other economic factors are taken to be unchanged.	Definition Scope Context
Body 1 (Basic channel)	Although, a trade deficit impacts an economy through both the Aggregate Demand (AD) as well as the Aggregate Supply (AS), the primary and most immediate impact is probably through the AD. When a country experiences a trade deficit, its export revenues are less than its import expenditures, this implies that (X-M) becomes negative. This has the effect of shifting the AD curve to the left, (see fig 1), where $AD_1 = AD_0 + \Delta(X\text{-}M)$. The impact of this change will be to reduce growth, increase unemployment but reduce inflationary pressures.  	P E E L

Body 2 (magnitude and impact)	The magnitude and significance of this impact would depend on the current health of the economy, its reliance on the exports as well as its stage of development. For an overheating economy experiencing high inflation like China, a trade deficit may actually be quite welcomed, as it would lead to lower rates of inflation whilst having little or no major effect on real national output. (fig 2). The initial aggregate demand (AD_0) is on the classical range of the AS and the GPL is high (Po). A fall in AD to AD_1 would have very little effect on national income (fall from Y_0 to Y_1) but a large effect on the GPL (Po to P_1). Thus, for a country with an overheating economy and high inflation like China may not feel that a trade deficit would affect them too negatively. 	P E, E L
Body 3 (Positive impact)	Similarly, for a closed economy like Cuba, which is not heavily reliant on exports to generate economic activity, the effect on national income would be muted. This is because, for such economies, the shift in AD would be small and not very significant as the trade deficit (X-M) as a proportion of the total AD (C+I+G + (X-M)) is small. Countries like Cuba are more reliant on their domestic economies. Thus, the overall impact of the trade deficit on the economy's income, inflation and unemployment would also be limited as the shift in AD resulting from the trade deficit is rather small. (Fig 3) 	P E,E L P E,E
Body 4 (Degree)	Finally, the magnitude of the impact of a worsening deficit would not only depend on the degree to which it worsens but also the duration. A prolonged deficit can be likened to being continually in debt, since it would mean that the country is spending more on its imports than it is earning from selling its exports. This implies that it needs to finance this expenditure from past savings or from 'borrowing' from abroad. Thus, a prolonged deficit would cause a country to become a 'debtor' nation with a growing external debt. Such countries such as Chile, Argentina and Brazil of the early 1980's would face pressure from the international community to resolve their debt after their prolonged balance of payments deficits.	L
Summary	A worsening trade deficit can, in some circumstances, be desirable, as in the case of newly developing countries importing large amounts of capital equipment. However, it is generally considered as undesirable for most economies and a prolonged trade deficit could potentially have dire consequences for a country's international standing. Thus, resolving a trade deficit would be a priority for most governments.	Summative conclusion

b)	Assess whether exchange rate policy is the most effective policy to solve United Kingdom's problems.	(15)
Intro	The primary problems faced by the UK are, the recession it is facing as well as its rapidly rising trade deficit. An exchange rate policy of depreciation can be used to address each of these problems individually but if it can address both problems simultaneously needs to be examined. The effectiveness of other policies will also be assessed against ERP to help decide on the most effective approach to handle these two problems.	Scope Approach
How ERP can work	An ERP refers to the deliberate attempt by the government to manipulate its country's exchange rate in order to influence its economy. In this context the UK government can depreciate the value of the UK£ by selling UK£s in the foreign exchange market. This has the effect of making UK goods gain an artificial comparative advantage, by making UK exports relatively cheaper (denominated in US$). When the value of the £ falls, the price of UK exports in terms of US$ would also fall. This is because US importers will have to pay less US$ for every £. Conversely, because of the weaker £, UK importers will have to pay more £s for every US$. This has the effect of increasing the price of imports, in the eyes of the British importers, discouraging them from buying imported goods. Thus, by devaluing the £, export revenues would increase and import expenditures would decrease i.e. (X-M) would increase. This has the effect of improving the trade balance position, at the same time it would help to increase AD, shifting the AD function to the right from AD_0 to AD_1 (fig 4). This has the effect of both reducing unemployment and increasing growth. 	P E E L
Limitations of ERP #1	A Policy of depreciation, however, is not always effective. To correct the UK's trade deficit, depreciation will require certain conditions for it to be effective. The primary condition is called the 'Marshall-Lerner' condition, which states that the sum of the price elasticities of demand for exports and for imports must be greater than one. It the condition is not met, depreciation may actually cause the trade balance to worsen. The lack of response of quantity demanded for exports would mean that the revenue gains from the cheaper prices (resulting from the depreciation) would be negated by the increased expenditures on imports as quantity demanded for imports are not responsive to the higher prices of imports (resulting from the depreciation). The UK would likely meet the Marshall-Lerner condition and thus a depreciation of the £ would likely have a positive effect on the UKs trade balance.	P E E L

Limitations of ERP #2	Another limitation of depreciation as a policy is that it does little to address the capital account of the Balance of Payments. Although it may improve the trade balance, a continued depreciation of a currency may lead to a lack of confidence in the economy causing investors to move their investments out. During the Asian financial crises of the late 1990s Asian governments had a difficult time trying to retain investments in their respective economies as their currencies depreciated continuously.	P E,E L
Limitations of ERP #3	Another, limitation of ERP is that it does not address the domestic causes of the weak economy. It the cause of UKs problems is a weak domestic economy, where domestic consumption and investments are sluggish, then depreciation will do little to help the situation. ERP focuses on the external economy and the external balance, if the cause of the problem is domestic, then increasing export earnings will only be a temporary increase in economic activity.	P E E L
Bridge	To address the shortcomings of ERP, the UK government could use other policy tools to target either domestic aggregate demand or domestic aggregate supply. Further, it may also choose to limit imports with protectionist approach.	Bridge
Fiscal Policy	The problem of a recession in the UK can be addressed by more traditional demand-side macro-economic policies of fiscal or monetary policies. Such policies can address the sluggish domestic demand in the UK economy. An expansionary fiscal policy where governments increase expenditures and reduce taxes will have the effect of increasing consumption, investment and government expenditure. This would boost the AD through the multiplier and similarly increase national income and growth in the UK.  	P E E
FP (Limitations)	The effectiveness of FP in the UK would depend on the size of the Keynesian multiplier in the UK, which is likely to be fairly large. A large multiplier would make FP effective as a small injection of 'G' would have a bigger effect on national income. However, an expansionary FP would imply that the British government run a budget deficit, which would need to be financed. If the government is already having a public debt, the budget deficit would add to problem. Thus, although FP can address the inadequacies of the domestic economy, unlike ERP it is unable to address the trade deficit problem.	L P E E L

Monetary Policy	To avoid the problem of increasing the public debt the British government could increase AD by manipulating money supply, i.e. monetary policy (MP). By adopting an expansionary MP, the British government through the Bank of England reduces increases British money supply. This has the effect of reducing interest rates which increases investment levels (through the Liquidity Preference function). The higher levels of investments will then, through the multiplier, increase the AD, reducing recessionary pressures. This again will have the effect of being anti-recessionary but will have little effect on the trade deficit, as was the case with FP. In fact, as with FP, the increased economic activity may have a detrimental effect on the trade deficit because, with increased income in the UK, the British demand for imports will increase, worsening the trade deficit. Furthermore, with the UK economy already experiencing low levels of interest rates, which implies that British business sentiment is very low and lowering interest rates any further will not encourage any increased levels of investments. This situation is described as a 'liquidity trap'. Thus, MP would not be a viable or appropriate policy for the British government.	P E,E L P E E L
Supply side policies (LR & SR)	Another policy approach available to the British government is Supply-side policies. This approach refers to policy measures that target the Aggregate Supply curve either to lower costs in the short-run or to increase productive capacity in the longer run. Short-run supply side policies include such policies as 'rent controls' or 'wage controls' which reduce or control the costs of production. These policies can quickly achieve higher levels of income and even have a positive effect on the trade balance as they enable British exports to be more price competitive. This seems a viable policy approach but is usually difficult to achieve as labour unions are adverse to any policy that reduces the wages of their workers. Long-run supply side policies do not usually face that problem but usually involve a long gestation period. This policy approach involves increasing the productive capacity of the British economy through increasing either the quantity or the quality of its factors of production. The principle behind this approach is that it would shift the AS curve rightward increasing national income. Examples of this would be government building of infrastructure like the 'M' motorway systems across Britain or expenditures to improve education system in Britain.  	Intro (Marker) P E,E L P E E L

SS-side (Limitations)	can be reaped. Motorway systems take a long time to build and education systems literally take a lifetime before the recipients of the new improved education measures can enter the workforce. Furthermore, such policies require large amounts of government funding which can be very inflationary in the short-run or can exacerbate the burden of the government debt. For a government facing a debt problem, the British government would not find such a policy an attractive one to pursue.	P E E L
	Based on the assumption that the primary problems faced by the UK economy are its recession and its trade deficit, it can be seen that a policy of depreciating of the pound (£) would seem very attractive. This is because it would seem to address both these problems simultaneously. However, this policy does have its limitations, the chief of which being that it does not directly address the weak domestic UK economy, which may be the primary cause of the problems in the first place. In examining the other policy approaches available to the British government that may address the weak domestic economy, Demand-side policies, either FP or MP, would not be considered appropriate given the debt problems faced by the government and the weak economic sentiment of the British economy. With regard to Supply-side policies, the primary concern would be the reaction of the trade unions, which can be very powerful in Britain, and the lengthy period for these policies to take effect. Given the urgency of solving its economic problems the UK government would likely adopt a policy that would see more immediate results. Thus, given the current circumstances I would say that an exchange rate policy involving the depreciation of the pound (£) would be most effective.	Concl. Compare Judgment

The END

Candidate Name: _____ CT Group: _____

Index number: _____

PIONEER JUNIOR COLLEGE

JC 2 Preliminary Examination 2013

ECONOMICS 8819/01

Higher 1

Paper 1 **16 September 2013**

3 hours

Additional materials: Writing Paper

READ THESE INSTRUCTIONS FIRST

Write your class, 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.

At the end of the examination, fasten your answers for Questions 1, 2 and 3 or 4 separately.
The number of marks is given in brackets [ ] at the end of each question or question part.

This document consists of **8** printed pages

[Turn over

Section A

Answer **all** questions in this section.

Question 1: Car pollution

Figure 1

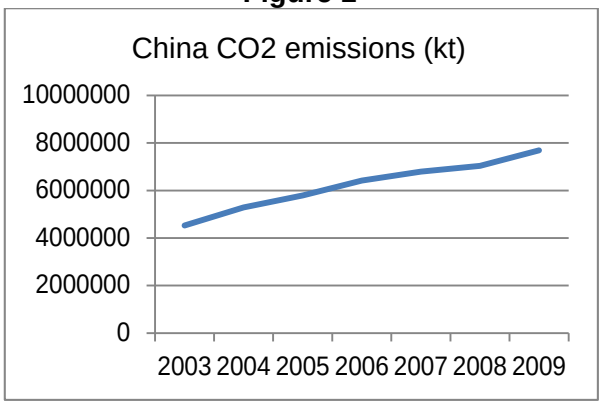
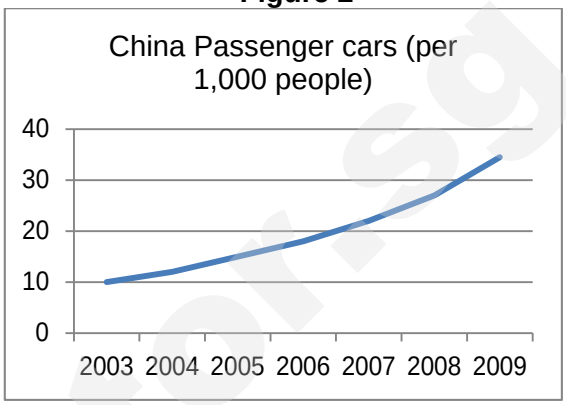


Figure 2



Source: *World Bank*

Extract 1: Pollution from car emissions killing millions

An explosion of car use has made fast-growing Asian cities the epicentre of global air pollution. Worldwide, a record 3.2m people a year died from air pollution in 2010, compared with 800,000 in 2000. It now ranks for the first time in the world's top 10 list of killer diseases, says the Global Burden of Disease (GBD) study.

According to a UN report - in 2010, more than 2.1m people in Asia died prematurely from air pollution, mostly from the minute particles of diesel soot and gasses emitted from cars and lorries. 65% of all air pollution deaths are now in Asia. Air pollution also contributes to higher rates of cognitive decline, strokes and heart attacks.

The full effects of air pollution on health in Asian cities may not be seen for years. Toxic effects like cancer surface after a long latency period. Therefore, exposure to air pollution will have to be reduced today to reduce the burden of disease.

Improvements in car and fuel technology have been made since 2000 but these are nullified by the sheer increase in car numbers. Nearly 18m are expected to be sold this year alone.

Experts suggested the need to "demand restraint measures", to put a check on the growing number of cars so that there was a check on pollution.

Adapted from *The Guardian,* 17 Dec 2012

Extract 2: Test-bedding of Electric Vehicles In Singapore

A multi-agency taskforce comprising different ministries, statutory boards and industrial partners is involved in the Electric Vehicles (EVs) test-bedding programme. $20 million has been set aside as part of this programme to support infrastructure development and test-bed EV.

“Singapore is well-positioned for the deployment of EVs because of our compact urban environment, and robust electrical grid and IT infrastructure”, says Mr Lawrence Wong, Chief Executive, Energy Market Authority.

The EV test-bed also offers potential economic benefits for manufacturing and R&D, for example, in areas like battery technology, power electronics and electric drive systems. Singapore’s capabilities in electronics and R&D will enable us to attract and anchor such new and high-value activities.

The EV test-bed also serves as a platform for companies to experiment and adapt innovative solutions for use in other countries.

Factsheet on EV

- EVs can help reduce carbon emissions. Pure battery EVs offer significant energy and pollution advantages compared to conventional petrol and diesel vehicles. The magnitude of this advantage depends on the source of the electricity. For example, electric vehicles charged from renewable energy sources like solar and wind have virtually zero carbon emissions.
- Even for countries with limited renewable energy sources, if the EVs are charged using natural gas power generation (as is the case in Singapore), it is still possible to achieve some reduction in carbon emissions compared to conventional petrol vehicles.

Adapted from Energy Market Authority, press release, 6 May 2009

Extract 3: China consumers shun green vehicles

The hope that China will become a pioneer in the shift towards "clean car" technology have suffered a setback as the Chinese consumers show little sign of interest in electric and hybrid vehicles despite ambitious government plans. It had been hoped that government subsidies and policy support would help China's manufacturers, such as BYD, to mass-produce electric cars. But BYD has scaled back its ambitions after failing to find a market because of costs, safety concerns and underdeveloped battery technology. Reflecting the lack of progress, Prime Minister Wen Jiabao recently published an article in a Communist party journal calling for a rethink of China's "road map" towards alternative green vehicles.

Registrations of new passenger cars, especially the luxury sector (Mercedes, BMW, Audi and Rolls-Royce), are still surging. This runs directly opposite to the government's stated goal of creating a more equal, environmentally friendly nation, suggesting a change of strategy may be needed. The state is unlikely to completely abandon its promotion of "clean" car technology, but it may have to revise its plans.

[Turn over

Despite subsidies of 60,000 yuan (£5,700) for pure electric vehicles and 50,000 yuan (£4,700) for plug-in hybrids in five pilot cities, there have been few buyers because regular cars are still cheaper and more reliable. Rather than jump directly to electric cars, it now expects government officials to pay more attention to hybrid cars and fuel-efficient conventional vehicles. Although "in the long term pure [electric vehicles] may still become mainstream, it is welcome to see the government slowly but surely recognising that its targets are inflated," IHS, a Shanghai-based consultancy noted.

With the frequent traffic congestion and smog even at current unhealthy levels, even if all the new cars were hybrid or electric, the congestion would be incredible.

"Green growth" now looks a less likely prospect than a simple market slowdown.

Adapted from theguardian.com, 24 August 2011

Questions

(a) **(i)** Using Figure 1, describe the trend of China's CO_2 emissions from 2003 to 2009. [2]

(ii) Explain one possible reason to account for the trend observed in a(i). [2]

(b) **(i)** Explain what is meant by the term 'negative externality'. [2]

(ii) With reference to Extract 1, explain how the existence of a negative externality can lead to market failure. [4]

(c) Analyse the impact of the Electric Vehicles (EVs) test-bedding programme on Singapore economy. [6]

(d) **(i)** Using DD/SS analysis, explain how "consumers show little sign of interest in electric and hybrid vehicles despite ambitious government plans" (Extract 3) affect the market for EV. [6]

(ii) In light of the "lack of progress" in reducing car pollution through the use of subsidies, what recommendations would you present to the Chinese government? Justify your answer. [8]

[Total: 30 marks]

Question 2: Rising prices, falling prices

Table 1: Inflation Rates in Selected Countries, 2007-2011

Country	2007	2008	2009	2010	2011
Brazil	3.6	5.7	4.9	5	6.6
China	4.8	5.9	-0.7	3.3	5.4
Japan	0.1	1.4	-1.3	-0.7	-0.3
Singapore	2.1	6.5	0.6	2.8	5.3

Source: *The World Bank*

Extract 4: Brazil's rising inflation hampers growth

Keeping inflation under control is one of the main challenges facing the new government, amid risks that the economy is over-heating following a credit boom last year and rapid growth in consumption.

The rising inflation is threatening to push Brazil's policy interest rate, already among the highest among large economies at 11.25 per cent, even higher. This is in turn attracting hot money from abroad and strengthening Brazil's currency, the real, damaging the competitiveness of domestic manufacturers.

Exchange rates cripple the country, but inflation kills," said one government official in a recent interview in Sao Paulo

Economists point out that Brazil's development is at a critical phase. Driven by consumption, her internal growth is strong. At the same time, external demand for Brazilian resources further fuel price rises. China, for instance, has become the fastest growing consumer of Brazilian exports, from little more than 5 percent in 2003 to more than 15 percent, in 2009 and its appetite continues to grow.

Consumer prices rose 6.71 percent in June from a year ago, due partly to an increase in food and fuel costs, which speed up inflation even more.

Source*:* Adapted from *CNBC* 25th April 2011and *Bloomberg* July 11 2011

[Turn over

Table 2: Selected Key Economic Indicators, Brazil

	2007	2008	2009	2010	2011
GDP at 2005 constant prices (US$b)	973	1,023	1,019	1,097	1,127
Unemployment (%)	8.1	7.1	8.3	8.2	8.2
Inflation (annual %)	3.6	5.7	4.9	5	6.6
Current account balance (% of GDP)	0.1	-1.7	-1.5	-2.2	-2.1
Government debt (% of GDP)	57.4	56.6	60	52.2	52.8

Source: *The World Bank*

Extract 5: Japan's Central Bank marks a goal for higher inflation

Hoping to win its long-futile battle against falling prices, Japan's central bank on Tuesday said it would try to kindle inflation, setting a goal of 1 percent, by pumping tens of billions more dollars into the economy.

While central bankers usually worry more about keeping inflation in check than trying to encourage it, Japan's economy has labored for more than two decades against the stagnating effects of falling prices, or deflation.

The government said Monday that the Japanese economy shrank at a 2.3 percent annual rate in the October-to-December quarter, reversing robust gains in the previous three months, as weak overseas demand and a strong yen hurt manufacturing. Prices in Japan have not risen at an annual pace above 1 percent since 1997, when deflation set in. As widely expected, the bank left its benchmark interest rate unchanged at a range of zero to 0.1 percent.

Tokyo stocks rose modestly, and the yen weakened against the dollar on the news. A weaker yen is good news for Japan's economy because it strengthens the competitiveness of its exports. The yen's recent strength has battered the country's exporters like Panasonic, which predicts record losses for the year.

Mr. Shirakawa, Governor of Bank of Japan, has long argued that monetary policy alone cannot bring an end to deflation in Japan, a situation that he says is caused by a lack of demand. Economists say the bank is running out of options, since interest rates are already effectively at zero and because it has little leeway to expand its asset-buying program.

No amount of money can energize a recovery, Mr. Shirakawa has said, without measures to restructure and expand the real economy. But the Japanese government, saddled with a debt of 220% of GDP, twice the size of its economy, has struggled to spend enough to sustain strong economic growth, and economic reforms have fallen short. This serious fiscal position is made worse by the nation's natural and nuclear disasters. And now, demographics are taking a toll. With low birth rates and little inward migration, Japan is facing an ageing and shrinking population. Social security and pension costs have soared as Japan's baby boomers reach retirement.

Source: Adapted from *www.nytimes.com,* 1 Sept 2011 and 14 Feb 2012

Extract 6: Singapore exchange rate policy losing anti-inflationary mojo?

A debate on the effectiveness of Singapore's exchange rate policy in controlling inflation has surfaced as the country restructures its economy to boost productivity.

The restructuring – a large part of which involves capping the expansion of the foreign workforce – is likely to lead to higher inflation from rising wages. At least one economist believes this limits the central bank's ability to keep price increases in check through a strong Singapore dollar, since this works mainly by making imports cheaper.

'If inflation is being driven by domestic supply-side pressures, in particular those owing to tight foreign labour supplies or policies, then the ability of the exchange rate policy to curb inflation will be muted or less effective than in the past,' said a DBS report yesterday.

But there are market watchers who think that a strong currency still helps by containing domestic price pressures indirectly. And with oil prices creeping up, the spectre of imported inflation remains.
Some economists noted that the economic restructuring has, to some extent, made Singapore's exchange rate policy more challenging to manage, but the 'mechanism still works'.

The DBS report threw the spotlight on how the measures could affect exchange rate management. It supported a 'slightly softer' monetary policy stance as it could facilitate restructuring. There would be more pain for the export sector if the policy is tightened further.

And if the growth momentum turns out to be slower than expected, an even more gradual pace of appreciation would support the economy, it added.

Source: Adapted from *Business Times,* 9 Mar 2012

Questions:

(a) Using the information in Table 1, compare the inflation rate in Brazil and Singapore, between 2007 and 2011. [2]

(b) Using AD/AS analysis, explain the possible causes of inflation in Brazil. [4]

(c) **(i)** With reference to data, explain how high inflation is 'damaging the competitiveness of domestic manufacturers' in Brazil. [3]

(ii) With reference to Table 2, comment on Brazil economic performance in 2011. [5]

(d) Discuss the view that a stronger currency is bad news for Japan but good news for Singapore. [8]

(e) As a consultant economist, what options would you present to the Japanese government as a possible response to the economic problems that the data suggest? Justify your answer. [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) Discuss whether direct provision by the government in the markets for merit and public goods will lead to a more efficient allocation of resources. [15]

4 **(a)** Explain the benefits of free trade. [10]

(b) Protectionism, inevitably, emerged during a period of global economic downturn.

Discuss whether countries should resort to trade protectionism when faced with a global economic downturn. [15]

[End of Paper]

PJC 2013 PRELIM EXAM (H1 ECONOMICS)

Question 1: Car pollution

<u>Suggested Answers</u>

(a) (i) Using Figure 1, describe the trend of China's CO_2 emissions from 2003 to 2009. [2]

General trend: China's CO_2 emissions have generally increased from 2003 to 2009. [1m]

Refinement trend: China's CO_2 emissions have been rising consistently every year [1m] OR have almost doubled between 2003 and 2009. [1m]

(ii) Explain one possible reason to account for the trend observed in a(i). [2]

Rapid economic growth in China has resulted in rising affluence amongst the people in China. As a result, their demands for normal goods such as cars have also been increasing. As shown in Figure 2, rising number of passenger cars in China might have resulted in the CO_2 emissions of China to have risen.

Other possible reasons such as rising economic activities such as manufacturing will be accepted as long as candidates show and explicit linkage between the reason provided and the rising trend in China's CO_2 emissions.

(b) (i) Explain what is meant by the term 'negative externality'. [2]

Negative externalities refer to the spillover cost that affects someone not directly involved in the production / consumption of the good or service and it incurs outside the operations of the market, without compensation.

For example, consumption of cars in Asia has resulted in higher rates of medical issues such as cognitive decline, strokes, heart attacks and have caused many (the non-users or third parties) to have died prematurely from air pollution caused by rising number of transportations on the roads.

Complete and accurate definition: 1m; example from Extract 1: 1m [Note: the example required here is a brief one and should not overlap too much with the 3rd party & ext. cost mentioned in b(ii)]

Candidates who did not provide examples will be awarded 2 marks if they further elaborate the consequence of an existence of negative externality in a market.

(ii) With reference to Extract 1, explain how the existence of a negative externality can lead to market failure. [4]

Market failure refers to the inability of the free market forces of demand and supply to allocate resources efficiently to achieve maximum welfare in the absence of government intervention.

Consumption of cars produces carbon emissions and results in air pollution to the residents staying near major roads, as well as other residents who do not drive. As identified in question b(i), rising consumption of cars in Asia has brought about multiple medical issues. As a result, external costs such as medical costs paid by third parties have been incurred in the consumption of cars.

Since Marginal Social Costs (MSC) = Marginal Private Costs (MPC) + Marginal External Costs (MEC), MSC deviates from MPC due to external costs involved. Assuming there's no positive externalities, Marginal Private Benefit (MPB) = Marginal Social Benefit (MSB). The private equilibrium occurs when MPC=MPB since drivers consider only their own private benefits and costs. The socially optimal output is where MSC=MSB. Since MSC > MSB at private equilibrium, there is an over-usage ('overconsumption') of cars and society's welfare can be improved if less cars were used.

Thus, the presence of negative externalities will cause the economy to over-allocate resources to the particular market, resulting in overconsumption or overproduction and bring about a situation of less than maximum welfare. Thus, the market fails in the presence of negative externalities.

(c) Analyse the impact of the Electric Vehicles (EVs) test-bedding programme on Singapore economy. [6]

The EV test-bedding programme was implemented in Singapore due to the suitability of our economy in terms of the geographical size, available infrastructure and the high levels of technology in our economy.

The Singapore government sees economic benefits that this EV test bed can bring about. Singapore can potentially be on the road to identifying a new comparative advantage (CA) in the areas of electronics and technologies for EV such as battery technology, power electronics and the drive systems. Developing a new CA will allow us to boost our exports as our robust trade sector will be further expanded, which further improves our Balance of Trade (BOT) and as such a healthier current account.

On top of that, The EV test-bed also serves as a platform for companies to experiment and adapt innovative solutions for use in other countries. Therefore, with more research and experimental initiatives, various jobs will be created and it will also allow us to attract more foreign direct investments (FDI) into Singapore given that we are already an important financial and trade hub. This will bring about a healthier capital account for Singapore.

If the test-bed programme is successful and various new industries are developed in Singapore, Singapore's exports earnings (X) and investment expenditure (I) will increase. Increases in X and I will increase AD, and brings about multiplied increase in national income, bringing about economic growth. A rise in national income means higher levels of production of goods and services, hence higher derived demand for factors of production, such as labour, maintaining the levels of employment in Singapore.

Thus, the development of EVs can help Singapore government achieve 3 of the macro aims, namely, growth, employment & healthy BOP. However, if all these positive achievements result in AD rising faster than AS, then demand pull inflation may result in the short run. But, in the long run, with AS rising from the

advancement in technology in this field (development of EVs) and the associated FDI attracted, the demand pull inflation may be addressed.

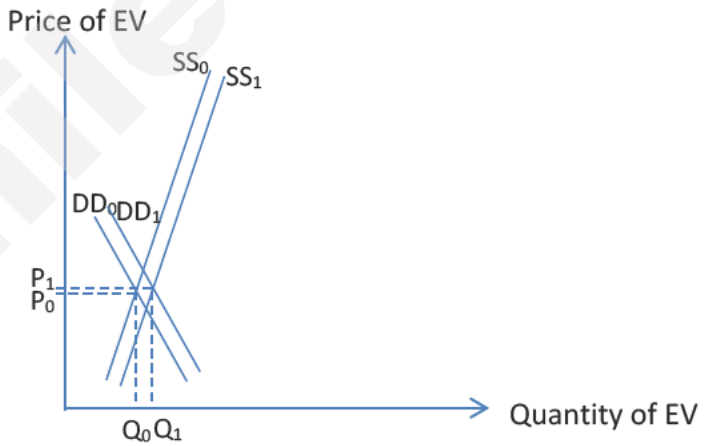
Alternative negative impacts – structural unemployment

(d) (i) Using DD/SS analysis, explain how "consumers show little sign of interest in electric and hybrid vehicles despite ambitious government plans" (Extract 3) affect the market for EV. [6]

Slow growth in the EV market in China is caused by demand and supply that are barely growing.

To begin with, there is a low consumers preference for EV as Chinese consumers show little interest in EV. This is because consumers are concerned with the underdeveloped battery technology and safety issues of electric cars. In view of rising affluence in China, the demand for luxury regular cars grows faster than the demand for EV while demand for EV only rises marginally, from DD_0 to DD_1.

At the same time, the Chinese government has provided subsidies (to producers) and complemented with policies support to help China's EV manufacturers increase production, hoping to increase the supply of EV in the country (such government policies would raise the SS of EVs). However, as the lack of technology makes production costs fairly high, and firm's pessimistic expectation of the future, the increase in SS turns out to be marginal too. This has also resulted in a marginal rightwards shift of the supply curve from SS_0 to SS_1



With reference to the above diagram, equilibrium output in the EV market has only increased marginally from Q_0 to Q_1.

(ii) In light of the "lack of progress" in reducing car pollution through the use of subsidies for EV, what recommendations would you present to the Chinese government? Justify your answer. [8]

From the above analysis in d(i), it seems that there are both push and pull factors that make the Chinese govt less successful in promoting green cars to cope with the pollution from vehicles. The push factor that makes EV less attractive comes from the immature technology in this field, while the pull factor comes from conventional, non-electric cars being relatively (compared to EV) cheaper and reliable (from the matured technology). Thus to effectively

reduce pollution from the current conventional, non-electric cars (as mentioned in Extract 1), the Chinese govt can consider a few policies that address both the 'push and pull' factors.

To deal with the 'pull factor' from conventional, non-electric cars, experts in Extract 1 advised that dd for these (non-electric, regular) cars needs to be reduced, to manage the pollution from these vehicles. Theoretical polices to managed such negative externality would be taxes on the usage/ownership of these vehicles to internalise the external cost, and rules/regulations to limit their usage/ownership. Since the Chinese govt original intention was to develop a 'cleaner' alternative to regular cars (ie EVs), the govt can also consider the development and promotion of public transport to attract road users towards other 'cleaner' substitutes that may be more manageable/achievable.

As for managing the 'push factor' from EVs, Extract 2 suggests that the Chinese govt can be more actively involved in initiating the R&D and providing the supporting infrastructure as what S'pore govt is doing to make EV more reliable with advancement in technology and to defray the high R&D cost burden on the producers (which, in turn, can make EV cheaper, in addition to the inadequate subsidies that were already implemented as mentioned in Extract 3).
Hence the current policy was not very successful/effective as the govt fails to consider the above push & pull factors and single-mindedly provided merely subsidies to consumers and producers which proved insufficient. In addition, from Extract 3, the govt needs to realise that given the lack of technology currently, the long term policy (reduce pollution by promoting green cars) may not be achieved so quickly (there is a time lag for new technology in this field to develop and mature) and an interim or short term policy is needed (ie to focus more on promoting hybrid and fuel-efficient conventional cars).

While each of the above policy only addresses a fraction of the problem, it looks like the govt needs to implement a few policies concurrently – on the one hand, reduce the rising dd from conventional cars and on the other hand, promoting the cleaner alternatives (in this case, EVs). And one also has to be mindful that each of these polices may not be totally effective in dealing with their respective issue given their (own) limitations. The pollution from cars is definitely one difficult microeconomic problem (market failure), the Chinese govt needs to address. The irony is further complicated with what Extract 3 reminded us at the end, that, even with the pollution from cars effectively addressed with total replacement of EVs, the congestion that they create is yet another market failure problem to deal with after that!

[This question requires students to illustrate **theoretical knowledge** in dealing with negative externalities, **usage of data** (from all 3 extracts) to generate **in-depth analysis** to explore possible policy options that the Chinese govt can consider.]

Question 2: Rising Prices, falling prices

(a) Using the information in Table 1, compare the inflation rate in Brazil and Singapore, between 2007 and 2011. [2]

Suggested answer**:**
Inflation rates in both countries increase. Inflation rate on average is higher in Brazil than in Singapore.

(b) Using AD/AS analysis, explain the possible causes of inflation in Brazil. [4]

Suggested answer**:**

Brazil is experiencing both demand-pull inflation and cost-push inflation.

Demand-pull inflation occurs when aggregate demand grows excessively given the constraints of supply. Demand-pull inflation in Brazil is mainly driven by rising domestic consumption (C) and external demand for Brazilian exports. Demand for Brazillian resources (e.g. by China) has led to a rise in exports. This raises export revenue (X). The increase in C and X raises AD. As the Brazil economy is at or near full-employment, an increase in AD causes firms compete for limited available resources, driving up the prices of factor inputs. Thus, firms expect higher prices to produce each level of output and there is a rise in the general price level.

Cost-push inflation is caused by an increase in production costs that are independent of demand. In Brazil, the rising costs are most notably fuel and food costs. Since these are necessary inputs in the production of many goods, a rise in fuel and food prices would raise the cost of production for many firms. This leads to an upward shift of the aggregate supply as firms try to maintain their profit margins and price level rises.

(c) (i) With reference to data, explain how high inflation is 'damaging the competitiveness of domestic manufacturers' in Brazil. [3]

Suggested answer**:**
Higher interest rates to curb rising inflation (Extract 4, para 2) attracts net short-term capital inflows resulting in *a rise in exchange rate*. [1m]

As the Brazilian currency, real, appreciates,

- Price of imports become fall in domestic currency, causing consumers to switch from domestically produced goods to their relatively cheaper domestic substitutes.
- Price of exports rise in foreign currency and foreign consumers switch away from relatively the relatively more expensive goods from Brazil to substitutes produced in other countries.

Thus goods manufactured in Brazil become less competitive in both foreign and domestic markets.

(c) (ii) With reference to Table 2, comment on Brazil's economic performance in 2011. **[5]**

Suggested answer**:**

	2007	2008	2009	2010	2011
GDP at 2005 constant prices (US$b)	973	1,023	1,019	1,097	1,127
- Real GDP growth (%)		*5.14*	*-0.04*	*7.65*	*2.73*
Unemployment (%)	8.1	7.1	8.3	8.2	8.2
Inflation (annual %)	3.6	5.7	4.9	5	6.6
Current account balance (% of GDP)	0.1	-1.7	-1.5	-2.2	-2.1
Government debt (% of GDP)	57.4	56.6	60	52.2	52.8

Real GDP continues to rise in 2011 so the economy expanded in 2011. The rise in real output would mean that more goods and services were available for consumption leading to a rise in standards of living.

However, GDP growth rate fell from 7.65% in 2010 to just 2.73%. The drastic decline in economic growth, coupled with a significant increase in inflation could indicate that the economy is overheating.

Although unemployment remained steady at a high rate of 8.2%. The persistently high rate of unemployment also signifies that there are plenty of resources are not fully utilized. This implies that the economy is productive inefficient (within it's PPC).

Brazil's small current account deficit did show a very slight improvement in 2011. However, additional data has be given (e.g. capital account balance) before the performance of Brazil's BOP can be assessed

Overall, the drastic decline in economic growth rate coupled with rising inflation and a high rate of unemployment indicate that the Brazilian economy did not perform very well in 2011.

(d) Discuss the view that a stronger currency is bad news for Japan but good news for Singapore. [8]

Suggested answer**:**

A stronger currency or a currency appreciation would imply that the domestic currency is worth more in terms of foreign currency. Whether a stronger currency would be good or bad news for either economy would depend on the each economy's current state of resource utilization and the nature of the economy.

A stronger currency would reduce aggregate demand and lead to a worsening of the economy's balance of trade.

- A stronger yen would make Japanese goods relatively more expensive in foreign markets. Assuming that the demand for Japan's imports and exports is price elastic, quantity demanded for exports falls more than proportionately resulting in a fall in export revenue (X). On the other hand, imports become relatively cheaper in Japan resulting in a more than proportionate increase in their quantity demanded and a rise in import expenditure (M). This causes a fall in net exports (X-M) and a worsening of the economy's balance of trade. AD also falls resulting in a fall in price level and a multiple decrease in NY via the reverse multiplier.

Due to differences in the state of their economies, the stronger currency is bad news for Japan but good news for Singapore.

- Japan is currently in a recession and experiencing deflation due in part to weak external demand (Extract 4 para 3).
  - A stronger yen would decrease the competitiveness of domestically produced goods, causing a further decline in net exports, AD and NY. This would deepen Japan's recession, raise her level of unemployment and worsen her trade deficit.
- On the other hand, the Singapore economy currently suffers from inflation.
  - Given that she is likely to be operating near or at full employment levels, a fall in aggregate demand would lead to a fall in general price level, relieving inflationary pressures with less or no impact on national income.
  - However, given that Singapore suffers from cost-push inflation, the fall in AD stabilises prices at the expense of economic growth and fails to address the root causes of inflation.

The stronger currency is will also reduce imported inflation e.g. due to rising oil prices (Extract 5 para 4) depending on the nature of the economy.

- Although the strengthening Yen would help Japanese firms cope with the rising oil prices, Japan is less dependent on imported inputs and thus there could be relatively little impact on the cost of production for firms.
- Since she is small open, economy dependent on imports, a stronger dollar would effectively reduce imported inflation in Singapore. As the Singapore dollar appreciates, the cost of imported finished goods and inputs fall in domestic currency, this would reduce the cost of production for many firms resulting in a rightward shift of the AS curve. Assuming that cost savings are passed to consumers, price of domestically produced goods fall as well. Cost-push inflation is thus reduced.
  - The fall in the price of goods in Singapore dollars will also help to partially offset the decrease in export competitiveness wrought by the appreciation of the Singapore dollar. Thus, the negative impact on the Balance of Trade and aggregate demand is reduced is lessened for Singapore.
  - However, Singapore is also currently facing domestic supply-side pressures. E.g. Government restrictions on foreign labour are leading to a shortage of labour and increasing labour costs. A strengthening of the Singapore dollar alone may not be sufficient to curb cost-push inflation but may instead be "bad news" for this export-led economy as the fall in export competitiveness could have a larger negative effect on growth and employment.

Thus, given the current state of Japans economy, a stronger Yen is definitely "bad news" as it will worsen her current economic woes of recession, unemployment and deflation and have a negative impact on its BOP. On the other hand, it is more likely to be "good news" for Singapore given her current state of economy dependence on imports, a stronger currency will help curb imported inflation from rising fuel prices with relatively less impact on her export competitiveness.

(e) As a consultant economist, what options would you present to the Japanese government as a possible response to the economic problems that the data suggest? Justify your answer. [10]

<u>Suggested answer</u>**:**
<u>Question analysis</u>
<u>*Command words*</u>*:*
Justify: State, explain and evaluate
The data suggest: Use data

Key words:
Policy options: at least 2 or more policy options
Economic problems: at least 2 problems à serious fiscal position, ageing population, low birth rates and low inward migration suggests that Japan is facing a shrinking labour force and increased strain on the fiscal position. Other possible problems include stagnate economic growth and deflation. Japan's economy is still not recovering from a long period of depression, thus policy options must take these factors into account.

The economic problems that Japan may face include (i) the serious fiscal position and (ii) falling productive capacity.	Go straight to the question – identify economic problems.
As stated in the extract, the serious fiscal position is due to many years of higher government spending and lower government revenue which leads to rising public debt. This is caused by the many years of depression and the ageing population. A serious fiscal position is undesirable as it will put a heavy burden on the future generation to pay back the debt and reduces their welfare. Furthermore, the serious fiscal position may affect investor's confidence and reduce investment and economic growth in the future. Thus, the Japanese government should deal with it as soon as possible.	Identify economic problem 1 Explain why the government should deal with it.
To reduce this serious fiscal position, the Japanese government can either reduce government spending or raise tax revenue. It is difficult to lower government spending such as its spending on pension due to the social and political costs of doing so. In addition, natural and nuclear disasters required increased government expenditure. Furthermore, government spending on infrastructure may be long-term and necessary to promote higher investment. It is also undesirable to reduce government spending as Japan has not recovered from its depression and economic growth may still be weak. Thus, instead of lowering government spending, it may be better to raise tax revenue instead.	Explain policy option "Lower G and raise T" Elaborate on how to lower G and difficulty of lowering G
Tax revenue can be raised either by <u>increasing the tax rate</u> or <u>increasing the tax base</u> (i.e. the 'object' to which the tax rate is applied which involves mainly income tax on households and firms, tax on expenditure and tax on capital gains). It may be usually undesirable to increase tax rate as a higher tax rate is a disincentive to work and invest, thus lowering Japan's aggregate supply and potential economic growth. With a shrinking labour force and greater competition for investment by developing countries, it may be even less desirable to increase tax rate. Hence, it may be better to raise the tax base by switching away from direct taxes to a greater reliance on indirect taxes (such as Goods and Services Taxes (GST) in Singapore).	Explain how to raise T either by increasing tax rate or tax base. Evaluate problem of increasing tax rate
Indirect tax is a more stable source of tax revenue as it is not affected by on the shrinking size of working population in Japan. Even retired workers will need to spend and	Explain why increasing tax base through switching to indirect tax

contribute to indirect taxes of GST. Furthermore, a fall in direct tax rate will help to attract more investment to Japan and thus help to lower its unemployment rate. The higher foreign investment and more workers being employed will be able to contribute to higher tax revenue despite a lower direct tax rate.	system is better.
However, it should be noted that raising indirect tax may worsen income distribution as indirect tax is a regressive tax system and penalized more heavily on the lower-income households who has to consume a larger proportion of their income. Thus, it is necessary for the Japanese government to minimize such undesirable effect on the income distribution by offsetting the indirect tax burden of the lower-income households through transfer payments.	Problem of indirect tax system and how to avoid the problem "synthesis"
The next economic problem is the shrinking labour force caused by ageing population, low birth rates and little inward migration which reduces Japan's full employment capacity thus reducing aggregate supply and hence her potential economic growth.	The next economic problem and its impact on economic growth.
Increasing birth rates is a challenge in developed nations due to social and cultural norms. It is difficult to increase birth rate in a developed country as women become more educated and participate in the workforce. Attracting more foreign labour is difficult due to the national language making it difficult for foreigners to adjust and may also bring about social problems and increase the competition for jobs as unemployment in Japan while falling is still high.	Explain the option of increasing quantity of labour force and its limitations.
Given these reasons, the best option is supply side policy. The government can raise the retirement age and offer tax incentives for firms that have in house training centres and firms that continue to hire their experienced elderly workers. They can offer subsidies to firms that engage in R&D, and offer education programmes for workers to improve their skills. These policies increase the productivity of labour and improve the productive capacity of the economy. This may also allow Japan to move up the value-added chain and reduce its dependence on labour. Currently, Japan may be losing jobs in the labour-intensive manufacturing industries as they are shifted to lower labour cost countries while new jobs are created in the higher value-added manufacturing industries and tertiary (or service) sector. Hence, the skilled workforce will enable Japan to reduce possible structural unemployment caused by the lack of relevant skills and enable Japan to attract higher value-added investment.	Explan the better option of increasing the quality of labour force and its benefits.
While this may involve more spending and tax cuts, which is a concern given Japan's current public debt, it is a timely option since it can boost Japan's economic recovery and at the same time help it achieve its long term aims. Furthermore, ensuring long run economic growth will lead to an increase in tax revenue in the future, and raising the	Evaluation, consider limitations and justify why it is still essential (good in the long run)

retirement age and creating meaningful jobs for the elderly can slow down the drain on government funds via pensions.	
<u>Conclusion</u> The combination of policies suggested would help Japan to achieve its long run goals in light of the current problems. The government needs to do cost benefit analysis and may need to bear with its public debt for now, increasing indirect taxes to fund essential government spending on supply side policies that can help bring a full recovery to Japan's economy, which would help the government reduce its public debt in the long run as tax revenues increase with GDP.	Summarise and synthesize main ideas

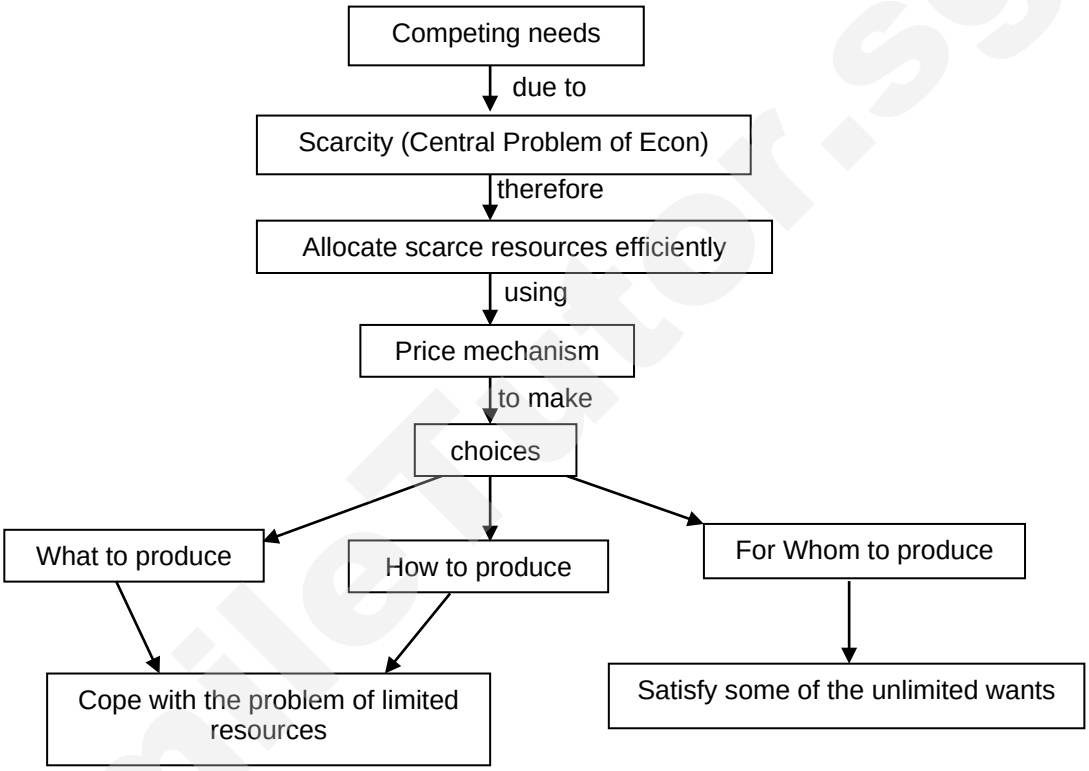
3(a) Explain how the price mechanism allocates scarce resources among competing needs in a free market. [10]

Marker's Comment:

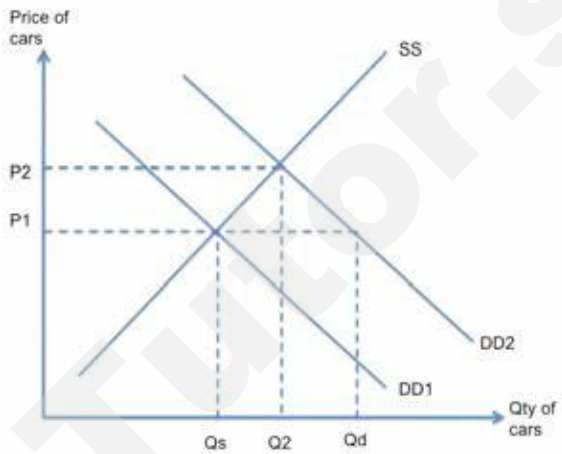
Question Analysis

Cue word –	Explain
Concept word –	price mechanism
Content words –	allocates scarce resources, competing needs
Context –	free market

Schematic Plan



Intro GIST Explain the context of 'competing needs in a free market'	Competing needs in a free market economy stems from the Central Problem of Economics – Scarcity. Because the limited resources are unable to produce enough to satisfy the unlimited wants, these endless needs end up 'competing' for the scarce resources. In a free market economy, such competition for resources among the unlimited wants is carried out via the price mechanism, where prices of the successfully 'competed' goods/services fetch relatively higher prices and attract the scarce resources into the production of such goods/services.
Explain the price mechanism	Price mechanism serves as a signaling function for the free market thus market prices will adjust to demonstrate where resources are required, and where they are not. As the unlimited wants changes from one good to another, the prices of these goods would adjust to re-allocate the scarce resources in the production that fetches the relatively higher price at that time. Such adjustments to reduce wastages of scarce resources in producing the less valued/wanted goods via price signals are highly desirable as allocative efficiency can be achieved without any govt intervention.

	Competing needs in a free market also means that the 3 resource allocation questions need to be answered – What to produce, How to produce and For Whom to produce. 'What' and 'How' to produce would decide which needs among the unlimited wants 'emerge as the winners' ie these specific goods/services would be produced instead of the others. 'For Whom' to produce 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.
Using eg to illustrate/explain 'What', 'How' and 'For whom' to produce under price mechanism to address the competing needs	For example, when there is rising demand for cars (from Dd1 to Dd2), the price of cars will rise (from P1 to P2) and this signals car producers to manufacture more cars to meet the rising demand. More resources such as labour and capital will then be allocated to production of cars.  As shown from the above diagram, producers would react to the higher price through increasing quantity supplied of cars from Qs to Q2. As the producer allocates more resources to the production of cars, he would try to increase production using lowest cost possible. Whether a labour intensive method or capital intensive method of production would be used depends on which production method costs less and generates a higher profit for the producer. The firm would hence use the cheapest possible combination of resources to increase production of cars. As more people demand for cars, the price of cars will rise. At the higher price, some people will not be able to afford the cars and choose to buy other modes of transports, such as motorcycles. Higher prices enable the cars to be allocated to consumers who are willing and able to pay for it.
Conclusion	In the absence of mkt failure, price mechanism can help to ensure that the scarce resources are efficiently allocated to meet the competing needs in a free market. However, the downside is that the less fortunate/poor may end up losing the 'competition' and their wants are not addressed. Hence in the case of mkt failure and to ensure a more equitable society, the govt may choose to intervene in the mkt operations (price mechanism).

Level	Descriptor	Marks
L3	The workings of the price mechanism are well-explained and illustrated with real world or hypothetical examples. Explanation of Scarcity, choice and opp cost are required only in brief	7 - 10
L2	Some attempt at explaining the problem of scarcity. Attempted to explain the workings of the price mechanism à allocation of resources, but with gaps.	4 – 6
L1	Mostly vague/unclear or irrelevant points. Relevant points are stated rather than explained. Stated definitions of terms.	1 - 3

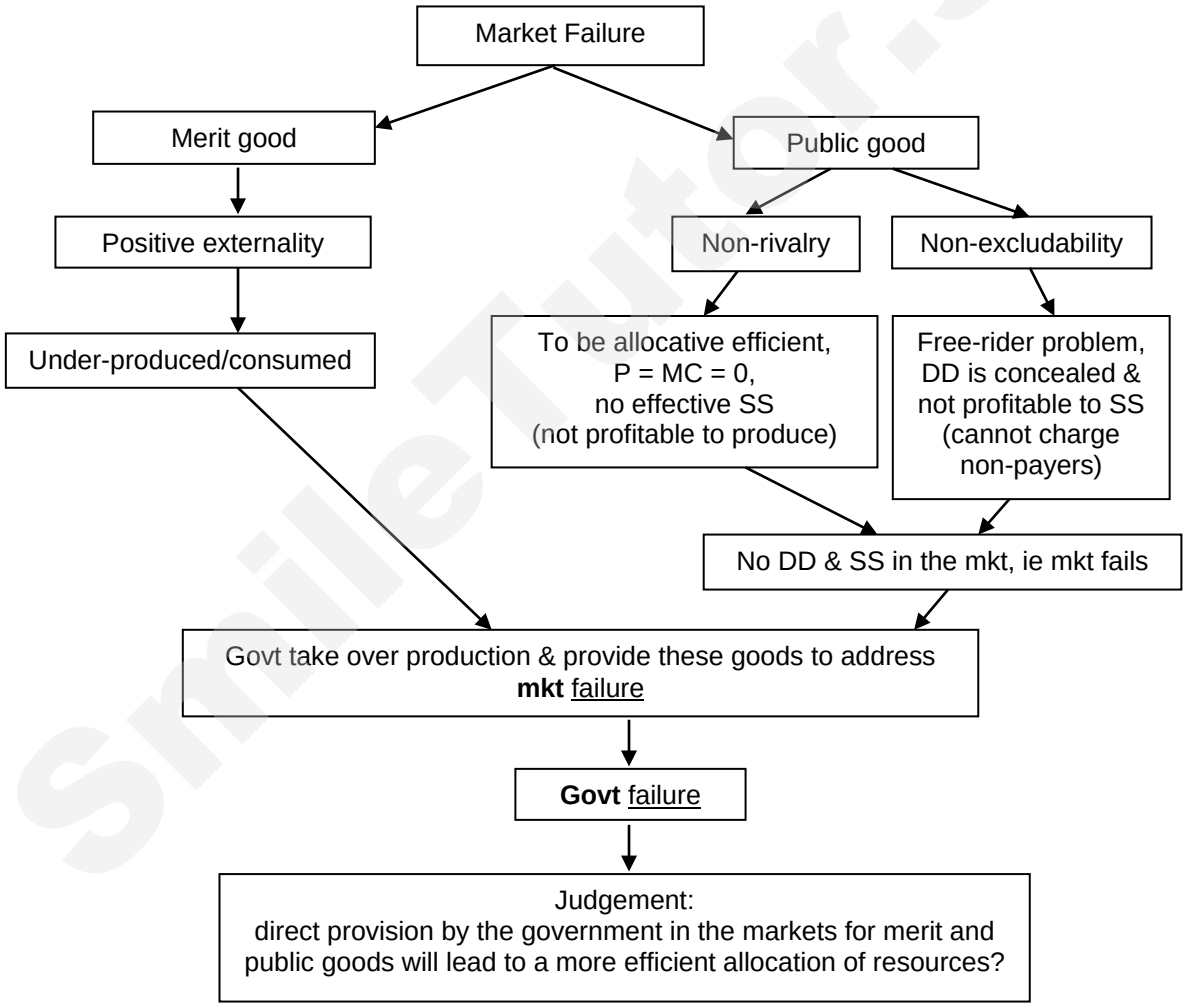
3(b) Discuss whether direct provision by the government in the markets for merit and public goods will lead to a more efficient allocation of resources. [15]

Marker's Report:

Question Analysis

Cue word –	Discuss
Concept words –	direct provision by govt, merit and public goods (ie govt provision – govt produce/provide the merit & public goods)
Content words –	efficient allocation of resources
Context –	markets for merit and public goods (ie market failure)

Schematic Map



Intro GIST	The markets for merit and public goods exhibit market failure, ie if left to the market forces of DD & SS, and without govt intervention, allocative inefficiency results (in other words, merit goods are under-produced/consumed and public goods are not provided at all by the market). Hence, whenever market failure occurs, govt intervention is recommended to correct for the allocative inefficiency. For merit goods, there are a few ways (policies) for the govt to intervene – mkt- and non mkt based approaches; while for public goods, govt has to produce and provide

	for the society. In both cases, govt provision seems to be a common policy.
Thesis: How govt provision correct for under-production/ consumption of merit goods (with egs)	In the case of merit goods, such as education and healthcare, the existence of positive externalities results in under-production/consumption of such socially desirable goods if left to mkt forces. To increase the production/consumption to the higher socially desirable output level, govt can choose to produce/provide them directly to the consumers and society to correct for the mkt failure. Thus, in S'pore, we see the govt building 'public' or 'govt' schools (as opposed to private schools) and providing basic education (primary and secondary education especially) to the masses. Similarly, in the case of healthcare, the S'pore govt builds 'polyclinics' and 'general hospitals' and provide outpatient & inpatient medical services to the majority. Together with the private firms' provision, the effort of the govt joining in the production and provision is aimed at achieving the higher socially desirable output.
Thesis: How govt provision correct for non-provision of public goods (with egs)	For public goods, because they are non-rivalry and non-excludable in nature, there would be no effective SS and DD (respectively) in the market. This is because when such goods are non-rivalry, the marginal cost of providing the public good to an additional consumer is zero, ie producer does not need to produce additional unit of the good for the next consumer. Once the public good is produced, it is non-divisible, ie it does not matter whether there is 1 or many consumers consuming it. For instance, once national defence is established, the whole country is protected, regardless of the number of people inside the country. Non-excludable means that consumers can conceal their DD and pose themselves as free-riders. Since it is impossible to prevent non-payers from enjoying the public good, there is no (profit) incentive for the firms to produce too. Hence, if left to market forces, street lighting, once produced cannot be charged to non-payers, would not motivate any firms to provide. Thus, for public good, the only option is for the govt to take over the production and provide it for the society.
Anti-thesis: Limitations of govt provision – govt failure	While govt provision of merit and public goods seems to correct the allocative inefficiency, the govt may not have perfect information to accurately correct for the market failures. In other words, govt may end up providing less or more than the socially desirable output level (for both merit & public goods). In such a case, scarce resources are still not allocated efficiently after govt intervention. In addition, unlike firms which are profit-motivated, govt merely produce and provide these goods to achieve the microeconomic aims, thus govt provision may not be cost efficient (not govt's aim to make profit). This can result in productive inefficiency and again scarce resources may be 'wasted'. All the above discussion is based on the assumption that the govt is operating efficiently, if the red-tape and bureaucracies instill further inefficiency, the effectiveness of govt provision to correct the above market failures would be further reduced. (this is in addition to the opp. cost incurred for providing these goods as the next best alternative for such govt resource utilisation could be on achieving the other micro/macro-economic aims)
	Nevertheless, given the past experiences of inefficiency, most govt

	nowadays would strive to reduce the possible govt failure to make the intervention more effective. Hence it is now common to see govt tendering out govt projects for the production of merit and public goods to introduce more (cost) efficiency in the govt administration. For merit goods, govt can also choose to subsidise the production/consumption to achieve allocative efficiency (ie rely more on mkt-based approach). However, usually relying on one policy to correct the market failure is inadequate given the individual policy's limitations, hence govt may adopt a combination of polices for education and healthcare as seen in S'pore's cases (subsidised school fees are still charged to the students attending govt/public schools, so are subsidised medical fees charged to patients utilising the medical services in polyclinics and govt hospitals).
Conclusion	The above discussion shows that govt provision may be <u>one option</u> for the govt to correct the under-production/consumption of merit goods and the <u>main (or only) way</u> to correct for the non-provision of public goods. However, given the possibility of govt failures, the decision for govt provision must be carefully calibrated before committing to such 'promises' (towards taking over the production). Ultimately, when the benefits of govt provision outweigh the costs of such action, the govt should go ahead to provide these merit and public goods for the society.

Level	**Description**	**Marks**
L3	For clear explanation and good usage of examples to show how government provision can correct the market failure. Analysis: Limitations and/or benefits of govt provision are well explained.	9-11
L2	An attempt to explain how govt provision can be used to correct the market failure (ie achieve efficient allocation of resources). Poor/ no use of example(s) to which market would fail due to +ve externalities/public goods. An (undeveloped) attempt to analyse the policies: poor explanation on the limitations and/or benefits of govt provision.	6-8
L1	Able to state and briefly explain govt provision and its limitations. Smattering of valid points.	1-5
E2	Well supported judgement made with reference to whether govt provision can address the market failure.	3-4
E1	An (undeveloped) attempt/unsuccessful attempt to justify whether govt provision can address the market failure.	1-2

4	**(a)** Explain the benefits of free trade. [10] **(b)** Protectionism, inevitably, emerged during a period of global economic downturn. Discuss whether countries should resort to trade protectionism when faced with a global economic downturn. [15]

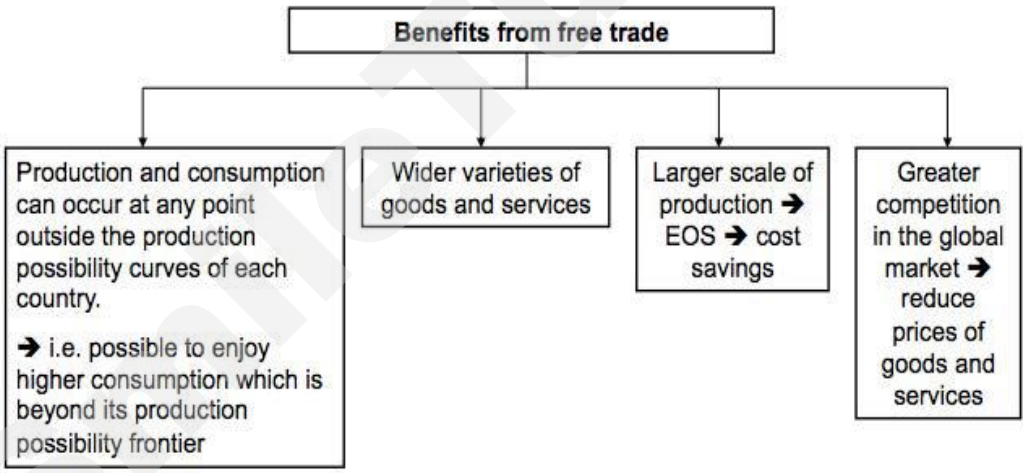
Interpret the Question – Part (a)

a) Explain the benefits of free trade. **[10]**

What is the cue word? (what are the skills required for this question?)	**What is the concept word?** (what are the concepts required to answer this question?)	**What is the context word?** (what is the context for this question?)
'Explain'	'free trade'	An economy

Examiners' Comments

Schematic Plan



Thinking process	Content/ Analysis
GIST Introduction	**(G)** Free trade occurs when governments do not discriminate against imports or interfere with exports by applying tariffs / quotas (to imports) or subsidies (to exports). **(I)** There are several benefits that countries can enjoy when they engage in free trade. **(S)** These include higher standard of living, greater varieties of goods and services, greater cost savings and lower prices of goods and services.
P: The first benefit of specialization. Explain how the theory of comparative advantage justifies the rationale for specialization. E: State the assumptions behind the theory E: Use numerical example to show how 2 countries gain because of specialization and trade.	Through free trade, countries can obtain combinations of goods and services beyond the Production Possibility Curve. This benefit of free trade can be explained by the Theory of Comparative Advantage. **The theory of Comparative Advantage** states that trade between nations is beneficial to both if there is a difference in relative opportunity cost and each specialises according to their comparative advantage. The assumptions made are as follows: · USA and Vietnam produce 2 commodities shirts and car · No transportation costs · No trade barriers and · Vietnam and US each has 2 units of resources that are divided equally between shirts and car production, USA can produce 100 shirts and 50 cars while Vietnam can produce 80 shirts and 10 cars. The total production of shirts is 180 and total production of cars is 60. Base on the above information, the opportunity cost of producing 1 car in USA is 2 shirts while the opportunity cost of producing 1 car in Vietnam is 8 shirts. Since USA has a lower opportunity cost (comparative advantage) of producing cars, it should specialise in the production of cars. So, for USA who specialise in car production, for one car produced, USA would expect for exchange for more than 2 shirts (1 car > 2 shirts). For Vietnam who specialise in shirts production, for 8 shirts produced, Vietnam expect to exchange for more than 1 car (8 shirts > 1 car). Combine these inequalities1 car > 2 shirts and 8 shirts > 1 car, we will know that the mutually beneficial exchange ratio must lie in this range: 2 shirts < 1 car < 8 shirts) With free trade, all countries can enjoy a higher consumption of all goods through exporting the goods in which it has a comparative advantage, and importing the goods in which it has a comparative disadvantage. Base on a mutually beneficial exchange ratio, both countries can obtain a combination of goods that lies beyond the country's PPC. This is not possible without free trade.
P: Other benefits of specialization: E: To explain how after specialization and trade, consumers gain	In addition, through free trade, consumers from both countries to enjoy a wider variety of goods and services. A country may not be able to produce certain goods and services domestically as countries differ in factor endowment, weather condition and factors have limited mobility across countries. In order to enjoy these goods and services, it purchases them from other countries, which produce them. For example, domestic consumers in Singapore are able to purchase a wide range of goods and services due to a high level of trade

from a wider variety of gds and svs, enjoy EOS and increase efficiency in production processes due to increased competition.	activities. Many of the goods are not produced locally due to lack of natural resources and conducive weather condition. In addition, free trade enables firms to reap economics of scale. Such cost savings can be reaped when firms expand the market for its products from the local market to include the foreign market. For example, Singapore has a relatively small domestic market and firms will have limited cost savings when goods and services are produced for the domestic market. However, with free trade, firms in Singapore are able to operate at a large scale and thus lowering the cost per unit of output. As such, consumers are able to enjoy a goods and services at a lower price. Lastly, with free trade, there is a rise in competition amongst firms in the world market. This would force the local firms to improve their quality of products and efficiency. Hence this eventually enables consumers to gain from better quality products and lower prices.
Evaluation: the major limitations of theory of CA.	However, in reality, the extent of gains from free trade among countries could be limited due to the following reasons. Firstly, the assumption that there are no transport costs is unrealistic. If transport costs exist and is less than the price differentials between countries, it is still profitable to trade. However if the transport costs is greater than the price differential, then it is no longer profitable to trade. Next, the theory assumes perfect factor mobility but in the real world, as factors are not perfectly mobile and interchangeable, costs start to rise as less and less suitable factors have to be employed to increase the production of a good which the country specializes in producing.
Conclusion	In conclusion, from the theory of comparative advantage, we can see that countries do gain from free trade. However, there are limitations to the theory, which explain why not all countries in the real world engage in free trade despite the potential benefits.

Level	Descriptors
L3 (7-10)	Max 7: A detailed explanation of benefits of free trade. Candidate uses the Theory of CA to explain how countries could obtain a combination of goods outside PPC and other benefits of free trade. Max 8: A detailed explanation of benefits of free trade. Candidate uses real life examples and the Theory of CA to explain how countries could obtain a combination of goods outside PPC and other benefits of free trade. 9 – 10: Reserve for candidates who the factors that limit the benefits of free trade.
L2 (5-6)	Candidate is able to identify and explain the benefits of free trade and use the Theory of CA to explain one of the benefits. However, some parts of candidate's answer are underdeveloped.
L1 (1-4)	Brief description of benefits of free trade.

b) Protectionism, inevitably, emerged during a period of global economic downturn. Discuss whether countries should resort to trade protectionism when faced with a global economic downturn. [15]		
What is the cue word? (what are the skills required for this question?) **Discuss whether…** 2 sided argument – need to examine economic reasons for and against the issue – Thesis / Anti-thesis / Synthesis approach (should / should not) 2 sided argument – need to examine economic reasons for and against the issue – Thesis / Anti-thesis / Synthesis approach (should / should not)	**What is the concept word?** (what are the concepts required to answer this question?) Trade Protectionism – restrictions on trade Global economic downturn – worldwide recession and cyclical unemployment	**What is the context word?** (what is the context for this question?) Global economic downturn This means that there is a global recession (falling NY worldwide)

Schematic Plan	
(Intro) Definitions of protectionism, global economic downturn **(Interpretation)** Impact of protectionism in view of the global economic downturn: + impact and – impact **(Scope)** Long-term costs likely to outweigh short-term benefits **(sTand)**	
Thesis (Point 1) **<u>Protectionism – How it helps during a global economic downturn</u>** A global economic downturn = AD falling (due to falling X) Problems of Negative growth (Recession) & Cyclical unN + (demand deficient unN) Protectionism: M falls and C rises. Firms use more capital goods produced locally à Focus on internal growth via C and I +AD à +NY via multiplier effect. (generate ec growth) à +real output à industries involved + output à + hiring of FOP à UnN falls (reduce cyclical unN) **<u>Link2Qn:</u>** Rising domestic C and I help to offset declining X in view of the global economic downturn)	**Anti Thesis (Point 1)** **<u>Protectionism (Beggar thy neighbour)</u>** à protectionism reduces M, but this causes trade partner's X to fall à NY of trade partners fall à ability to purchase your X falls à fall in your country's X à assume (fall in X > fall in M) à fall in AD à NY falls worldwide **<u>Link2Qn:</u>** (Worsens Crisis / Shld not use)
Thesis (Point 2) **<u>Protectionism may make fiscal policy (+G) more effective</u>** Protectionism à a greater proportion of the rise in income spent on domestic goods and services. i.e. reduces the extent of withdrawal when income rises. +G à +AE à +++NY through income induced C. Protectionism è increases the extent of the rise NY **<u>Link2Qn:</u>** (+effectiveness of FP / Shld use)	**Anti Thesis (Point 2)** **<u>Retaliation may worsen global economic downturn</u>** Protectionism reduces other countries X, other countries may resort to retaliation through imposing protectionist measures on your X into their countries à reduce your X further à -AD à -NY Benefits of Free trade (CATheory) where all countries benefit with higher NY à lost due to protectionism worldwide.(no free trade) à -NY à +unN **<u>Link2Qn:</u>** (Worsens Crisis / Shld not use)
Anti Thesis (Evaluation Paragraph) **<u>Protectionism may help in SR, but costs outweigh benefits</u>** SR: AD+ & NY+, but consumers face higher prices of goods (tariffs) Affects SOL / purchasing power Firms face higher costs if tariffs on resource industries (e.g. Steel) à +COP à +SS à +Px à reduce export competitiveness à X falls further (+unN) **<u>Protectionism not a viable option of a small and open economy like Singapore</u>** A small and open economy like Singapore is trade dependent. X is more than 200% of GDP while C and I are merely about 35% and 25% of GDP respectively. Protectionism is definitely not a viable option for the Singapore government. Boosting domestic demand cannot offset the fall in X.	
(Conclusion / Synthesis) Summarize the above analysis and reiterate stand: Stand: Shld not adopt a policy of protectionism	

Introduction (GIST)	
General Statement (recent example, quote, key idea) **I**nterpret (Definitions, clarify concepts/question) **S**cope (Set up directions for the answer) s**T**and (State the stand)	A global economic downturn signifies a fall in external demand for goods and services. Governments, seeking to spur economic growth, could then resort to protectionism to boost domestic demand. Protectionism refers to the imposition of trade barriers on foreign goods and services in order to protect domestic industries. Protectionism may indeed bring about benefits to a country, however, the cost of protectionism would outweigh its benefits. Overall, whether countries should resort to trade protectionism when faced with a global economic downturn depends on its impact on economic stability, the nature of the economy, the time period under consideration and the unintended consequences.

Body (PEEL)	
What is the most important point?	
State the **P**oint (**P**)	During an economic downturn, protectionism could help a government achieve economic stability as it protects the jobs of the populace.
Explain the point with clear causal links (**E**) **E**laborate the point with examples/diagram **L**ink back to Qn	A fall in income of a country's trading partner causes demand for the country's exports to fall. This leads to a fall in a country's Aggregate Demand (AD) and via the reverse multiplier process, the level of real GDP falls by multiple times and cyclical unemployment arises. Thus, protectionism seeks to boost domestic demand. This is done via the imposition of, for example, a tariff on imported goods. As such, the prices of imported goods increase and this makes the domestic goods relatively cheaper. Domestic consumers and firms are then induced to switch their expenditure to the relatively cheaper domestic consumer and capital goods. The increase in consumption of domestic goods will raise the level AD. Through the multiplier process, more factors such as labour are utilized to produce more good and services. Thus, demand for labour rises and unemployment rate falls. Furthermore, in view of the reduction in export earnings, the fall in import expenditure will reduce the size of trade deficit. Thus, protectionism indeed aids in a country's economic stability during a global economic downturn.
What is the second most important point?	
P	In addition, protectionism measures reduce the extent of withdrawal and make expansionary demand-side policies more effective in boosting domestic spending.

Explain the point with clear causal links (**E**) **E**laborate the point with examples/diagram **L**ink back to Qn	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 = mpt + mpm + mps). 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.
What is the third most important point?	
P	However, the use of protectionism measures give rise to unintended consequences detrimental to the country's economy.
Explain the point with clear causal links (**E**) **E**laborate the point with examples/diagram **L**ink back to Qn	Protectionism would negatively affect an economy both in the short and long run. For example, a fall in exports of a country's trading partner of USA due to protectionism brings about lower export earnings and thus AD. This will cause a fall in national income via the reverse multiplier process. As a result, the trading partner demands less of USA's exports which causes USA's export earnings to fall, causing a drop in AD and hence national income. This is known as the "beggar-thy-neighbour" effect. In the long run, both countries would miss out on the benefits of free trade unless the protectionism is lifted.
What is the fourth most important point?	
P	Also, protectionism could possibly cause a country's trading partner to retaliate.
Explain the point with clear causal links (**E**) **E**laborate the point with examples/diagram **L**ink back to Qn	For example, in September 2009, United States levied tariffs of up to 35 percent on tyres from China. China retaliated by imposing tariffs on American exports of automotive products and chicken meat. The tariffs applied to chicken parts and whole birds, but not to live chickens or cooked products such as chicken sausage. Included are chicken feet, which most Americans throw away but are a delicacy in southern China. Such tit-for-tat action thus reduces the exports for each country further, lowering export earnings and impeding economic recovery.
What is the fifth most important point?	
P	Moreover, protectionism has harmful effect on an economy that is highly dependent on trade.

Explain the point with clear causal links (**E**) **E**laborate the point with examples/diagram **L**ink back to Qn	For example, given the nature the Singapore economy, which is export and import dependent. Both the export revenue and import expenditure are more than 150% 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 earning and worsen economic downturn.
Conclusion (SR)	
Summarise main points **R**eiterate Stand	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. 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.

Part (b) answer is written by Calvin Yeo (12A05) and edited by Mr Chu.

Level	Descriptor
L3 9-11	A well developed presentation of both the arguments for protectionism and its limitations.
L2 6-8	An underdeveloped 2-sided answer.
L1 1-5	For an answer that shows limited knowledge of protectionism

E2 3-4	For an evaluative discussion that is based on economic analysis
E1 1-2	For an unexplained judgment, or one that is not supported by economic analysis.

Candidate Name: _____ CT Group: _____
Index Number: _____

PIONEER JUNIOR COLLEGE
JC 2 Preliminary Examination 2013
Higher 2

ECONOMICS **9732/01**
Paper 1 **Monday 16 Sep 2013**
2 hours 15 minutes

Additional Materials: Writing Paper

READ THESE INSTRUCTIONS FIRST

Write your class, 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 your work for Questions 1, 2 separately.

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

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The document consists of **7** printed pages and **1** blank page.

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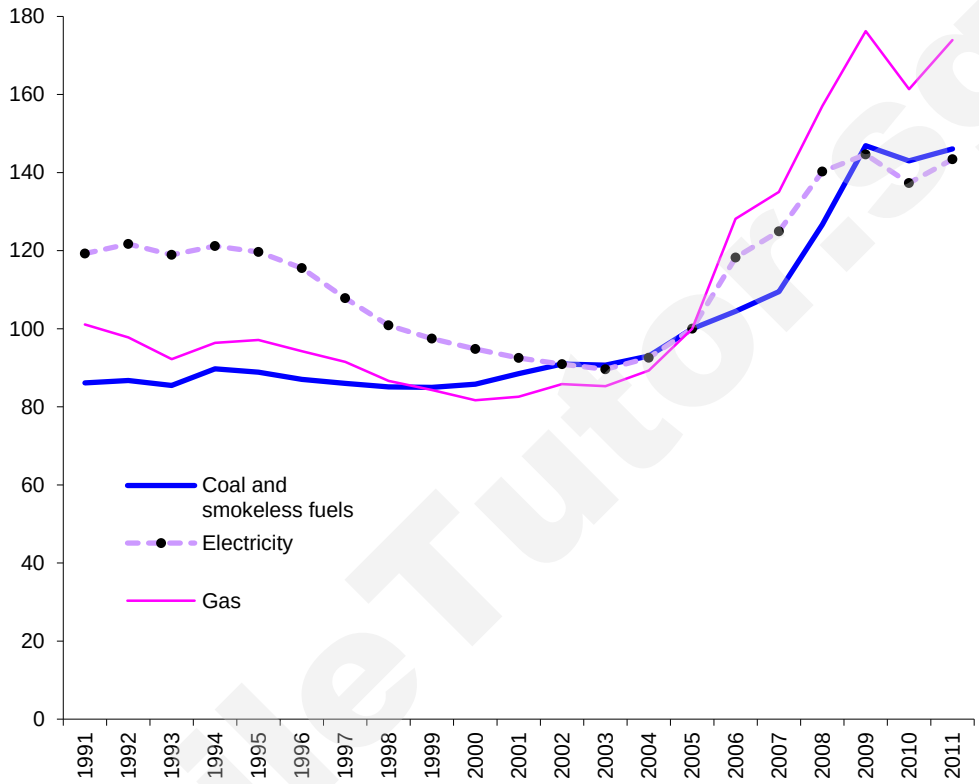
Answer **all** questions.

Question 1: The Energy Market

Figure 1: Fuel price indices in UK in real terms 1991 to 2011



Source: *Office of National Statistics, UK*

Extract 1: Switch energy tariff to help beat bill rises

British Gas's parent company, Centrica, suggested in a statement to the City this week that domestic gas and electricity prices are now significantly lagging behind wholesale prices, which it said have risen by a quarter compared with last year.

Centrica blamed unrest in the Middle East and the Fukushima nuclear crisis following March's earthquake and tsunami in Japan for pushing up the cost of power. Large quantities of liquefied gas have been diverted to Japanese power stations to make up the shortfall in power production.

"In the UK the expected wholesale prices of gas and power for delivery in winter 2011/12 are currently around 25% higher than prices last winter, with end-user prices yet to reflect this higher wholesale market price environment," said Centrica.

Source: *The Guardian,* 14 May 2011

Table 1: Selected UK Big Six Energy Firms Profits 2008-2011 (in million pounds)

	Year			
Selected UK Big Six Energy Firms	**2008**	**2009**	**2010**	**2011**
Centrica	1788	1704	2156	2103
EDF Energy	750	2728	2344	1659
Scottish and Southern Energy	1254	1290	1310	1336

Source*: consumerfocus.org.uk*

Extract 2: UK suppliers face tough power auction reforms

Britain's six largest utilities face tough retail power market reforms next year which could force them to auction off more than one fifth of electricity they produce. Ofgem, Britain's energy regulator, has reiterated its determination to "radically overhaul" the retail energy market and has told the "big six" power companies that their complex tariffs are going to come under further scrutiny over the coming months.

Ofgem's three-month consultation showed some respondents, especially smaller power suppliers such as First Utility, favour full production auctions to prevent large utilities from supplying and producing power at the same time.

Ofgem will pursue breaking up the stranglehold of the Big Six on the electricity market to encourage more firms, like new arrival the Co-op, to enter the energy market and increase the competitive pressure on the Big Six.

The rise in energy prices made competition in the gas and electricity market even more important to ensure consumers receive a fair deal.

The government wants to see more clarity in billing to help consumers shop around and switch to the best deal. The government is also working with Ofgem to sweep away the barriers to new companies entering the energy market so consumers can benefit from greater competition.

Source*:* Adapted from *Reuters and The Guardian, 22* June 2011

Extract 3: Energy suppliers' profit margins eight times higher, says regulator Ofgem

A spokesman for Energy and Climate Change Committee told the BBC that electricity bills have been attacked for being too complicated to consumers to understand and currently they are faced with more than 400 tariffs to choose from.

The process of trying to switch from one supplier to another is hideously complicated - very off-putting even for quite intelligent people.

He also criticised the rise in profit margins to a three-year-high as, "evidence of absolutely crass behaviour by the energy companies, with a jump in prices announced in the last few months ahead of what will be a winter in which most families face their highest ever electricity and gas bills.

A market overhaul will therefore help remove some of the complexity and confusion in the energy market that infuriates consumers and these important steps will take time to make a difference for hard pressed consumers.

[Turn Over

Electricity and gas firms will still be able to offer a mix of products but under the plans Ofgem will set a fixed standing charge on top of which the companies will be able to offer a variable price per unit, making bills clearer and price comparison easier. Extra layers of complexity such as discount structures will also be removed altogether.

Source*: The Telegraph, 14 October 2011*

Extract 4: Third Tank for Singapore's LNG Terminal on the Back of Strong LNG Uptake

With growing electricity demand, there has been a stronger uptake of Liquefied Natural Gas (LNG) by companies in Singapore. In the first quarter of 2010, the six power companies contracted for an initial tranche of 1.5 Mtpa of regasified LNG. These companies have now increased their gas volumes to 2 Mtpa of regasified LNG. The increase reflects the demand for more gas to fuel new generation capacity. Altogether the six power companies have either started or are planning to build around 3,600 megawatts of new gas-fired generation capacity.

Beyond providing increased storage capacity to cope with new demand, the third tank is also expected to catalyse new business opportunities that would allow LNG traders to store and re-export LNG cargoes. Many international LNG traders have approached Singapore LNG to express their keen interest to use the Terminal for trans-shipment of LNG cargoes throughout the region.

The third tank is an infrastructure that cements the future for multiple parties. It is in line with the Government's aspirations to develop Singapore as a regional trading hub. They have identified several new businesses that can be developed by leveraging on LNG handling infrastructure, which in turn can generate incremental income for Singapore LNG in the future.

Source: *The Straits Times*, 2 November 2010

Questions

(a) **(i)** Compare the change in fuel prices in UK between 2000 to 2011. [2]

(ii) With the aid of a demand and supply diagram, account for the price change identified in (a)(i) [4]

(b) **(i)** Describe the type of market structure operating in the UK energy market. [2]

(ii) Explain how firms in the UK energy market might compete against each other. [4]

(c) "The third tank is an infrastructure that cements the future for multiple parties." Comment on the economic impact of constructing the "third tank" on the Singapore economy. [8]

(d) "Ofgem has reiterated its determination to "radically overhaul" the retail energy market". Discuss the extent to which an overhaul of the retail energy market increases consumer welfare. [10]

[Total: 30 marks]

Question 2: Rising prices, falling prices

Table 2: Inflation Rates in Selected Countries, 2007-2011

Country	2007	2008	2009	2010	2011
Brazil	3.6	5.7	4.9	5	6.6
China	4.8	5.9	-0.7	3.3	5.4
Japan	0.1	1.4	-1.3	-0.7	-0.3
Singapore	2.1	6.5	0.6	2.8	5.3

Source: *The World Bank*

Extract 5: Brazil's rising inflation hampers growth

Keeping inflation under control is one of the main challenges facing the new government, amid risks that the economy is over-heating following a credit boom last year and rapid growth in consumption.

The rising inflation is threatening to push Brazil's policy interest rate, already among the highest among large economies at 11.25 per cent, even higher. This is in turn attracting hot money from abroad and strengthening Brazil's currency, the real, damaging the competitiveness of domestic manufacturers.

Exchange rates cripple the country, but inflation kills," said one government official in a recent interview in Sao Paulo

Economists point out that Brazil's development is at a critical phase. Driven by consumption, her internal growth is strong. At the same time, external demand for Brazilian resources further fuel price rises. China, for instance, has become the fastest growing consumer of Brazilian exports, from little more than 5 percent in 2003 to more than 15 percent, in 2009 and its appetite continues to grow.

Consumer prices rose 6.71 percent in June from a year ago, due partly to an increase in food and fuel costs, which speed up inflation even more.

Source*:* Adapted from *CNBC* 25th April 2011and *Bloomberg* July 11 2011

Table 3: Selected Key Economic Indicators, Brazil

	2007	2008	2009	2010	2011
GDP at 2005 constant prices (US$b)	973	1,023	1,019	1,097	1,127
Unemployment (%)	8.1	7.1	8.3	8.2	8.2
Inflation (annual %)	3.6	5.7	4.9	5	6.6
Current account balance (% of GDP)	0.1	-1.7	-1.5	-2.2	-2.1
Government debt (% of GDP)	57.4	56.6	60	52.2	52.8

Source: *The World Bank*

Extract 6: Japan's Central Bank marks a goal for higher inflation

Hoping to win its long-futile battle against falling prices, Japan's central bank on Tuesday said it would try to kindle inflation, setting a goal of 1 percent, by pumping tens of billions more dollars into the economy.

While central bankers usually worry more about keeping inflation in check than trying to encourage it, Japan's economy has labored for more than two decades against the stagnating effects of falling prices, or deflation.

The government said Monday that the Japanese economy shrank at a 2.3 percent annual rate in the October-to-December quarter, reversing robust gains in the previous three months, as weak overseas demand and a strong yen hurt manufacturing. Prices in Japan have not risen at an annual pace above 1 percent since 1997, when deflation set in. As widely expected, the bank left its benchmark interest rate unchanged at a range of zero to 0.1 percent.

Tokyo stocks rose modestly, and the yen weakened against the dollar on the news. A weaker yen is good news for Japan's economy because it strengthens the competitiveness of its exports. The yen's recent strength has battered the country's exporters like Panasonic, which predicts record losses for the year.

Mr. Shirakawa, Governor of Bank of Japan, has long argued that monetary policy alone cannot bring an end to deflation in Japan, a situation that he says is caused by a lack of demand. Economists say the bank is running out of options, since interest rates are already effectively at zero and because it has little leeway to expand its asset-buying program.

No amount of money can energize a recovery, Mr. Shirakawa has said, without measures to restructure and expand the real economy. But the Japanese government, saddled with a debt of 220% of GDP, twice the size of its economy, has struggled to spend enough to sustain strong economic growth, and economic reforms have fallen short. This serious fiscal position is made worse by the nation's natural and nuclear disasters. And now, demographics are taking a toll. With low birth rates and little inward migration, Japan is facing an aging and shrinking population. Social security and pension costs have soared as Japan's baby boomers reach retirement.

Source: Adapted from *www.nytimes.com,* 1 Sept 2011 and 14 Feb 2012

Extract 7: Singapore exchange rate policy losing anti-inflationary mojo?

A debate on the effectiveness of Singapore's exchange rate policy in controlling inflation has surfaced as the country restructures its economy to boost productivity.

The restructuring – a large part of which involves capping the expansion of the foreign workforce – is likely to lead to higher inflation from rising wages. At least one economist believes this limits the central bank's ability to keep price increases in check through a strong Singapore dollar, since this works mainly by making imports cheaper.

'If inflation is being driven by domestic supply-side pressures, in particular those owing to tight foreign labour supplies or policies, then the ability of the exchange rate policy to curb inflation will be muted or less effective than in the past,' said a DBS report yesterday.

But there are market watchers who think that a strong currency still helps by containing domestic price pressures indirectly. And with oil prices creeping up, the spectre of imported inflation remains.

Some economists noted that the economic restructuring has, to some extent, made Singapore's exchange rate policy more challenging to manage, but the 'mechanism still works'.

The DBS report threw the spotlight on how the measures could affect exchange rate management. It supported a 'slightly softer' monetary policy stance as it could facilitate restructuring. There would be more pain for the export sector if the policy is tightened further.

And if the growth momentum turns out to be slower than expected, an even more gradual pace of appreciation would support the economy, it added.

Source: Adapted from *Business Times,* 9 Mar 2012

Questions:

(a) Using the information in Table 2, compare the inflation rates in Brazil and Singapore, between 2007 and 2011. [2]

(b) Using AD/AS analysis, explain the possible causes of inflation in Brazil. [4]

(c) **(i)** With reference to data, explain how high inflation is 'damaging the competitiveness of domestic manufacturers' in Brazil. [2]

(ii) With reference to Table 3, comment on Brazil economic performance in 2011. [4]

(d) Discuss the view that a stronger currency is bad news for Japan but good news for Singapore. [8]

(e) As a consultant economist, what options would you present to the Japanese government as a possible response to the economic problems that the data suggest? Justify your answer. [10]

[Total: 30 marks]

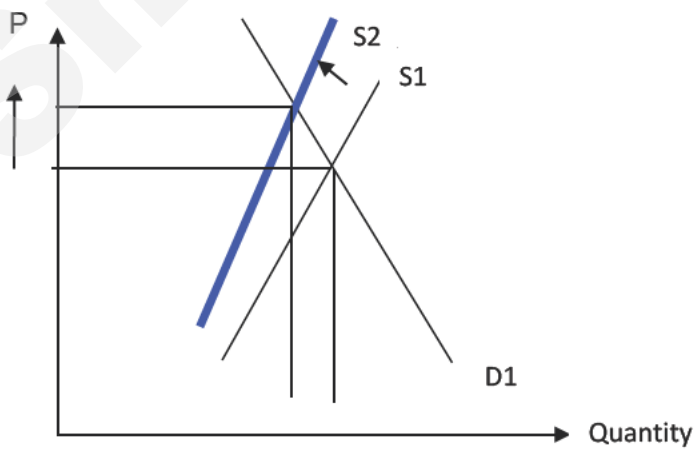
PIONEER JUNIOR COLLEGE

2013 PRELIMINARY EXAMINATION

ECONOMICS

SUGGESTED ANSWER TO H2 P1

Question 1

(a)	**(i)**	Compare the change in fuel prices in UK between 2000 to 2011.	[2]
		Suggested Answer: Overall increase for all 3 fuels [1] with gas rising the most between the identified period. [1]	
	(ii)	With the aid of a demand and supply diagram, account for the price change identified in (a)(i)	[4]
		Suggested Answer: **<u>World Supply</u>** The Middle East is a major fuel producer in the world. The unrest in the Middle East has led to a decrease in supply of fuel in the world and the Fukushima nuclear crisis in Japan has also led to a diversion of the energy resources to Japan instead. These events decrease the supply of energy resources in the world. **<u>Demand</u>** Due to the Fukushima nuclear crisis, there was also a higher demand for fuel in general causing the world demand for fuel to rise. With a lower world supply and higher demand, the overall world fuel prices will increase. This higher price will mean a higher cost in importing oil to UK, thus decreasing the supply of fuel in UK shifting its supply curve from S1 to S2. This overall leads to an increase in prices of fuel in UK.	
			

(b)	**(i)**	Describe the type of market structure operating in the UK energy market.	[2]
		Suggested Answer: The UK energy market is operating as an **Oligopoly** market structure.**[1]**	
		The industry consists mainly of a few producers. With reference to the case material, the market place is being dominated by Britain's six largest utilities and the fact that they could be forced to auction off more than one fifth of electricity they produce shows that they own large market shares of the industry. **[1]**	
	(ii)	Explain how firms in the UK energy market might compete against each other.	[4]
		Suggested Answer: Being in an oligopolistic market structure where there are a few large firms each with substantial market share, the UK energy firms tend to avoid price competition because they are mutually interdependent and there is no real incentive to do so. Any form of price cutting would mean an erosion of revenue as competitors will match such price cuts to prevent a loss of market share and any attempt to raise price will likewise see a fall in total revenue as competitors are unlikely to follow with the expectation of a gain in market share. This result in price rigidity illustrated by the firm's kinked demand curve. Therefore, firms in such a market will favour the use of non-price competition. The non-price competition in the UK energy market is reflected in how the firms compete against each other through different billing system and discount structures which makes it hard for consumers to understand to switch demand to its rival firms. It is also mentioned in Extract 3 that the electricity and gas firms can offer a mix of products, emphasising the differentiated products and marketing strategies adopted to gain a greater market share and revenue.	
(c)		"The third tank is an infrastructure that cements the future for multiple parties." Comment on the economic impact of constructing the "third tank" on the Singapore economy.	[8]
		Question Analysis: Comment: Requires the need to evaluate the validity of arguments presented, based on the context given by the extracts Economic Impact on Singapore Economy: Identified current and future positive and/or negative, and how does it affect the economy. May want to analyse impact via the use of AD/AS diagram to show the impact onto the economy towards achieving the macro aims	
		Suggested Answer:	

Evidence:

Construction of 3rd tank…fuel current Investment

"catalyse new business opportunities", "international LNG traders" … long run investment, Building productive capacity of the nation

Intro: With the construction of the 3rd Tank, it would help to fuel current and future growth in the economy, lowers unemployment and promote price stability, through the combination of increase in Aggregate Demand (AD) and Aggregate Supply (AS)

By building the 3rd tank, it leads to an increase in the level of investment in the economy. Since I is a component of AD, it leads to an increase in AD, shown by a rightward shift from AD1 to AD2, leading to an **increase in output** from Y1 to Y2. Producers will hire more factors of production to meet this increase in aggregate demand, leading to an **increase in derived demand for labour**.

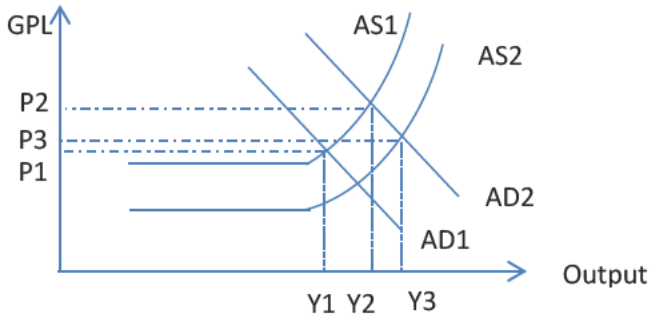
Also, with the increase in the productivity in LNG storage and handling facilities, it may improve our comparative advantage in the processing and re-exporting of natural gases, explaining why many international traders are turning to Singapore. Thus, this comparative advantage might lead to us to price our re-exported LNG more competitively, and assuming demand for such good is price elastic, it would increase our export earnings more than proportionately. Since net exports are also a component of AD, such increase will provide a stronger growth.

However, with the increase in competition for factors of production, it leads to possible higher wage costs, which is passed to the consumers in forms of higher prices, shown by upward **increase of general price level** from P1 to P2 in the short run.

This new investment would catalyse new business opportunities and attract future investment into the economy as shown by extract 4 and improve their storage capabilities. This increase in investment leads to increase in productivity and thus increase the productive capacity of the country, shown by an increase in AS from AS1 to AS2. This raises the potential output of the nation from Y2 to Y3 and cushion off the inflationary pressure earlier on by bringing general price level down to P3. The increase in potential output also creates more jobs in the future.

Yet, this is at the expense of possible structural unemployment as higher skilled workers would be demanded to manage the LNG cargoes due to possible replacement, especially in sectors that are still using conventional fuels as firms shift their focus.

Thus, in the short run, while the building of the 3rd tank might lead to higher growth and lower unemployment rates, it comes at the expense of raising general price level, which would only be reduced in the future. Also, the government might need to impose various measures to mitigate the possible structural unemployment.



(d)		"Ofgem has reiterated its determination to "radically overhaul" the retail energy market". Discuss the extent to which an overhaul of the retail energy market increases consumer welfare.	[10]

Suggested Answer:

The extent to which an overhaul of the retail energy market increases consumer depends on the effectiveness of the policies and unintended consequences the policies may bring about.

<u>State the policies to radically overhaul the market</u>

1. From Ext 2 Para 1, "Britain's six largest utilities face tough retail power market reforms next year which could force them to auction off more than one fifth of electricity they produce."
2. From Ext 2 Para 5, "More clarity in billing"
3. From Ext 2 Para 5, "Sweep away the barriers to new companies entering the energy market"- Deregulation of the UK energy market

<u>Explain how the overhaul of the energy market can increase consumer welfare</u>

With Ofgem forcing the 6 largest energy producers in UK to auction off more than one fifth of the electricity they produce, it reduces their dominance on the market and hence their ability to control prices will be limited. The extent to which how much prices can be raised will also be less as energy producers face a greater degree of competition posed by the smaller energy retailers. With more retailers competing with the traditional larger utility producers in the energy market head on, prices will fall, resulting in higher consumer surpluses and choices will increase for consumers. Therefore, this increases the level of consumer welfare in the market.

However, *The extent to which consumer welfare can be increased is small*

		because as large energy producers and retailers, the top 6 UK energy firms are able to reap substantial amount of EOS compared to the smaller energy retailers in the market, which allows them to enjoy lower average costs of production and compete more aggressively with the smaller energy retailers in terms of price. Smaller retailers that could not withstand this competition will shut down, and the top 6 UK energy firms will regain their market share, providing them with greater ability to restrict output and control prices once again. Secondly, with Ofgem dictating how billing should be done with complex and complicated structures to be removed, comparison between different contracts offered by the various energy retailers becomes easier. The amount of imperfect information is reduced, leading to consumers being more able to make well-informed decisions. This will maximise the level of consumer welfare and consumers will be able to sign up for contracts which better suit their needs and requirements, reducing the amount of welfare loss. Last but not least, Ofgem sought to reduce the barriers to entering the UK energy market in order to make the market more competitive. As barriers to entry are lowered, this attracts more firms into the market, reducing the market share of the existing energy producers. The existing energy producers are forced to be more productive efficient in order to compete and maintain their foothold on the market. This drives energy prices down and will allow for more consumer surplus, thereby increasing the level of consumer welfare. It may also motivate energy producers to conduct more R&D to develop more environmentally friendly and efficient sources of energy as part of product differentiation, leading to better and more energy choices for consumers, raising their level of consumer welfare. ***However,*** *the deregulation of the market may not necessarily result in a higher level of consumer welfare as EOS reaped may now be less, affecting the extent to which how much cost savings firms can pass on to consumers in the form of lower prices. In addition, the loss of market share due to the entrance of more firms may dampen profit margins, reducing the ability of energy providers to engage in R&D and in the process leading to possible lower consumer welfare in the long run.* <u>Synthesis and Evaluation</u> It is important to note that the very nature of this industry requires a firmt o be large in the first place to enjoy substantial EOS, in order to offset the high fixed cost. Furthermore, in view of rising oil prices worldwide and concerns with climate change, it may be even more appropriate for energy firms to remain large. These advantages can then be channelled into R&D to develop more efficient sources of energy to satisfy our needs in the longer term. Also, one must also note that Ofgem might have intervened, but it may not be able to correct this market failure fully due to several considerations as mentioned above. **Reasoned Conclusion** Hence, to a large extent, the overhaul of the energy market may not result in higher consumer welfare in the long run although it may still be necessary in the short run to prevent consumers from being exploited with inadequate information and higher prices set by the dominant energy producers.	

Question 2: Rising Prices, falling prices

(a)		**Using the information in Table 1, compare the inflation rate in Brazil and Singapore, between 2007 and 2011.**	**[2]**
		Suggested answer**:** Inflation rates in both countries increase. Inflation rate on average is higher in Brazil than in Singapore.	
(b)		**Using AD/AS analysis, explain the possible causes of inflation in Brazil.**	**[4]**
		Suggested answer**:** Brazil is experiencing both demand-pull inflation and cost-push inflation. Demand-pull inflation occurs when aggregate demand grows excessively given the constraints of supply. Demand-pull inflation in Brazil is mainly driven by rising domestic consumption (C) and external demand for Brazilian exports. Demand for Brazillian resources (e.g. by China) has led to a rise in exports. This raises export revenue (X). The increase in C and X raises AD. As the Brazil economy is at or near full-employment, an increase in AD causes firms compete for limited available resources, driving up the prices of factor inputs. Thus, firms expect higher prices to produce each level of output and there is a rise in the general price level. Cost-push inflation is caused by an increase in production costs that are independent of demand. In Brazil, the rising costs are most notably fuel and food costs. Since these are necessary inputs in the production of many goods, a rise in fuel and food prices would raise the cost of production for many firms. This leads to an upward shift of the aggregate supply as firms try to maintain their profit margins and price level rises.	
(c)	**(i)**	**With reference to data, explain how high inflation is 'damaging the competitiveness of domestic manufacturers' in Brazil.**	**[2]**
		Suggested answer**:** If inflation rates are high, i.e. price level is rising, banks have to pay *higher nominal interest rates* in order for households to have incentive to save. This attracts net short-term capital inflows resulting in *a rise in exchange rate*. [1m] As the Brazilian real appreciates, · Price of imports become fall in domestic currency, causing consumers to switch from domestically produced goods to their relatively cheaper domestic substitutes. *OR* · Price of exports rise in foreign currency and foreign consumers switch away from relatively the relatively more expensive goods from Brazil to substitutes produced in other countries. Thus goods manufactured in Brazil become less competitive in both foreign and domestic markets. [1m] Note: - Data (Ext 4 Para 2) refers explicitly to impact of rising ER. - Theoretical answer [max 1m]	

High inflation rates in Brazil will likely be higher than those of her trading partners, prices of goods manufactures in Brazil will rise faster than substitutes from other countries, rendering them relatively more expensive and thus less competitive in both domestic and foreign markets.

(c) (ii) With reference to Table 2, comment on Brazil's economic performance in 2011. [4]

Suggested answer:

	2007	2008	2009	2010	2011
GDP at 2005 constant prices (US$b)	973	1,023	1,019	1,097	1,127
- Real GDP growth (%)		*5.14*	*-0.04*	*7.65*	*2.73*
Unemployment (%)	8.1	7.1	8.3	8.2	8.2
Inflation (annual %)	3.6	5.7	4.9	5	6.6
Current account balance (% of GDP)	0.1	-1.7	-1.5	-2.2	-2.1
Government debt (% of GDP)	57.4	56.6	60	52.2	52.8

Real GDP continues to rise in 2011 so the economy expanded in 2011. The rise in real output would mean that more goods and services were available for consumption leading to a rise in standards of living.

However, GDP growth rate fell from 7.65% in 2010 to just 2.73%. The drastic decline in economic growth, coupled with a significant increase in inflation could indicate that the economy is overheating.

Although unemployment remained steady at a high rate of 8.2%. The persistently high rate of unemployment also signifies that resources are not fully utilised and the Brazilian economy is productive inefficient.

Brazil's small current account deficit did show a very slight improvement in 2011. However, additional data has be given (e.g. capital account balance) before the performance of Brazil's BOP can be assessed

Overall, the drastic decline in economic growth coupled with rising inflation and a high rate of unemployment indicate that the Brazilian economy did not perform very well in 2011.

d Discuss the view that a stronger currency is bad news for Japan but good news for Singapore. [8]

Suggested answer:

A stronger currency or a currency appreciation would imply that the domestic currency is worth more in terms of foreign currency. Whether a stronger currency would be good or bad news for either economy would depend on the each economy's current state of resource utilization and the nature of the economy.

A stronger currency would reduce aggregate demand and lead to a worsening of the economy's balance of trade.

- A stronger yen would make Japanese goods relatively more expensive in foreign markets. Assuming that the demand for Japan's imports and exports is price elastic, quantity demanded for exports falls more than proportionately resulting in a fall in export revenue (X). On the other hand, imports become relatively cheaper in

Japan resulting in a more than proportionate increase in their quantity demanded and a rise in import expenditure (M). This causes a fall in net exports (X-M) and a worsening of the economy's balance of trade. AD also falls resulting in a fall in price level and a multiple decrease in NY via the reverse multiplier.

Due to differences in the state of their economies, the stronger currency is bad news for Japan but good news for Singapore.

- Japan is currently in a recession and experiencing deflation due in part to weak external demand (Extract 4 para 3).
  - A stronger yen would decrease the competitiveness of domestically produced goods, causing a further decline in net exports, AD and NY. This would deepen Japan's recession, raise her level of unemployment and worsen her trade deficit.
- On the other hand, the Singapore economy currently suffers from inflation.
  - Given that she is likely to be operating near or at full employment levels, a fall in aggregate demand would lead to a fall in general price level, relieving inflationary pressures with less or no impact on national income.
  - However, given that Singapore suffers from cost-push inflation, the fall in AD stabilises prices at the expense of economic growth and fails to address the root causes of inflation.

The stronger currency is will also reduce imported inflation e.g. due to rising oil prices (Extract 5 para 4) depending on the nature of the economy.

- Although the strengthening Yen would help Japanese firms cope with the rising oil prices, Japan is less dependent on imported inputs and thus there could be relatively little impact on the cost of production for firms.
- Since she is small open, economy dependent on imports, a stronger dollar would effectively reduce imported inflation in Singapore. As the Singapore dollar appreciates, the cost of imported finished goods and inputs fall in domestic currency, this would reduce the cost of production for many firms resulting in a rightward shift of the AS curve. Assuming that cost savings are passed to consumers, price of domestically produced goods fall as well. Cost-push inflation is thus reduced.
  - The fall in the price of goods in Singapore dollars will also help to partially offset the decrease in export competitiveness wrought by the appreciation of the Singapore dollar. Thus, the negative impact on the Balance of Trade and aggregate demand is reduced is lessened for Singapore.
  - However, Singapore is also currently facing domestic supply-side pressures. E.g. Government restrictions on foreign labour are leading to a shortage of labour and increasing labour costs. A strengthening of the Singapore dollar alone may not be sufficient to curb cost-push inflation but may instead be "bad news" for this export-led economy as the fall in export competitiveness could have a larger negative effect on growth and employment.

Thus, given the current state of Japans economy, a stronger Yen is definitely "bad news" as it will worsen her current economic woes of recession, unemployment and deflation and have a negative impact on its BOP. On the other hand, it is more likely to be "good news" for Singapore given her current state of economy dependence on imports, a stronger currency will help curb imported inflation from rising fuel prices with relatively less impact on her export competitiveness.

e	As a consultant economist, what options would you present to the Japanese government as a possible response to the economic problems that the data suggest? Justify your answer.	[10]

	Suggested answer**:** Question analysis *Command words:* Justify: State, explain and evaluate The data suggest: Use data *Key words*: Policy options: at least 2 or more policy options Economic problems: at least 2 problems à serious fiscal position, ageing population, low birth rates and low inward migration suggests that Japan is facing a shrinking labour force and increased strain on the fiscal position. Other possible problems include stagnate economic growth and deflation. Japan's economy is still not recovering from a long period of depression, thus policy options must take these factors into account.	
	The economic problems that Japan may face include (i) the serious fiscal position and (ii) falling productive capacity.	Go straight to the question – identify economic problems.
	As stated in the extract, the serious fiscal position is due to many years of higher government spending and lower government revenue which leads to rising public debt. This is caused by the many years of depression and the ageing population. A serious fiscal position is undesirable as it will put a heavy burden on the future generation to pay back the debt and reduces their welfare. Furthermore, the serious fiscal position may affect investor's confidence and reduce investment and economic growth in the future. Thus, the Japanese government should deal with it as soon as possible. To reduce this serious fiscal position, the Japanese government can either reduce government spending or raise tax revenue. It is difficult to lower government spending such as its spending on pension due to the social and political costs of doing so. In addition, natural and nuclear disasters required increased government expenditure. Furthermore, government spending on infrastructure may be long-term and necessary to promote higher investment. It is also undesirable to reduce government spending as Japan has not recovered from its depression and economic growth may still be weak. Thus, instead of lowering government spending, it may be better to raise tax revenue instead. Tax revenue can be raised either by increasing the tax rate or increasing the tax base (i.e. the 'object' to which the tax rate is applied which involves mainly income tax on households and firms, tax on expenditure and tax on capital gains). It may be usually undesirable to increase tax rate as a higher tax rate is a disincentive to work and invest, thus lowering Japan's aggregate supply and potential economic growth. With a shrinking labour force and greater competition for investment by developing countries, it may be even less desirable to increase tax rate. Hence, it may	Identify economic problem 1 Explain why the government should deal with it. Explain policy option "Lower G and raise T" Elaborate on how to lower G and difficulty of lowering G Explain how to raise T either by increasing tax rate or tax base. Evaluate problem of increasing tax rate

	be better to raise the tax base by switching away from direct taxes to a greater reliance on indirect taxes (such as Goods and Services Taxes (GST) in Singapore). Indirect tax is a more stable source of tax revenue as it is not affected by on the shrinking size of working population in Japan. Even retired workers will need to spend and contribute to indirect taxes of GST. Furthermore, a fall in direct tax rate will help to attract more investment to Japan and thus help to lower its unemployment rate. The higher foreign investment and more workers being employed will be able to contribute to higher tax revenue despite a lower direct tax rate. However, it should be noted that raising indirect tax may worsen income distribution as indirect tax is a regressive tax system and penalized more heavily on the lower-income households who has to consume a larger proportion of their income. Thus, it is necessary for the Japanese government to minimize such undesirable effect on the income distribution by offsetting the indirect tax burden of the lower-income households through transfer payments.	Explain why increasing tax base through switching to indirect tax system is better. Problem of indirect tax system and how to avoid the problem "synthesis"
	The next economic problem is the shrinking labour force caused by ageing population, low birth rates and little inward migration which reduces Japan's full employment capacity thus reducing aggregate supply and hence her potential economic growth. Increasing birth rates is a challenge in developed nations due to social and cultural norms. It is difficult to increase birth rate in a developed country as women become more educated and participate in the workforce. Attracting more foreign labour is difficult due to the national language making it difficult for foreigners to adjust and may also bring about social problems and increase the competition for jobs as unemployment in Japan while falling is still high. Given these reasons, the best option is supply side policy. The government can raise the retirement age and offer tax incentives for firms that have in house training centres and firms that continue to hire their experienced elderly workers. They can offer subsidies to firms that engage in R&D, and offer education programmes for workers to improve their skills. These policies increase the productivity of labour and improve the productive capacity of the economy. This may also allow Japan to move up the value-added chain and reduce its dependence on labour. Currently, Japan may be losing jobs in the labour-intensive manufacturing industries as they are shifted to lower labour cost countries while new jobs are created in the higher value-added manufacturing industries and tertiary (or service) sector. Hence, the skilled workforce will enable Japan to reduce possible structural unemployment caused by the lack of relevant skills and enable Japan to attract higher value-added investment.	The next economic problem and its impact on economic growth. Explain the option of increasing quantity of labour force and its limitations. Explan the better option of increasing the quality of labour force and its benefits.

	While this may involve more spending and tax cuts, which is a concern given Japan's current public debt, it is a timely option since it can boost Japan's economic recovery and at the same time help it achieve its long term aims. Furthermore, ensuring long run economic growth will lead to an increase in tax revenue in the future, and raising the retirement age and creating meaningful jobs for the elderly can slow down the drain on government funds via pensions.	Evaluation, consider limitations and justify why it is still essential (good in the long run)
	<u>Conclusion</u> The combination of policies suggested would help Japan to achieve its long run goals in light of the current problems. The government needs to do cost benefit analysis and may need to bear with its public debt for now, increasing indirect taxes to fund essential government spending on supply side policies that can help bring a full recovery to Japan's economy, which would help the government reduce its public debt in the long run as tax revenues increase with GDP.	Summarise and synthesize main ideas

Candidate Name: _____ CT Group: _____

Index number: _____

PIONEER JUNIOR COLLEGE

JC 2 End-of-Year Examination 2013

ECONOMICS 9732/02

Paper 2 **25 September 2013**

2 hours 15 minutes

Additional materials: Writing Paper

READ THESE INSTRUCTIONS FIRST

Write your class, 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 work for **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

Answer **three** questions in total.

Section A

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

1 Discuss whether it is necessary to have government intervention to achieve an efficient allocation of resource. [25]

2 Japan's nuclear regulation authority announced that the radioactive water leak at the troubled Fukushima Daiichi nuclear power plant is classified as Level 3 on the International Nuclear and Radiological Event Scale (INES), denoting it as a very serious incident.

Using economic analysis, discuss the likely effects of this nuclear leak on product markets in Japan. [25]

3 **(a)** Explain the factors that affect price and output in an oligopolistic market. [10]

(b) Assess the extent to which oligopoly is the most appropriate market structure to promote innovation and efficiency. [15]

Section B

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

4 Aggressive fiscal and monetary stimulus to revive domestic demand work more effectively in countries when consumers are more inclined to spend extra income than save it.

(a) Explain the above statement. [10]

(b) Assess the view that the government should focus on achieving economic growth as its main macroeconomic goal. [15]

5 **(a)** Explain why high unemployment is a concern to a government. [8]

(b) To what extent might other macroeconomic problems result from the use of fiscal policy to reduce unemployment in an economy. [17]

6 President Barack Obama said that China's currency is undervalued, resulting in a trade advantage for Chinese goods over American goods that contributes to the US trade deficit.

(a) Explain whether the alleged undervalued yuan has resulted in US trade deficit. [10]

(b) Discuss the view that protectionism is the best policy to resolve the imbalance in US trade account. [15]

- End of Paper-

PJC 2013 PRELIM EXAM (H1 ECONOMICS)

Question 1: Car pollution

<u>Suggested Answers</u>

(a) (i) Using Figure 1, describe the trend of China's CO_2 emissions from 2003 to 2009. [2]

General trend: China's CO_2 emissions have generally increased from 2003 to 2009. [1m]

Refinement trend: China's CO_2 emissions have been rising consistently every year [1m] OR have almost doubled between 2003 and 2009. [1m]

(ii) Explain one possible reason to account for the trend observed in a(i). [2]

Rapid economic growth in China has resulted in rising affluence amongst the people in China. As a result, their demands for normal goods such as cars have also been increasing. As shown in Figure 2, rising number of passenger cars in China might have resulted in the CO_2 emissions of China to have risen.

Other possible reasons such as rising economic activities such as manufacturing will be accepted as long as candidates show and explicit linkage between the reason provided and the rising trend in China's CO_2 emissions.

(b) (i) Explain what is meant by the term 'negative externality'. [2]

Negative externalities refer to the spillover cost that affects someone not directly involved in the production / consumption of the good or service and it incurs outside the operations of the market, without compensation.

For example, consumption of cars in Asia has resulted in higher rates of medical issues such as cognitive decline, strokes, heart attacks and have caused many (the non-users or third parties) to have died prematurely from air pollution caused by rising number of transportations on the roads.

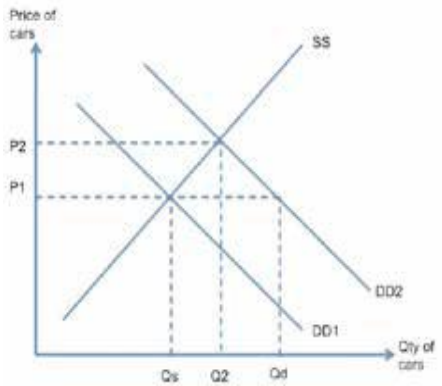
Complete and accurate definition: 1m; example from Extract 1: 1m [Note: the example required here is a brief one and should not overlap too much with the 3rd party & ext. cost mentioned in b(ii)]

Candidates who did not provide examples will be awarded 2 marks if they further elaborate the consequence of an existence of negative externality in a market.

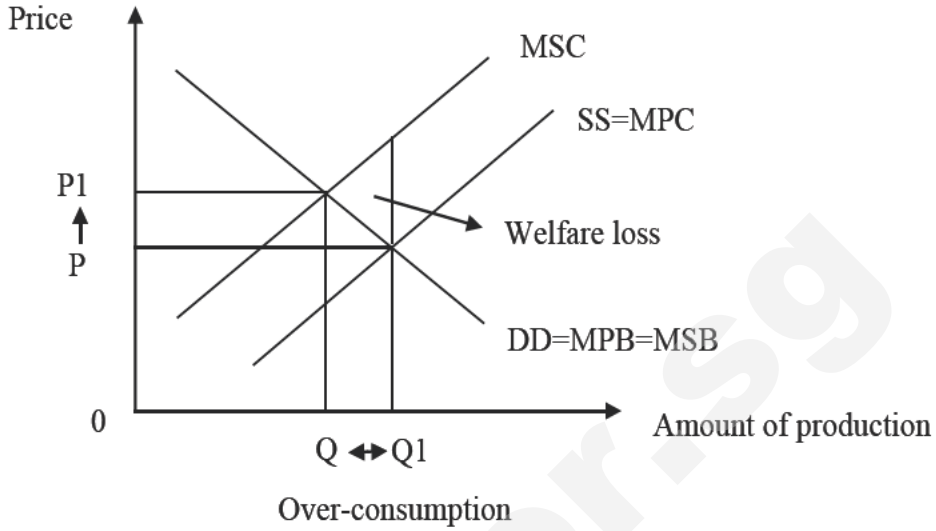
(ii) With reference to Extract 1, explain how the existence of a negative externality can lead to market failure. [4]

Market failure refers to the inability of the free market forces of demand and supply to allocate resources efficiently to achieve maximum welfare in the absence of government intervention.

Introduction (GIST)	
General Statement (recent example, quote, key idea) **I**nterpret (Definitions, clarify concepts/question) **S**cope (Set up directions for the answer) s**T**and (State the stand)	**(G)** Price mechanism is a self-regulating system used in the free market economy to automatically allocate resources. It allocates resources in a market economy through the two forces of demand and supply. **(I)** Efficient resource allocation means that allocative efficiency is attained in the economy. Allocative efficiency refers to a state where the economy is producing the 'right mix' of goods is being produced. It is the state of maximum economic welfare. **(S/T)** For it to allocate resources efficiently, i.e. to maximize society welfare, <u>certain conditions</u> must hold true. In reality some of these conditions are hard to come by and hence government intervention is necessary to achieve an efficient allocation of resource. However, very often, government intervention can only result in a more efficient allocation of resources. It is likely to be impossible to totally remove welfare loss when allocative inefficiency is present.

Body (PEEL)	
What is the most important point?	
State the **P**oint (**P**)	Price mechanism will result in allocative efficiency when all firms operate in a perfectly competitive environment, there is perfect factor mobility, externalities such as external costs and benefits are not present and there are no missing markets. Hence, when these conditions are present, government intervention would not be necessary to achieve an efficient allocation of resource.
What to produce?	Price mechanism serves as a signaling function for the free market thus market prices will adjust to demonstrate where resources are required, and where they are not. The rise and fall of prices reflect shortages and surpluses. For example, when there is rising demand for cars (from Dd1 to Dd2), the price of cars will rise (from P1 to P2) and this signals car producers to manufacture more cars to meet the rising demand. More resources such as labour and capital will then be allocated to production of cars. The rising demand for the labour and capital resources to produce cars will cause the price of these resources to increase in the factor market and attract more resources for the production of cars.  Higher prices also act as a signal to the producers to allocate more resources to the production of these goods which are demanded by the consumers. As shown from the above diagram, producers would react to the higher price through increasing quantity supplied of cars from Qs to Q2. Thus, price mechanism serves as an allocative mechanism.

	Through the signalling function, consumers are able through their expression of preferences to send important information to producers about the changing nature of their needs and wants. When demand is strong, higher market prices act as an incentive to raise output (production) because the supplier stands to make a higher profit. When demand is weak, then the market supply contracts and resources will be moved out of the market.
How to produce?	As for how to produce, price of factors of production acts as a signal to producers when deciding how to produce. The traditional aim of producers is to maximise profits. As such, they will seek for the lowest cost method of production. For instance, in Singapore whereby the price of labour has increased relative to capital, producers will use more capital-intensive method of production. With least-cost method being employed in the production, productive efficiency can be achieved.
For whom to produce?	Lastly, price (money vote) answers the question of for whom the goods should be produced for. In answering the resource allocation question of for whom to produce, resource allocation via the price mechanism is geared towards whoever can pay. This ability to pay is dependent on wealth and income. As such, the higher the income and wealth, the greater is the ability to pay and thus, more resources will be allocated towards this group of people.
Link back to Qn	From the above analysis, we can see that under certain conditions, it is possible to rely on the price mechanism to achieve efficiency in resource allocation. These conditions include (i) all firms operate in a perfectly competitive environment (ii) perfect factor mobility (iii) externalities such as external costs and benefits are not present. However, in reality, these conditions are often not present. Firms operate in imperfect markets where factors are not perfectly mobile. In addition, externalities arise from consumption and production of goods and services. Therefore, when market fails, resources are not allocated efficiency via the price mechanism. The good can either be under produced, over produced or not produced in a free market that relies on price mechanism to allocate resources.
What is the next important point?	
P	In the case of goods which produce externalities, there is a need for government intervention for an efficient allocation of resources.
Explain the point with clear causal links (**E**) **E**laborate the point with examples/diagram	Externalities include both positive and negative externality. It is the spill-over effect to the third party from consuming or producing a good. Price mechanism does not include the third-party costs or benefits. As a result, there may be an under or over consumption/production of the goods, thus leading to welfare loss to the society, indicating that without government intervention, resources cannot be allocated efficiently in the market as desired by the society. Government intervention in this case includes the usage of both taxes and subsidies to maximize total society welfare. Take for an example, due to the negative externality of production, MSC> MPC. This can occur in the example of factory production which emits carbon fumes that affect the residents living near the factory or the workers there. Through breathing in the carbon fumes, these residents nearby and workers may suffer from breathing difficulties and incur higher medical cost. This may also cause them to be absent from work, hence lowering the productivity of the firms they work in. These external costs borne by the third parties causes a

	divergence between MSC and MPC, thus private market output is more than social optimal output. Hence resulting in welfare loss.  The government can then impose a tax at Q with a value that is equal to the MEC to correct this market failure by forcing producers to internalise the negative costs, causing the MPC to shit leftwards to coincide with MSC and cut the MPB at Q, the socially ideal output. However, whether allocative efficiency can be met through government intervention is highly dependent on the how accurate the amount of tax is imposed to reduce production. Carbon emissions are intangible and hence it is hard to accurately estimate the right amount to tax to reduce production to the optimal level. Under or over tax may still lead to allocative inefficiency.
Link back to Qn	However, even though there is a risk of under or over taxation on production to achieve allocative efficiency, there is still a high possibility in producing near allocative efficient point than with no government intervention at all in a free market. Hence it can be said that government intervention is still necessary to achieve allocative efficiency in a market with externalities.

What is the next most important point?	
P	Public goods are also often not produced and accounted for in the free market due to its non-excludability and non-rivalry characteristics. Hence, there will be a need for government intervention to achieve allocative efficient output.
Explain the point with clear causal links (**E**) **E**laborate the point with examples/diagram	Public goods are goods having characteristics of non-rivalry- one's consumption of the good does not reduce another's consumption of it- and non-excludable- it is impossible to exclude non-payers from consuming the good. An example would be national defence. As it is non-rivalrous, the marginal cost of providing security to an additional person is zero, hence at allocative efficient output at P=MC, no firms will produce as there will be zero price for the good. Its non-excludability will also bring about a problem of free-ridership and make it impossible to charge a price for the consumption of national defence security as there is no effective demand. As a result, the free market will not provide for such goods as no private

	firms will be willing to supply goods at zero price. There is hence a total loss in economic welfare of the society if there is no government intervention as these goods brings about positive benefits to the society such as security.
Link back to Qn	Hence the government needs to supply such goods in order to increase society's welfare. However, this is only if the government knows the correct level of consumer demand for a product. If the estimation is inaccurate, then the wrong amount of the product produced will result in inefficiency. The amount used to produce for the public good may be better allocated in other areas of government concern for a more efficient allocation of resources.
P	In reality, almost all firms operate in imperfect markets. Due to imperfect knowledge and barriers to entry, price mechanism may fail to work efficiently. Hence, government intervention is necessary to achieve an efficient allocation of resource.
Explain the point with clear causal links (**E**) **E**laborate the point with examples/diagram	Imperfect markets include monopolies such as Debeers and oligopolies such as the petroleum firms. With large barriers to entry, producers may choose to restrict the output and charge a higher price as they have price setting ability to achieve profit maximisation. This will lead to an inefficient allocation of resources at P>MC at MC=MR, their profit maximizing output. This will worsen if they are able to obtain large monopoly power such that they are able to price discriminate. Therefore, in a free market made up of imperfect markets, firms are able to dictate prices, and if left entirely to the price mechanism, misallocation of resources may take place and societal welfare may be lost. Thus government intervention here is necessary. Intervention such as setting competition laws, prohibiting entities, supervising mergers and acquisition of large corporations and prohibiting collusions can help lower the amount of price setting abilities of such firms, thus bringing their pricing and output production closer to allocative efficient level, hence reducing welfare loss. Take for an example the PTC in Singapore. Though the transportation companies in Singapore are large with significant market share, hence have price setting abilities, the PTC helps to monitor the prices set by the transport companies and has the authority to object the proposed price hike of these transport companies in consideration of social welfare. Hence these agencies set up by the government helps to regulate the prices and output level of firms to ensure a more allocative efficient output is produced. However, it must also be noted that, large firms with large funds, with higher profits incentives may be more prone to engage in R& D to produce products which will improve the welfare of the people. Hence, with government intervention in its pricing policies and its market size may deter them from doing so. Government intervention in this case has to be threaded very carefully based on cost benefit analysis for efficient allocation of resources.

Link back to Qn	Therefore, government intervention will be very necessary in a situation where there is an imperfect market that tends to exploit consumers with higher prices and lower output for profitability.
Conclusion (SR)	
Summarise main points **R**eiterate Stand	It is possible to achieve efficiency without government intervention in resource allocation in a free market provided it has the characteristics of a perfect competition. In reality however, such characteristics are hard to achieve due to imperfect information, and so government intervention is necessary in order to maximize total society welfare and to achieve economic efficiency. This is especially so when there is the existence of externalities, imperfect market and also lack of provision of public goods in the free market. It is also important to note that government intervention may sometimes fail and worsen the situation. it is also evident that there is differing degree of government intervention in similar markets in different countries. The imperfect information makes it hard for the government to accurately implement policies to allocate resources efficiently. However, intervention on the whole is still better than none in a free market. Hence explaining the huge government budget allocated in most countries to help in allocating resources efficiently every year, emphasizing the need in government intervention to do so.

Question 2

Japan's nuclear regulation authority announced that the radioactive water leak at the troubled Fukushima Daiichi nuclear power plant is classified as Level 3 on the International Nuclear and Radiological Event Scale (INES), denoting it as a very serious incident.

Using economic analysis, discuss the likely effects of this nuclear leak on product markets in Japan.

[25]

Interpret the Question

What is the cue word? (what are the skills required for this question?)	**What is the concept word?** (what are the concepts required to answer this question?)	**What is the context word?** (what is the context for this question?)
Discuss – A two sided answer is required with evaluative comments	· Demand and supply · Elasticities of Demand and Supply	*Japan*-examples required from Japanese context

Examiners' Comments

Schematic Plan

Explain briefly the implication of the Fukushima nuclear leak and state which product markets are likely to be affected

Explain what determines the equilibrium price and quantity of various products. (Price Mechanism)

Examine Product Markets
- Energy
- Agriculture
- Tourism
- Construction
- Healthcare products

Conclusion

Introduction (GIST)

General Statement (recent example, quote, key idea) **I**nterpret (Definitions, clarify concepts/question) **S**cope (Set up directions for the answer) s**T**and (State the stand)	Japan's economy was dealt a devastating blow by the radioactive water leak at the troubled Fukushima Daiichi nuclear power plant. Infrastructures were damaged and radioactive radiation has contaminated the area around the region. (G) There are numerous product markets in Japan that will be affected by this disaster – markets such as energy, automobile, agriculture, tourism and construction. (I & S) The extent of the impact on the various product markets is affected by shifts of demand and supply of the products/services and elasticities of demand and supply. (T)

Body (PEEL)	
What is the most important point?	
State the **P**oint (**P**)	The nuclear leak will affect Japan's energy market significantly.
Explain the point with clear causal links (**E**) **E**laborate the point with examples/diagram	Demand for a product refers to the willingness and ability to purchase the product at every price level while supply refers to the willingness and ability to produce a particular product at every price level. The intersection between demand and supply will determine the equilibrium price and quantity that prevails in the market. Hence, the impact on Japan's energy market due to the nuclear leak depends on changes in demand and supply of energy as well as price elasticities of demand and supply. Japan's nuclear industry supplied a third of the country's electricity. Due to the nuclear leak, the capacity to produce electricity was reduced as infrastructure was damaged and affected nuclear reactors were shut down. This disrupted production of electricity in the Japanese economy and supply of electricity will fall, causing the supply curve to shift leftwards. In addition, as electricity is an essential and necessary energy source for many households in Japan, it is not easily substitutable and hence, demand is highly price inelastic.
Link back to Qn	The leftward shift of the supply curve will create a shortage at the original price and there's an upward pressure on price. Thus, price will rise to clear the shortage. With demand being highly price inelastic, the fall in supply of electricity against a price inelastic demand curve will result in prices being escalated significantly.
What is the second most important point?	
P	Secondly, Japan's nuclear leak will adversely affect its agricultural sector.
Explain the point with clear causal links (**E**) **E**laborate the point with examples/diagram	Nuclear radiation leaking from the Fukushima nuclear power plant complex contaminated food produced in surrounding farmland and seeped into groundwater beneath the site. The New York Times reported that ten days after the nuclear leak, abnormal levels of radiation are detected in an assortment of foods: milk from Fukushima Prefecture, where the reactors sit; spinach from Ibaraki Prefecture to the south; canola from Gunma Prefecture to the west; and chrysanthemum greens from Chiba to the south. This piece of news affected the consumers' taste and preference dramatically, reducing demand for Japan's agriculture produce and shifting the demand curve for Japan's leftwards by a huge magnitude. As the nuclear leak seeped into the ground and made conditions for crop cultivation unfavorable, supply of agricultural products will fall, resulting in a leftward shift of the supply curve for agricultural products. *However, with the prevalence of social media and attention paid to this disaster which is deemed as serious as the Chernobyl one, demand for Japan's agricultural produce is likely to fall by a much greater extent compared to the fall in supply. Furthermore, with constant news reports and prolonged media coverage of this disaster, demand for Japan's agricultural produce will be dampened even more.* ***(Evaluation)***

Link back to Qn	With a fall in demand outweighing the fall in supply there will be a surplus created at the original price, creating a downward pressure on price. Prices will therefore fall to clear the surplus with a lower quantity of agriculture produce traded in this market.
What is the third most important point?	
P	Tourism activities came to a standstill in Fukushima city as news of the nuclear leak shocked many countries in the world.
Explain the point with clear causal links (**E**) **E**laborate the point with examples/diagram	For instance, South Korea's Asiana Airlines Inc has cancelled charter flights between Seoul and Fukushima city in October due to public concerns over the radioactive water leaks. Consumers' taste and preferences were affected negatively as tourists stayed away from the radioactive contaminated city or switched to alternative destinations. This decreased the demand for tourism services to the city, leading to a leftward shift of the demand curve for tourism services. In addition, Fukushima city, around 60 kms (37 miles) from the nuclear facility and with a population of some 284,000, is a popular destination for golfers and tourists visiting nearby local hot springs and lakes. However, due to possibility of the city being contaminated with radioactive radiation, many of such tourist attractions were temporarily closed down and residents sought refuge in other Japanese cities for fear of contracting radioactive related illnesses such as cancer. Supply of tourism services hence fell, resulting in a leftward shift of the supply curve for tourism services in the city. *However, as anecdotal evidence has shown that tourism prices plummeted during the period of the disaster, demand for tourism services must have outweighed the fall in supply in order for price of tourism services to fall.* ***(Evaluation)***
Link back to Qn	The fall in price of tourism services was caused by the combined effect of a fall in demand outweighing the fall in supply which has created a surplus at the original price. Downward pressure will be exerted, resulting in lowered prices and quantity traded in the market.
What is the fourth most important point?	
P	The nuclear leak may impact the construction and renovation industry positively
Explain the point with clear causal links **(E)** **E**laborate the point with examples/diagram	With infrastructures and many places possibly contaminated with radioactive radiation, the demand for renovation and restorative services will be raised. This will cause the demand for restorative and renovation services to rise, causing the demand curve for construction and restorative services to shift rightwards. As price of restorative and renovation services increase due to the significant rise in demand, the quantity supplied of restorative services may not be extremely responsive to the higher prices in the short term. With public health concerns, workers and residents have left the city and it will be hard for construction and renovation firms to employ workers in the short term. With construction and renovation services being highly intensive the labor market constraints will make the supply of restorative and renovation services highly price inelastic.

	However, the extent to which Fukushima city could be restored to its usual state and cleared of contamination depends heavily on government intervention. The severity of this natural disaster has made the Japanese government act swiftly in mobilizing many of its agencies and ministries to start working in the affected region instead of leaving the restoration and reconstruction work to the free market. The speed at which the city is rebuilt may be increased with government intervention. ***(Evaluation)***
Link back to Qn	Without government intervention in the free market, the rapid increase in demand for construction and renovation services will result in a shortage of construction and renovation services at the original price, exerting an upward pressure on price, leading to higher prices to clear the shortage. With a rise in demand against a highly price inelastic supply curve, prices of construction and renovation is expected to rise significantly.
What is the fifth most important point?	
P	The pharmaceutical and healthcare industry might receive a temporary boost due to the nuclear leak.
Explain the point with clear causal links **€** **E**laborate the point with examples/diagram **L**ink back to Qn	The nuclear water leak has emitted radioactive radiation which is known to cause cancer in human beings. Hence, the demand for health related products such as berry essences which are known to be able to reduce the risk of contracting cancer may rise. This increase in preference for such health related products and supplements will cause the demand curve for such products and supplements to shift rightwards, resulting in higher prices and quantity traded of such products and supplements in the market. *However, the rise in demand for such products depends on how fast the Japanese government is able to complete its cleaning up and restorative work in Fukushima city. If the Japanese government could efficiently and effectively execute its efforts to prevent the spread of radioactive radiation and reassure the public of the fact that Fukushima city is cleared of all possible contamination, the impact of the healthcare products industry may only be temporary and insignificant.* ***(Evaluation)***

Conclusion (SR)	
Summarise main points **R**eiterate Stand	S: The Fukushima nuclear leak will have different impacts on different product markets and the extent of the impact will primarily depend on the extent of the shifts of the demand and supply curves and elasticities of demand and supply. R: In the short run, the impact on many product markets in Japan is largely detrimental. However, in the long run, it will be difficult to predict the exact impact on different product markets and this is made even more challenging with constant changing of tastes and preferences from the consumers and effectiveness of government policies.

Question 3:

(a) Explain the factors that affect price and output in an oligopolistic market. [10]
(b) Assess the extent to which oligopoly is the most appropriate market structure to promote innovation and efficiency. [15]

Interpret the Question – Part (a)

a) Explain the factors that affect price and output in an oligopolistic market **[10]**

What is the cue word? (what are the skills required for this question?)	**What is the concept word?** (what are the concepts required to answer this question?)	**What is the context word?** (what is the context for this question?)
'Explain'	Factors affecting price and output, oligopoly	oligopoly

Schematic Plan

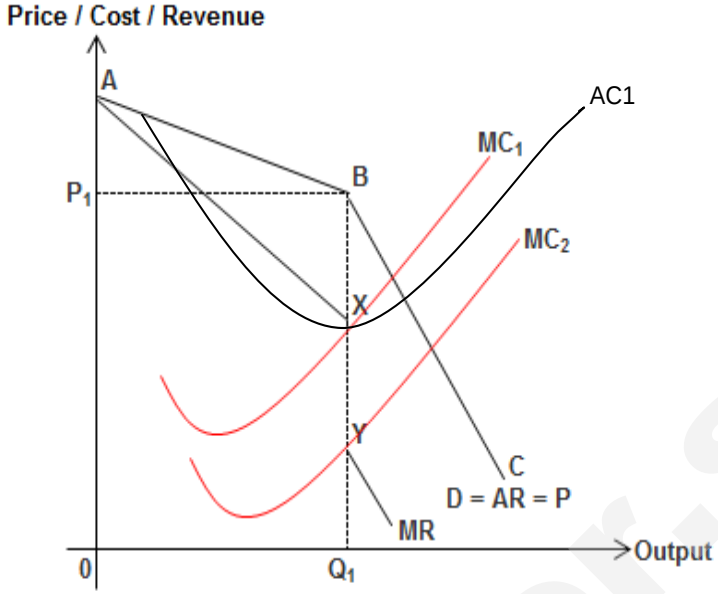
Oligopoly
↓
Features leading to Price and output set at profit maximizing conditions
↓
Mutual interdependence affects price and output of a firm
↓
High BTE prevents firms from entering, retaining price and output of a firm
↓
Conclusion

Introduction (GIST)

GIST	**(G/I)** Oligopoly can be differentiated in terms of their characteristics which will affect their behaviour and performance of the firms in each market structure. **(S/T)** Price and output of an oligopolistic firms can eb be determined by their features, their conduct and their ability to retain supernormal profits.

Body (PEEL)

What is the most important point?	
State the **P**oint (**P**)	P: Firms in an oligopoly face high barriers to entry, such as high fixed cost of satellites in a telecommunication market, resulting in few large firms such as Singtel, M1 and Starhub, each with significant market share.
Explain the point with clear causal links (**E**) **E**laborate the point with examples/diagram	With imperfect information, goods produced can be homogenous and/or differentiated products. Depending on the nature of the goods, demand for these goods can thus be price elastic and inelastic, but the mutual interdependence between firms leads to the emergence of a kinked demand curve. With reference to Fig 1, a profit maximizing oligopolistic firm will produce at an output, Q1, where the additional cost of producing an additional unit of the good is equivalent to the additional revenue earned from that unit. This reflects that every additional profit that can be earned will be maximized at Q1. Thus, with reference to the kinked demand curve, an oligopolistic firm will tend set a price at P1.

	 **Figure 3: The kinked demand curve of a firm in an oligopoly market structure**
Link back to Qn	Thus, based on features of the market structure, an oligopolistic firm will produce at output where (MC=MR) and set a price at price with reference to the demand in the market.
What is the second most important point?	
P	P: Mutual interdependence between firms in an oligopolistic market will also affect the price and output of a firm.
Explain the point with clear causal links (**E**) **E**laborate the point with examples/diagram	Due to mutual interdependence, if the firm raises prices, consumers would switch to close substitutes sold by its rivals, and their rivals would not raise prices as they benefit from higher demand and hence revenues and profits. This is why the demand curve is price elastic from point A to B as many consumers would switch if prices were raised. However, if the firm cuts prices, rivals would respond by cutting their own prices as well for fear of losing customers to this firm. This is why the demand is price inelastic from point B to C, as cutting prices would not result in many more customers buying their good. Thus, due to the mutual interdependence, firms are restricted in setting prices and output and their decision to do so include the consideration of their rivals' decisions. Furthermore, due to the kinked demand curve, even as the cost structure of the firm were to change (between MC_1 and MC_2), an oligopolist is likely to keep prices at P_1 to maximize profits for fear of large reaction from consumers.
Link back to Qn	Thus, mutual interdependence between firms will also affect the price and output decision of an oligopolistic firm.

What is the third most important point?	
P	P: Due to substantial barriers to entry, an oligopolist is able to retain the price and output set.
Explain the point with clear causal links (**E**) **E**laborate the point with examples/diagram	If a market structure has low barriers to entry, any short run supernormal profit will entice a large number of new entrants, which will compete away the supernormal profit earned by that firm. The large number of substitutes will also result in demand to be more price elastic, leading to likely lowering of prices to maintain revenue. Also, due to large number of sellers, output sold by each firm will be less. However, for an oligopoly, high BTE will prevent firms from entering, allowing them to retain the price and output set earlier in the short run.
Link back to Qn	Thus, high BTE allows the oligopolist to retain her price and output set earlier.
Conclusion (SR)	
Summarise main points	S: It is important to note that the above only examines the price and output decision of oligopoly in a theoretical manner. In the real world, possible price competition, collusive models and changing cost structures can also affect the price and output of a firm.

Interpret the Question – Part (b)		
b) Assess the extent to which oligopoly is the most appropriate market structure to promote innovation and efficiency. [15]		
What is the cue word? (what are the skills required for this question?) 'Assess the extent' requires one to examine various conditions or criteria that will explain the likelihood of oligopoly being the most appropriate	**What is the concept word?** (what are the concepts required to answer this question?) Oligopoly, promoting innovation and efficiency.	**What is the context word?** (what is the context for this question?) Oligopoly and appropriate

Schematic Plan

Definition of Innovation and Efficiency
↓
Thesis: Explain why oligopoly is a better market structure for innovation as compared to Monopoly due to constant contestability between firms. And better than MC firms due to supernormal profits.
↓
Anti-thesis: Monopoly can also face contestability
↓
Evaluation: Depends on level of government intervention to control level of contestability
↓
Thesis: Explain why PC and MC is might be a better market structure for efficiency especially AE
↓
Anti-thesis : MC less able to achieve productive efficiency as compared to oligopoly
↓
Evaluation: PC is not possible in the real world.
↓
Synthesis/ Judgement: it is important to understand how nature of the product is critical to fully assess whether oligopoly is best. Certain products such as healthcare favor greater innovation, despite possible higher prices. Thus, perhaps in such cases, a regulated oligopoly might then be the best.

Introduction	
GIST	**(G/I)** Efficiency in an economy can take many forms, and may include allocative efficiency, where the price of a good is equivalent to the additional cost of producing that additional unit. It can also be in the form of productive efficiency where the firm is able to produce on the long run average cost curve, with the lowest possible cost. Innovation could be in forms of product improvement, or improvements in the production process that result in a fall in per unit cost of output. **(S/T)** However, one has to critically examine the various contexts, such as level of government intervention, contestability in the market and nature of the product, to assess whether oligopolistic firm is the most appropriate market structure to promote all the above.

Thesis: Oligopoly can be the most appropriate market structure (Innovation)	
Point	An oligopoly can be the most appropriate market structure to promote innovation, due to high level of contestability between firms, as compared to a monopoly.
E/E	As mentioned in (a), due to the mutual interdependence between firms, an oligopolistic firm will often resort to non-price competition in order to further increase their price-setting ability and thus greater market share. Thus, firms has the incentive to channel any supernormal profit earned to innovate on their products or reduce cost due to large scale of production and large cost structure, leading to further increase their profits. Whereas in the case of an monopoly, being the single seller in the market, there is a lack of contestability results in the lack of incentives for the firm to engage in R&D. Furthermore, due to high barriers to entry that deter firms into the market to compete with their profits, oligopolistic firms are often using their supernormal profit to engage in extensive R and D to improve their products. Also. This is unlike the monopolistic competitive firm, where due to lower barriers to entry, any supernormal profits in the short run will entice entrants to compete away the profits. Thus, with only normal profits in the long run, they are unable to engage in extensive research and development.
Linkback to Qn	Thus, it can be seen that as compared to a monopoly or a monopolistic competitive firm, an oligopoly is most appropriate to promote innovation.
Anti-Thesis: Other market structures can be more appropriate market structure (Innovation)	
P	However, a monopoly can be better in promoting innovations, as compared to oligopoly.
E/E	If there is the threat of contestability from foreign firms, it will also spur the monopolist to conduct R and D to increase the barriers of entry to prevent foreign firm from entering the market. This is especially evident in the smartphones market where Samsung was able to penetrate the market of the Apple iPhones, forcing the former touchscreen smartphone maker to conduct in aggressive R&D.
L	Thus, in view of contestability, a monopoly can be a better market structure to promote innovation.
Evaluation	
	Thus, it is important to recognize the role of government in the context of promoting innovations. Should the government open the market to foreign firms, it will introduce potential competitors into the market for a monopoly, increasing contestability and thus leading to greater innovation. However, should the government favor production of an output solely by local firms, and then it would be better for an oligopoly to produce it, since it is more likely to produce more innovated products due to high contestability between firms.
Anti-Thesis: Other market structures can be more appropriate market structure (Efficiency)	
Point	However, a PC firm is more allocative efficient as compared to an oligopoly.

Explain/ Elaborate	For both firms, by producing at profit maximizing output where MC is equal to MR, a PC firm is allocative efficient since price of the good is equivalent to the marginal cost (as MR is equal to AR since they are price taker). This is unlike an oligopoly where price is more that MC as due to higher price setting ability, price is set much higher than marginal cost. Thus consumer's valuation of the good is more than the additional cost of producing that unit. Furthermore, even though an MC firm is also allocative inefficient, since at profit maximising output where MC cuts MR, P is still greater than MC, however, the extent is less as MC firms has less price setting ability due to large number of substitutes, and thus prices are nearer to the marginal cost of producing it.
L	Thus, as compared to oligopoly, a PC and MC firm are better market structure to achieve efficiency.
Thesis: Oligopoly can be the most appropriate market structure (Efficiency)	
Point	However, an oligopoly can also be more appropriate when examining productive efficiency, as compared to a PC and MC firm
Explain and Elaborate	It is important to note that PC firm is not present in the real world, due to imperfect information and immobile factors of production. Furthermore, oligopoly is able to be more productive efficient than MC firm. Due to larger scale of production, an oligopoly able to produce with less excess capacity, unlike an MC firm where a smaller scale of production would result in inability to maximize their operations fully, and thus leading to less productive efficient as compared to an oligopoly
L	Thus, it is untrue to conclude that oligopoly cannot be an appropriate model to promote efficiency.
Synthesis and Conclusion	
S/R	It is important to understand how nature of the product is critical to fully assess whether oligopoly is the most appropriate market structure to promote innovation and efficiency. Certain products such as healthcare favor greater innovation, despite possible higher prices, where prices are still higher than marginal cost. However, it is only through this allocative inefficiency that allows the oligopoly to reap substantial profits and perhaps extensive cost savings as they increase production of this essential goods. Thus, it is only through this model coupled with certain government intervention with taxes on wasteful and inefficient practices and with the revenue, subsidizing essential healthcare that would truly promote innovation and efficiency. Thus, perhaps in such cases, a regulated oligopoly might then be the most appropriate market structure to promote innovation and efficiency.

Question 4:
Aggressive fiscal and monetary stimulus to revive domestic demand work more effectively in countries when consumers are more inclined to spend extra income than save it.

Interpret the Question – Part (a)

a) Explain the above statement. [10]

What is the cue word? (what are the skills required for this question?)	**What is the concept word?** (what are the concepts required to answer this question?)	**What is the context word?** (what is the context for this question?)
'Explain' = Economic theory	'Aggressive fiscal and monetary sitmulus' = Expansionary fiscal and monetary policies 'domestic demand' = C + I 'more effectively' = the impact of increase AD on NY 'more inclined to spend extra income than save it' = mpc, mps à determines the size of the multiplier effect	Countries

Schematic Plan

Expansionary Fiscal and Monetary policies à Higher domestic C and I à higher AD à via multiplier à real NY rises more than proportionate (assume economy <Yf) à The extent of the increase in NY depends on the size of the multiplier effect à *k = 1/(1-mpc) = 1/mpw = 1/(mps+mpt+mpm)* à factors that affect size of *k*

Introduction (GIST)

General Statement (recent example, quote, key idea) **I**nterpret (Definitions, clarify concepts/question) **S**cope (Set up directions for the answer) s**T**and (State the stand)	Aggressive fiscal and monetary stimulus refers to expansionary fiscal and monetary policies. Domestic demand refers to the level of spending by households and firms, that is, consumption and investments which are components of aggregate demand (AD) in a country. Expansionary fiscal and monetary policies aim to increase domestic C, I and government spending and thus aggregate demand. Via the multiplier process, real national income (NY) in the country (assuming the economy is below full employment, that is in an economic recession) will increase more than proportionately. 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)*.

Body (PEEL)

What is the most important point?

State the **P**oint (**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

Elaborate the point with examples/diagram	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. 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	Hence, expansionary fiscal and monetary policies boost both C and I. Increases in C and I 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 significantly.
What is the second most important 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. 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**) **E**laborate the point with examples/diagram	The marginal propensity to consume (MPC) indicates the portion of additional 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). Hence, 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. 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 domestic goods out of any additional increase in income 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 greater increase in AD and NY. When people save or spend more of their extra income on imports, less money will be passed on through the circular flow, hence there will be a smaller increase in AD and NY.
Link back to Qn	Thus, higher MPC leads to larger multiplier effect whereas the larger the MPW (the smaller the MPC) leads to weaker multiplier effect.
What is the third most important point?	
P	Different countries have different values of MPC and thus different size of the multiplier effect.

Explain the point with clear causal links (**E**) **E**laborate the point with examples/diagram	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, Singapore has one of the highest savings rate in the world (high MPS). In addition, 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 of many Asian countries will tend to be larger compared to other Western countries.
Link back to Qn	Consequently, the impact of increases in C and I will have a smaller impact on Singapore's national income. On the other hand, US has a larger multiplier and thus an increase in C and I will have a larger impact on US's national income.
Conclusion (SR)	
Summarise main points	To sum up, aggressive fiscal and monetary stimulus to revive domestic demand work more effectively in countries with relatively larger MPC as a larger MPC value implies a greater multiplier effect.

Interpret the Question – Part (b)

b) Assess the view that the government should focus on achieving economic growth as its main macroeconomic goal. [15]

What is the cue word? (what are the skills required for this question?)	**What is the concept word?** (what are the concepts required to answer this question?)	**What is the context word?** (what is the context for this question?)
'Assess' – consider both thesis and antithesis and synthesise with a judgement	'govt focus on economic growth as main macroeconomic goal' = the desirability of growth as the main aim over other macroec aims; the conflicts / trade-offs between growth and other macroec aims	Countries, time period

Schematic Plan

Economic growth = actual + potential growth

Thesis: It should be the main aim

3) Growth à higher SOL
4) Growth à also achieve other macroec aims:
   Actual growth (economy <Yf) à fall in cyclical unemploym
   Potential growth à lower cost-push inflation

Antithesis: It should not be the main aim

1) Rapid potential growth à higher structural unemployment
2) Rapid actual growth à demand-pull inflation if economy nears Yf + worsens BOP deficit

Conclusion
Ec growth should be the main aim especially for Singapore à benefits from growth are significant for a small and open economy

Introduction (GIST)	
General Statement (recent example, quote, key idea) **I**nterpret (Definitions, clarify concepts/question) **S**cope (Set up directions for the answer) s**T**and (State the stand)	Economic growth is the sustained increase in national output over a given time period (generally a year). There can be actual growth and potential growth. Actual growth refers to the annual percentage increase in national output due to increased utilization of resources. It is caused by an increase in AD in the economy in the short run, in an economy which is below full employment. Potential growth reflects the growth in the economy's capacity to produce (growth in potential output.) It is caused by a rise in the quantity and / or quality of resources available to the economy. In the long run, an economy's ability to grow is limited by the potential output. Whether Whether or not the government should focus on achieving economic growth as its main macroeconomic goal depends on how achieving economic growth affects other government aims and the current economic situation.
Body (PEEL)	
What is the most important point?	
State the **P**oint (**P**)	Economic growth brings about higher standard of living.
Explain the point with clear causal links (**E**) **E**laborate the point with examples/diagram	First, with a higher level of national output and thus higher income, as measured by Gross Domestic Product (GDP), 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. For example, economic growth has led to a greater quantity and range of goods and services for consumers – personal computers, engineering and healthcare – which contributed to a significant increase in living standard in many countries. In Singapore, within a short span of four decades, we have been able to increase our per capita income significantly which move us from a third world to a developed country. As a result, Singaporeans are now able to enjoy a wide range of consumer goods leading to a rising standard of living.
Link back to Qn	Thus, given the strong impact economic growth has on standard of living, it is the most significant aim for Singapore and many other countries, especially the developing economies.
What is the second most important point? (Explain the inter-connectedness and conflicts of economic growth with other aims)	
P	The pursuit of growth allows the countries to achieve other macroeconomic goals, namely lower unemployment rate and lower inflation rate.
E / E	This is because higher actual economic growth leads to a greater utilization of resources and hence move the economy towards full employment. Hence, unemployment rate falls. Moreover, economic growth in Singapore has also been based on supply factors such as higher productivity. With the shortage of land and manpower (from low birth rate and restriction on foreign labour inflow), Singapore has pushed for productivity as her main growth strategy in the long run. This enables the aggregate supply of Singapore to rise and hence overall output

	and employment can rise. In addition, the 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 Singapore.
L	Thus, higher growth can reduce both unemployment and inflation.
What is the third most important point? (Conflict of economic growth and employment)	
P	However, it is necessary to note that higher potential economic growth due to increase in aggregate supply may bring about rising structural unemployment.
E / E	This is because the new jobs created are in industries such as biomedical and electronics 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, leading to rising structural unemployment in Singapore. 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 such as the Workfare Income Supplement (WIS) to help the lower-income workers improve their living standards, thus achieving the aim of a more equitable distribution of income in Singapore as well.
L	Thus, considering that economic growth helps to promote higher employment and better distribution of income, it is the most significant aim for Singapore. This is the main aim Singapore hopes to achieve - inclusive growth, a growth which benefits all Singaporean workers.
What is the fourth most important point? (Other impact of economic growth – conflicts between economic growth, inflation and BOP)	
P	However, the pursuit of economic growth may lead to a conflict in pursuing other macroeconomic aims of low inflation and BOP equilibrium in the short-run.
E / E	Higher actual growth may lead to higher rate of inflation and balance of payments deficit especially when the country is approaching full employment. This is because as aggregate demand (AD) rises near full employment, demand-pull inflation set in. This will affect the export competitiveness and hence worsen the country's balance of payments (BOP). Higher economic growth may also lead to rising demand for imports of consumer and capital goods and hence worsen the balance of payments further.
L	Such negative effects of higher actual growth may cast doubt on the significance of promoting higher actual growth in Singapore.
What is the 5th most important point?	

(How Singapore resolve the conflicts btw growth, inflation and BOP)	
P	Despite the possible negative effects of economic growth on inflation and balance of payments, Singapore government has been able to pursue high economic growth without large increase in inflation and balance of payments deficit.
E/E	In 2007, with a strong economic growth of 7.8%, inflation remained at a low of 2.1% and balance of payments remained at surplus of about $29b. This shows that economic growth can be pursued without affect the rate of inflation and balance of payments if government could ensure that the rise in aggregate demand (AD) is matched by a rise in aggregate supply (AS). With higher productivity due to more efficient workforce (through retraining) and better technology, Singapore can lower her average cost of production. It can thus lead to lower general price level, greater export competitiveness, and improve BOP.
L	Even with current difficult external economic situation as well as the high exposure to global uncertainties, Singapore will be better positioned to enjoy economic growth without at the expense of the other macroeconomic aims of low inflation and healthy BOP if she continues with the effort to raise her productivity.
Conclusion (SR)	
Summarise main points **R**eiterate Stand	In conclusion, which macroeconomic aim is considered to be the most significant for a government would depend on how it affects other government aims and the existing economic condition. Achieving economic growth is an important macroeconomic aim for a country as the benefits from economic growth are significant and crucial for an economy.

Question 5

(a) Explain why high unemployment is a concern to a government. [8]

(b) To what extent might other macroeconomic problems result from the use of fiscal policy to reduce unemployment in an economy. [17]

Interpret the Question – Part (a)

(a) Explain why high unemployment is a concern to a government. [10]

What is the cue word? (what are the skills required for this question?)	What is the concept word? (what are the concepts required to answer this question?)	What is the context word? (what is the context for this question?)
· 'Explain' – causal explanation required	· Unemployment · Economic aims of government	· "is a concern" – focus on negative consequences

Examiners' Comments

Schematic Plan

Define Unemployment
Briefly describe the 2 types of unemployment

Microeconomic consequences	Macroeconomic consequences
· Unutilised resources =>Allocative and Prod inefficiency · Worsen income disparity – Widening income gap esp. if retrenched are unskilled or semi-skilled labour from lower Y-groups	· EG - Negative expectations => ¯C, I => ¯AD, actual growth¯ - Erosion of skills => ¯LRAS, LT EG¯ · Strain on govt budget => revenue from tax¯, spending on UnN benefits and other subsidies- *Others* · ¯ FDI, capital outflows => ¯ER and worsen capital account · - crime and political uncertainty=> ¯SOL

Introduction (GIST)	
- General Statement (recent example, quote, key idea) **- I**nterpret (Definitions, clarify concepts/question) **- S**cope (Set up directions for the answer) - s**t**and (State the stand)	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 employment despite an active search for work. There are several types of unemployment but during periods of high unemployment the main types are cyclical unemployment, structural unemployment. A high level of unemployment is a concern to government as it can result in a variety of micro and macroeconomic problems including inefficiency, widening income disparity, low or falling economic growth.

Body (PEEL)	
What is the most important point?	
State the **P**oint (**P**)	Governments are concerned if there is a high level of unemployment as it represents inefficiency and may worsen inequality.
Explain the point with clear causal links (**E**) **E**laborate the point with examples/diagram	A high unemployment rate means that a significant proportion of the labour force is unemployed and these factors of production are unutilized. The economy is producing within in its production possibilities frontier, the output of the economy is not maximised and this results in the worsening of the problem of scarcity. As wages are the main source of income for households, high unemployment widens income disparity as it brings about a significant loss of income. This is worsened if the job losses affect mostly unskilled workers. Many firms in the US are shifting all or part of their labour intensive mass-manufacturing processes to lower cost developing countries such as Mexico. This has led to the retrenchment of many unskilled workers in the US, widening the income disparity as these low-income households experience a further decline in income.
Link back to Qn	Thus, a high level of unemployment is a concern as it can worsen microeconomic problems.
What is the second most important point?	
P	A high level of unemployment is also a concern as it discourages consumption and investment, thereby reducing economic growth.
Explain the point with clear causal links (**E**) **E**laborate the point with examples/diagram	A high level of unemployment negatively impacts the outlook of the economy by households and firms. This may cause households to increase savings as a precaution, leading to a fall in consumption (C). Firms would likely lower the expected returns on investment (MEI shifts to the left) and the level of investment (I) will fall. The fall in C and I decreases aggregate expenditure leading to a larger fall in national income (NY) via the reverse multiplier. This worsens any existing recession. Prolonged periods of unemployment could lead to the erosion of skills of those unemployed. They also lose touch with new developments and lack the opportunity to acquire new skills that are required when demand returns. This means that high levels of cyclical unemployment may not fall significantly even when AD rises as it can become structural unemployment. The erosion of skills, together with the fall in I, also slows the increase in AS and reduces economic growth in the long run.

Link back to Qn	Thus, high unemployment may prevent the government from achieving sustained growth for the economy.

What is the third most important point?	
P	High levels of unemployment can strain the government's budget and lead to a worsening budget deficit.
Explain the point with clear causal links (**E**) **E**laborate the point with examples/diagram	Countries that provide unemployment benefits (e.g. US, Australia, Japan) may also experience a sharp non-discretionary rise in transfer payments. This is worsened if the government also provides additional medical, housing and other subsidies as high unemployment rates can lead to a sharp increase in the number of people that qualify.
Link back to Qn	This can strain the government's budget and lead to a large deficit if the situation is prolonged.
Conclusion (SR)	
Summarise main points **R**eiterate Stand	S: Thus, a high level of unemployment is a concern for the government as can result in inefficiency, rising income inequality, worsening recession as well as budget deficits. The consequences become worse if the situation is prolonged. Thus, governments will undertake a variety of policies (such as expansionary fiscal policy) to reduce unemployment quickly and prevent it from being prolonged.

Interpret the Question – Part (b)

(b) To what extent might other macroeconomic problems result from the use of fiscal policy to reduce unemployment in an economy. [17]

What is the cue word? (what are the skills required for this question?)	What is the concept word? (what are the concepts required to answer this question?)	What is the context word? (what is the context for this question?)
'To what extent might" - judgment required as to the likelihood and degree (to which other macro problems might occur)	'Other macroeconomic problems" "fiscal policy" "unemployment"	An economy

Examiners' Comments

Schematic Plan

Introduction
- Identify expansionary fiscal policy
- Identify conflicts with other macroeconomic aims- healthy BOP, price stability and sustained growth

Explain Expansionary FP

Inflation	LT Economic Growth	BOP Disequilibrium
· When economy is near Y_F · Expans FP causes AD to - => GPL rises · Conflict with inflation	· Crowding out effect- - G may crowd out I. => Unless - G is on capacity-building projects, the ¯I may reduce capital accumulation · - Govt debt => - T in future to finance payments => ¯ incentive to work and invest=> LRAS¯ => LT EG may ¯	· - Y induces- import expenditure => worsen current a/c · High levels of govt debt resulting from FP => business confidence => FDI ¯ & hot money outflow => capital a/c worsens

Conclusion

Introduction (GIST)

General Statement **I**nterpret **S**cope s**T**and	The government may undertake expansionary fiscal policy tin an attempt to reduce unemployment. However, the attempt to lower unemployment through expansionary fiscal policy may create other problems such as the worsening of the Balance of Payment (BOP), slow or falling economic growth as well as inflation. The extent to which these other problems may occur would depend on prevailing economic conditions, the nature of the economy and the level of government debt.

Body (PEEL)	
What is the most important point?	
State the **P**oint (**P**)	Expansionary fiscal policy involves raising government spending (G) and lowering tax revenue in an attempt to raise aggregate demand and output.
Explain the point with clear causal links (**E**) **E**laborate the point with examples/diagram	The government may raise its spending (G) on infrastructural projects such as improving the transportation networks, building training centres and holding job fairs. A fall in income tax will lead to an increase in disposable incomes. There is a rise in purchasing power and consumption increase. Similarly, a fall in corporate tax rates will raise retained profits of firms. The MEI curve shifts to the right and more investment projects will be undertaken. Since they are all components of aggregate demand (AD), the rise in G, C and I will raise AD. Assuming that the economy is not at full employment, the rise in AD leads to a larger increase in national income via the multiplier effect. The rise in real output increases the demand for factor inputs including labour and cyclical unemployment is reduced.
Link back to Qn	However, under some circumstances, the rise in AD may lead to inflation, cause a fall in long –run economic growth or worsen BOP.
What is the second most important point?	
P	Depending on the current economic conditions, i.e. the state of the economy, expansionary fiscal policy may cause inflation and threaten price stability.
Explain the point with clear causal links (**E**) **E**laborate the point with examples/diagram	An economy is enjoying healthy growth rates may still experience structural unemployment. In attempt to correct structural unemployment, the Singapore government has increased spending on infrastructure for training and re-skilling of workers. If the economy is at or near full employment, the rise in AD will cause firms to compete for and bid up the price of increasingly scarce factor inputs. This will result in an increase in the general price level. [Diagram]
Link back to Qn	Thus, expansionary fiscal policy can lead to demand pull inflation, depending on the economy's level of resource utilisation.

What is the third most important point?	
P	Expansionary fiscal policy can have a negative impact on future economic growth.
Explain the point with clear causal links (**E**) **E**laborate the point with examples/diagram	The rise in G can crowd out private investment. If the government borrows to finance its spending, less funds are available to firm who wish to undertake investment projects. This results in a fall in private investment, which offsets to some extent the rise in AD from fiscal policy. In the long run, the fall in I reduce capital accumulation and may slow the increase in productive capacity. This may be ameliorated if the government raises spending on infrastructural or capacity-building projects. However, if the funds are spent on projects that do not build productive capacity (e.g. monuments or military equipment), potential growth may be reduced and this reduces long-term economic growth.

	The combined increase in G and the fall in T may also strain the government's budget and result in a budget deficit over time. Tax rates will have to be raised in future to repay the debts and service the interest payments. This decreases the incentive to work and invest. Large budget deficits also weaken investment confidence and this may lead to a fall in both domestic and foreign direct investment. Again, long-term economic growth is reduced.
Link back to Qn	The extent to which economic growth is negatively affected depends on the extent of the crowding out effect and the government's resources. The Singapore government has healthy reserves, which it draws upon to finance budget deficits arising from expansionary FP. However, in countries such as Greece and Japan, expansionary fiscal policy will worsen their debt problems and it is far more likely for conflicts with economic growth to occur.

What is the next most important point?	
P	Expansionary fiscal policy can worsen the balance of payments.
Explain the point with clear causal links (**E**) **E**laborate the point with examples/diagram	Expansionary policy would result in the rise in national income. Assuming the population remains unchanged, per capita income rises. The increase households' income and thus purchasing power may induce a rise in expenditure on imports. Thus, the economy's current account worsens. This problem will be worse for countries that have a high marginal propensity to import (MPM). This is likely to be more of a problem for Singapore, due to her reliance on imports and high MPM, rather than for countries such as China, which have relatively abundance resources and a lower MPM. High and rising levels of government debt that result from the aggressive use of expansionary fiscal policy may also lead to a loss of business confidence. This will deter FDI and also lead to both long-term portfolio investments as well as hot money outflows. The capital account worsens. This problem is more likely to afflict countries such Greece and Japan whose governments have large budget deficits and accumulated large amounts of debt.
Link back to Qn	Overall, expansionary fiscal policy can cause the capital and/or the current account to worsen, leading to BOP disequilibrium.
Conclusion (SR)	
Summarise main points **R**eiterate Stand	Expansionary fiscal policy to correct unemployment can result in other macroeconomic problems depending on prevailing economic conditions, the nature of the economy and whether the government has sufficient resources to finance the expansionary FP without accumulating high levels of debt. E.g. Singapore, has a BOP surplus and the government has ample reserves accumulated from past surpluses. If the government chooses to implement expansionary fiscal policy to address cyclical unemployment, it is less likely to create other macroeconomic problems. On the other hand,

	countries like Greece which are saddled with high levels of government debt are likely to experience other macro problems to a greater extent

Question 6

President Barack Obama said that China's currency is undervalued, resulting in a trade advantage for Chinese goods over American goods that contributes to the US trade deficit.

a. Explain whether the alleged undervalued yuan has resulted in US trade deficit. [10]

Interpret the Question

What is the cue word? (what are the skills required for this question?)	**What is the concept word?** (what are the concepts required to answer this question?)	**What is the context word?** (what is the context for this question?)
Explain whether Clarify and make clear economic concepts	**Undervalued Yuan** **Trade deficit**	China and the United States

Question requirement:
Candidates must explain how alleged undervalued yuan cause a US trade deficit and whether there are other possible causes as well

Schematic Map

Meaning of trade deficit

⇩

How undervalued Yuan causes a US trade deficit

⇩

Other causes of a US trade deficit

⇩

Conclusion

Thinking Process	GIST Introduction
GIST Introduction Make a stand and try to link to the question.	The balance of payments records the receipts and expenditure from international transactions. It is made up of the current and the capital account. A deficit in the trade account occurs when receipts is lesser than payments for goods. While the alleged undervalued yuan might contribute to a US trade deficit, it may not be the only factor. A deficit is usually attributed to either cyclical or structural factors.
Thinking Process	**Body (PEEL)**
Topic sentence – alleged undervalued yuan	**(G)** To some extent, the alleged undervaluation of the yuan has resulted in US incurring a trade deficit. **(E)** The alleged undervalued yuan implies the Chinese government deliberately fixing the official rate of Yuan lower than what it would be in a freely floating exchange market. **(E)** This cause the price of Chinese exports to decreases in foreign currency, and an increase in the price of her imports in yuan. Assuming Marshall-Lerner condition holds true, net exports increase for China. China's trade surplus with US increases **(L)** causing a trade deficit for US.
Thinking Process	**Body (PEEL)**
Topic sentence: other possible causes of a deficit	**(P)** Another possible reason behind US trade deficit could be due to her loss of comparative advantage in labour intensive goods. **(E)** A country loses comparative advantage with respect to other competitors due to improved efficiency of competitors or a decrease of internal efficiency. As a result, exports are likely to fall leading to trade deficit. **(E)** For example, due to higher labour cost, many developed countries such as the U.S. lost their comparative advantage in labour-intensive manufactured goods (such as textile and toys) to the low-cost developing countries such as China). Thus, Chinese imports to US are relatively cheaper and demand for imports rises and hence US' expenditure on imports rises. At the same time, US exports of labour-intensive goods are more expensive and hence quantity demanded falls. If demand is price elastic, the quantity demanded falls more than proportionately leading to a fall in US export earnings. Hence, even without an undervalued yuan, Chinese goods will already have a competitive edge against other countries. **(L)**This results in a trade deficit for US.
Thinking Process	**Body (PEEL)**
Topic sentence: another possible causes of trade deficit	**(P)** Another possible cause of a US trade deficit could be due to the low interest rate in the US which encourages borrowing and overspending. **(E/E)** Interest rate is the cost of borrowing. As interest rate falls, cost of borrowing falls, the opportunity cost of current consumption falls as well. There is hence a high tendency for US consumers to borrow to spent and purchase foreign imports, leading to them spending more on Chinese goods, **(L)** causing a US trade deficit.

	Conclusion (SR)
Summarise main points **R**eiterate Stand Link to b	Alleged undervalued yuan is but just one of the reason for US trade deficit. A persistent trade deficit is unhealthy and it is imperative that US undertakes appropriate policies to reduce such unbalances. The most common policy US undertakes is protectionism. Whether this is the best policy or not will be discussed in part (b).

(b) Discuss the view that protectionism is the best policy to resolve the imbalance in US trade account.

[15]

Interpret the Question

Cue Word	Concepts	Context
Discuss – consider both sides of the argument and come to a reasoned conclusion	(what are the concepts required to answer this question?) 1. Protectionism 2. Imbalance in trade account	(what is the context for this question?) **"US"** **Absolute word** **'best policy'**

Schematic Map

Explain how protectionism reduces US trade deficit

Is it the best policy?

Criteria - root cause of deficit and nature of US economy

May not be the best policy

Suggest other policies using criteria given

Conclusion

Thinking process	Introduction (GIST)
Introduction - define protectionism - scope approach to question	To reduce a trade deficit, the government can use protectionism which represents any attempt by a government to impose restrictions on trade in goods and services between countries. Tariffs, Quotas, embargoes, export subsidies and exchange controls are all examples of barriers to international trade. Whether this is the 'best' policy depends on whether it can target at the root cause of the trade deficit and the nature of the economy. If policies implemented do not 'match' the actual cause of the worsening deficit, not only will it worsen the deficit, there could be other unintended consequences on the economy.

Thinking process	**Body (PEEL)**
Explain nature of US economy and root cause of her deficit.	**(P)** Protectionism is the main policy tool that the US government has use to tackle its trade deficit. **(E)** Protectionism is suitable because domestic firms' contribution to its GDP is very large and there may be a need to protect those industries that have lost comparative advantage especially those involved in the lower end of the production chain or labour intensive industries. **(E)** By imposing tariffs on imports, the US increases the price of her imports, causing US households and firms to reduce reliance on foreign g/s and turn to domestic produced substitutes, **(L)** hence reducing import expenditure.
Evaluate	However, in the short run, due to the existence of contractual agreements between trading firms and as domestic consumers need time to switch their preferences from consuming foreign imports to locally produced goods, the demand for imports is inelastic. A rise in the price of imports due to import tariffs leads to a smaller than proportionate fall in quantity demanded of imports, so total expenditure on imports rises. This will worsen the US trade deficit . Protectionism could also end up reducing local firms' export competitiveness since it raise cost of production for US firms dependant on imported raw material and semi-finished products for production of goods Example, US protectionism of the local steel industries resulted in higher cost of production for automobile industries like General Motor and Ford and other steel related industries like heavy machinery. This hurt export competitiveness of steel related industries, aggravating US trade deficit. Due to US large presence in the global market, protectionism may also invite retaliation from its trading partners in the form of similar protectionistic measures. This move may spiral into a trade war. Example, China retaliated by imposing export duties of its own steel. US may need to spend more on imported inputs from China further aggravate her trade deficit. Tariff is a beggar-my-neighbour policy: the fall in import expenditure causes export earnings of foreign countries to fall so foreign incomes fall and thus foreigners buy less imports from US and US export earnings will fall. aggravating US trade deficit. Hence protectionism may not be the best policy as it is just a a quick-fix that reduces the trade deficit in the short run by switching domestic consumers to locally produced goods, boosting domestic demand, enabling the declining industry to sort out its problems before closing but does not reduce it in the long run. It also may also not address the root problem of US deficit which is a loss of comparative advantage.

Thinking process	**Body (PEEL)**
Alternative policy- expenditure reducing policies	**(P)** If the underlying cause of the trade deficit is due to high level of import expenditure, the US may consider the use of contractionary fiscal policy or monetary policy. **(E)** This is further facilitated by the **nature of the US economy** which has a large proportion of its C and I relative to its GDP/external demand. A fall in C and I will have a great impact on AE and income which in turns decreases the consumption of imports. US also has low savings and large domestic C which affects the size of its downward multiplier. **(E)** For example, a government may adopt a contractionary fiscal policy which could be in the form of an increase in taxation on personal income. **(L)** This will reduce disposable income levels thus leading to a fall in demand for imports. The extent of fall in imports depends on the size of the marginal propensity to import (mpm).
Evaluation	However, US households' consumerism behaviour may limit the effectiveness of this policy. When income falls, the level of precautionary savings may not rise by much and households may continue to spend. This may be worsened by the current low i/r that US banks offer. Since US is a major trading partner for a lot of countries, reducing its imports expenditure may cause a large fall in the exports revenue of other countries. These other countries may in turn demand less of US exports, worsening the trade deficit. Need to consider that US is currently in a recession, expenditure reducing policies may be ineffective as it will deflate the economy further and worsens the problem of unemployment.

Thinking process	**Body (PEEL)**
Alternative policy – supply sides policies	**(P)** If the root cause of trade deficit is due to lack of export competitiveness, supply side policies can be implemented to improve exports competitiveness (both price and non-price) by improving quality and productivity. **(E)** In order to improve the quality of US exports →employ higher level of technology and increase automation. **(E)** Increase in exports competitiveness can also be achieved through higher level of productivity. Government spending on education facilities, retraining programmes may develop a better skilled workforce. Such spending will help to improve the productive capacity and put downward pressure on cost-push inflation.
Evaluation	The outcome of such government spending may not be certain as not all firms would be able adopt these new methods of production. Also, these new production methods would displace a certain degree of lower skilled workers and these workers would find it difficult to find new work as they may not have suitable skills required by these industries. This may increase structural unemployment for the country and worsens the overall unemployment rate in view of the recession.

	Spending on the R&D sector and retraining programmes can be very costly and it takes a very long time before the intended outcome is seen. As the US government has a large budget deficit, it may not be able to spend much on these areas. It may have to borrow even more and borrowing may result in crowding out effect (this may not be very significant in a recession as the other sectors in the economy may not borrow very much) and causes a burden on the future American generation. Trading partners' protectionism policies may negate the effect of US supply side policies that aim improve its exports competitiveness. In this case US may consider signing FTAs to eliminate some of these trade barriers.
	Conclusion (SR)
Summarise main points **R**eiterate Stand	**Conclusion:** Protectionism does not appear to be the best policy as it target at the symptoms but not the root cause of US deficit. Such intervention could end up distorting market signals and easily subjected to retaliation from trading partners. In assessing the suitability of the policies, it is important for the US government to know the main cause of its trade deficit problem. This could be the first criteria for policy consideration before examining the nature of the US economy. If the worsening trade deficit is due to high level of M consumption, then expenditure reducing policies would be suitable but if it is due to lack in X competitiveness, then supply side policies should be implemented instead. A misdiagnose of the problem may result in choosing the wrong policy and in turn may cause an adverse impact on the economy.

RIVER VALLEY HIGH SCHOOL
YEAR 6 Preliminary Examination
in preparation for General Certificate of Education Advanced Level
Higher 1

ECONOMICS 8819/01

Paper 1 **17 September 2013**

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.

Answer **all** questions.
At the end of the examination, hand in your work for Section A and B **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.

[Turn over

Section A (70%)

Answer **all** questions in this section.

Question 1

Issues in the agricultural sector

Table 1: Global Commodity Prices (US$/tonne)

	2007	2008	2009	2010	2011
Wheat	234.76	268.59	185.51	227.95	286.75
Poultry	934.75	996.92	988.92	1,032.25	1,147.00

Source: Food and Agricultural Organisation of the United Nations

Extract 1: Higher food prices

Global warming has already harmed the world's food production and has driven up food prices by as much as 20% over recent decades, new research has revealed.

A rising appetite for meat is another critical factor, said a Researcher. "We actually have enough calories to feed the world quite comfortably, the problem is meat is really inefficient," as many kilogrammes of wheat are needed to produce one kilogramme of meat, he said.

Source: The Guardian, 17 March 2011

Extract 2: Reforms for Common Agricultural Policy

It is "morally wrong" for European farmers to receive billions of pounds of state aid, a cabinet minister has said, warning that rising food prices mean it is only a matter of time before farmers will no longer receive billions in pounds of state aid, in form of high export subsidies. More than half of all the profits of British farmers come from EU subsidies, the National Farmers Union calculates.

Mrs Spelman said the Common Agricultural Policy (CAP) “distorted trade by keeping prices artificially high in the EU while imposing import tariffs on developing countries trying to sell to Europe. At the same time, export subsidies are used to clear market surpluses."

Her comments come as negotiations begin ahead of major reform of the CAP in 2014. At €55 billion, the CAP accounts for 42 per cent of the EU budget, making it the largest agricultural aid programme in the world.

Source: Telegraph, 5 January 2011

Extract 3: Pesticides in waterways

Insecticides enter rivers through runoff from fields and to a lesser extent when they drift into the water during application. This will have devastating effects on biodiversity as potential pesticide and excess fertilizer water contamination kills native species that are part of the normal food chain for birds, fish and other stream wildlife. It is estimated that in the decades ahead, some 40% of Europe's waterways will be degraded. Researches recommend a reduction in pesticide through organic farming.

Source: Environmental New Network, 8 December 2011

Extract 4: GM crops promote superweeds

Biotech (Bt) companies have claimed that Genetically Modified (GM) farming will lead to higher food yields, fewer pests and weeds, and less chemical use. However, a report warns that GM crops have failed to deliver higher food yields but have created dangerous super weeds. When these crops are modified to withstand herbicides and pests, nearby weeds and pests can develop a resistance to the chemicals. In India, the use of pesticide has increased 13-fold since Bt cotton was introduced.

Source: Daily Mail, 21 October 2011

Extract 5: GM crops in a tide of change

Historically, many biotech crops are grown to feed livestock or as ingredients for biofuels, rather than for direct human consumption. But that's changing. A new survey found that many Americans were receptive to foods containing GM wheat if it was produced sustainably. However, the survey also suggested that Americans are wary about the long term effects of GM food due to the lack of information on biotechnology.

In other parts of the world, a similar change is happening. China, the world's second-largest corn consumer, said it is testing the use of GM crops to boost output. Eager to expand its farm production capabilities, China is running field tests of biotech seeds to grow wheat and rice.

Source: Reuters, 6 January 2011

Questions

(a) With reference to Table 1, compare the trend in the price of wheat with that of poultry prices from 2007 to 2011. [3]

(b) **(i)** Explain why global warming has such a significant impact on food prices. [2]

(ii) With the use of a diagram, explain how the rising appetite for meat affects the market for wheat. [3]

(c) **(i)** Explain the underlying reason for the existence of the CAP in the European Union. Justify your answers. [6]

(ii) Explain the reasons behind the EU's plans to reform the CAP. [3]

(d) **(i)** With reference to the data, explain how the farming of non-GM crops can lead to market failure. [5]

(ii) Assess the view that the switch to GM crops helps solve the market failure. [8]

[Total: 30]

Question 2

The Australian Economy

Table 2: Quarter on quarter percentage change in selected economies

	Wage rate		Labour productivity	
	Q4 2010	Q1 2011	Q4 2010	Q1 2011
Australia	0.4	2.3	-0.1	-1.2
United States	0.5	1.0	0.7	-0.3

Source: OECD

Extract 6: Labour Shortages in Australia

The floods in Queensland and Victoria this summer have exacerbated the problem of wage inflation. Prior to the Queensland floods, the Sunshine state was already experiencing labour shortages, partly because of the expansion of the minerals sector and the major infrastructure improvements. Emboldened by the jobless figures that show near full employment and citing cost of living pressures, Australia's still powerful union movement is demanding hefty wage increases for their workers.

Source: BBC News, 6 April 2011

Extract 7: Australia Central Bank cuts key rate

The Reserve Bank of Australia (RBA) lowered its benchmark interest rate today for the first time since April 2009 as recent data suggests the subdued demand conditions and the high exchange rate have contained inflation.

Australian Prime Minister Julia Gillard said the decision brought 'welcome relief' to households. Commonwealth Bank of Australia, the nation's biggest lender, and Westpac Banking Corp. matched the RBA's rate reduction. Westpac said the lower borrowing costs announced today would save customers A$41 monthly on a A$250,000 mortgage.

A government report today also showed Australian house prices declined in the three months through September, the third straight quarterly drop. "The rate cut is especially good news for the retail and housing sectors," said Craig James, a Sydney-based senior economist at Commonwealth Bank. "Even tourism and export sectors will receive a boost."

Source: Bloomberg, 1 November 2011

Extract 8: Mining the truth

The mining industry in Australia has boomed, surging from around four per cent of GDP in 2004 to around nine per cent today. Much has been said about the changing face of the mining industry, where the effects of the boom have been both substantial and positive. But until very recently there has been far less discussion of the impact of the mining boom on the rest of the economy, including those areas which have suffered as a result. While one might assume that any expansion in the mining industry simply adds to the overall size of the Australian economy, in reality the operation of the macro economy is far more complex.

Indeed, much of the growth in mining comes at the direct expense of expansion in other parts of the economy. The study conducted by the Australia Institute also reveals that the mining boom is driving a blow out in the current account deficit with the International Monetary Fund expecting the current account deficit to reach 6.5 per cent of GDP in the medium term.

Source: The Australia Institute, 9 Sept 2011

Extract 9: Australia mining tax clears hurdle, after much debate

The Australian government's plan to impose a 30% tax on big mining companies has cleared a major hurdle, passing through parliament's lower house. It will go to the upper senate early next year, but is expected to pass.

The Minerals Resource Rent Tax (MRRT) Bill will tax coal and iron profits. When the tax becomes law, mining companies will have to pay about A$11bn in charges in the first three years of the tax.

Australia's iron ore exports rose to a record high of A$6.3bn in September, with the biggest demand coming from China and India.

The tax has sparked intense debate in Australian society, one that has been raging for 18 months. The conservative opposition is against the tax, arguing that it would deter foreign investment in the mining sector, driving it overseas and resulting in job losses for Australians.

Source: BBC News, 23 November 2011

Table 3: Degree of foreign ownership of major Australian mining companies

Company	Foreign ownership (%)
BHP Billiton	76
Rio Tinto	83
Woodside Petroleum	24
Newcrest Mining	75
Fortescue Metals Group	40

Source: The Weekend Australian 2011

Figure 1: Trade-weighted exchange rate of the Australian dollar

Source: Reserve Bank of Australia

Questions

(a) With reference to the data in Table 2,

(i) Compare Australia's wage rate and labour productivity with that of the United States for the first quarter of 2011. [2]

(ii) Explain **one** reason why the data suggests the Australian economy was likely to be in full employment. [2]

(b) **(i)** State what is meant by unit labour cost and how it is related to wage rate and labour productivity. [2]

(ii) What evidence is contained in the data to suggest the Australian economy suffered from cost-push inflation? [4]

(c) **(i)** Explain how a mining boom could have substantial positive impact on the rest of the economy. [4]

(ii) Explain the underlying factor that determines the extent of the above impact. [2]

(d) **(i)** Explain how the mining boom is a blow to the current account. [4]

(ii) Explain **one** factor that would mitigate the blow to the current account. [2]

(e) With the help of the data, discuss the extent to which a rate cut would be a boost to the different sectors of the Australian economy. [8]

[Total: 30]

Section B (30%)

Answer **one** question from this section.

3 **(a)** Explain the central economic problem and the rationale of how the optimal choice is made. [10]

(b) Discuss the view that a good is best provided by the government when the market fails. [15]

4 **(a)** Explain why it is important to keep unemployment and inflation rates low. [10]

(b) Discuss if fiscal policy is the key to keep Singapore's unemployment rate low. [15]

2013 Y6 H1 Prelim Case Study Question 1

(a) With reference to Table 1, compare the trend in the price of wheat with that of poultry prices from 2007 to 2011. [3]

- Both prices generally increased [1] but fell in 2009 [1].
- However, the dip in the price of wheat is more significant than that of poultry in 2009. [1]

(b) (i) Explain why global warming can have such a significant impact on food prices. [2]

The global warming will lead to a fall in the supply of food as stated in Extract 1 the world's food production has been harmed. [1m] What caused the significant increase in price is due to the price inelastic demand for food as food is a necessity. [1m]

(ii) With the use of a diagram, explain how the rising appetite for meat affects the market for wheat. [3]

The rising appetite for meat will increase the demand for meat [1m]. And since wheat is a factor input of meat, the demand for wheat increases from D_0 to D_1 as seen Figure 1 [1m]. As a result, the price and quantity of wheat will increase from P_0 to P_1 and Q_0 to Q_1 respectively [1m – with aid of diagram].

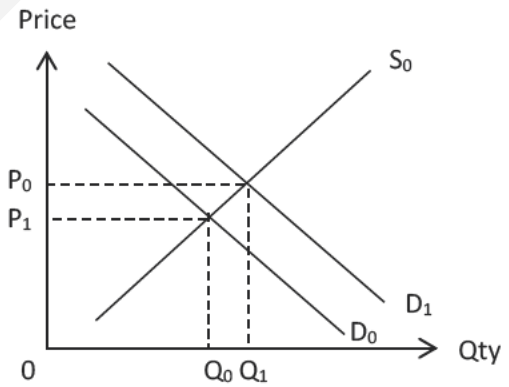


Fig 1: Market for food

(c) (i) Explain the underlying reason for the existence of the CAP in the European Union. Justify your answers. [6]

The agricultural sector in the EU does not have comparative advantage. However, it is regarded as a strategic industry so the use of protectionism is to give the industry an unfair advantage over imported agricultural produce.

The import tariff causes imports to be more expensive. This will cause domestic consumers to switch from imports to domestically produced goods, enabling the domestic industry to continue to survive. At the same time, export subsidies will enable the surplus of agricultural goods to be able to compete in the foreign market at lower prices.

Therefore, without these measures, the EU's agricultural goods will not be competitively priced and may not be able to survive. This means that the EU might lose this strategic industry.

L3	Explanation must include how <u>both</u> the import tariff and/or export subsidies help the domestic industry in the EU to survive. In addition, students must be able to identify that the CAP is a form of protectionism and that the agricultural industry is a strategic one.	5-6
L2	An explanation on how the import tariff and/or export subsidies help the domestic industry in the EU to survive.	3-4
L1	Smattering of valid points.	1-2

(ii) Explain the reasons behind the EU's plans to reform the CAP. [3]

The rising prices of the agricultural products means that the EU agricultural products no longer need the import tariff to make their goods more competitive in both the domestic and foreign market. [2]

In addition, the CAP accounts for 42% of the EU's budget. By reforming the CAP, it will help to relieve the financial burden on society. [1]

(d) (i) With reference to the data, explain how the farming of non-GM crops can lead to market failure. [5]

There are negative externalities that arise from the farming of non-GM crops. Through the farming of non-GM crops, farms use pesticides which leak into the waterways and pollute the rivers as mentioned in Extract 5. This affects those living within the vicinity that uses the water. These harmful effects are not taken into account by farmers who use the pesticides in their farming activities. As such, this results in a divergence between MPC and MSC.

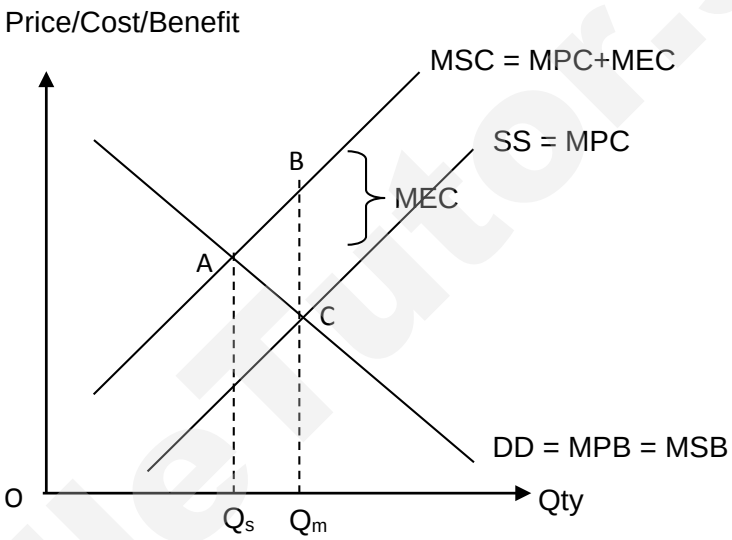


Fig 1: Overproduction of non-GM crops [1]

Assuming there are no positive externalities, where MPB = MSB, the market output is at Qm, where MPB = MPC, as individuals are only concerned with their private benefit and cost. However, the socially optimal output is at Qs, where MSB = MSC. This is where the additional benefit to society from farming the last unit of non-GM crop is equal to the additional cost borne by society from farming the last unit of non-GM crop. In other words, this is where society's welfare is maximised. Since the market output exceeds the socially optimal output, there is an overproduction of non-GM crops and this results in a deadweight loss, indicated by area ABC. Therefore, allocative inefficiency results and there is market failure.

(ii) Assess the view that the switch to GM crops helps solve the market failure. **[8]**

The farming of non-GM crops gives rise to negative externality which resulted in over-production of non-GM crops.

Thesis: The switch to GM crops helps in solving the market failure

Biotech companies claim that the use of GM crops use less chemicals as seen in Extract 4. Because of such claims, producers have switch from non-GM crops to GM crops to reduce their use of chemicals in hopes that it will help increase food yields. Since GM crops and non-GM crops are substitutes in supply, a switch towards planting GM crops to boost yields will reduce the supply of non-GM food.

At the same time, due to the claims, there is increasing receptiveness of the consumers towards GM crops since it's a more sustainable method of production as stated in Extract 4. Since GM crops and non-GM crops are substitutes in consumption, this would cause a decrease in the demand for non-GM food.

Both scenarios will shift the market output closer to the socially optimal output, where allocative efficiency can be solved.

Antithesis: The switch to GM crops does not help in solving market failure

However, there are still consumers who are wary of GM foods because they do not have enough information about the possible side effects of consuming GM foods. In this case, consumers may still prefer non-GM foods and the decrease in the demand for non-GM foods may not be substantial. Thus, the market output may not necessarily be where the socially optimal output is.

Furthermore, according to Extract 4, it could worsen the market failure in the long run as more pesticides would be needed for GM crops relative to non-GM crops. Thus there is now more negative externalities generated from the farming of GM crops and there will also be market failure in the farming of GM crops. Overall, this might even worsen the overall market failure in the farming of crops.

Stand:

- Even though a switch to GM crops solves the market failure in the non-GM market, it might lead to market failure of a larger magnitude in the GM market in the long run.
- Evaluate by suggesting alternative methods of farming

L3	A developed explanation on how the switch can be successful and unsuccessful in solving the market failure. This discussion must involve making a stand on the subject matter.	7-8
L2	A developed explanation on how the switch can be successful or unsuccessful in solving market failures ahead. OR An underdeveloped explanation on how the switch is either successful or unsuccessful in solving the market failure.	4-6
L1	Smattering of valid points.	1-3

Suggested Answer (b):

Introduction:

Fiscal policy refers to the use of government expenditure (G) and taxes (T) to regulate the level of aggregate demand (AD) so as to achieve the macroeconomic objectives. It is usually adopted to reduce cyclical unemployment, as cyclical unemployment is usually due to a deficiency in AD. As such, to decide if fiscal policy is the key in keeping unemployment low depends on the causes of unemployment. In addition, the nature of the Singapore needs to be taken into consideration too in assessing the effectiveness of the policy.

Development:
Thesis – Explain how expansionary fiscal policy is effective in tackling unemployment

During the last global financial crisis, Singapore slipped into a recession and was facing high cyclical unemployment. At that time, the expansionary fiscal policy undertaken was largely effective at mitigating the extent of unemployment. Government expenditure (G) was raised while tax (T) rebates were given in a bid to increase AD. Specifically, the government increased hiring in the civil service via 18000 job openings in the education, healthcare and defense ministries. Given that the government is the biggest employer in Singapore, such an action did create a substantial impact on the job market. Furthermore, the government also devoted around $20b in infrastructure spending, improving facilities in public healthcare, education, public transport, as well as developing Marina Bay as a new growth area. Besides propping up the construction sector directly, the subsequent multiplier effect helps to reduce the degree of cyclical unemployment.

Besides an increase in G, the government also gave a 20% personal income tax rebate to reduce the amount of tax payable by households. In addition, the government also handed out growth dividends and rebates to utilities charges for the households to tide over, with more given to the low-income and the elderly. Corporate tax rebates and a SME cash grant were also given to help the large and small companies respectively. Ideally, these help to stimulate consumption as well as investment.

Taken together, the above measures increase C, G, I and consequently AD. With reference to Fig. 1, this is reflected by a rightward shift of AD_0 to AD_1. Assuming the initial equilibrium is Y_0, the expansionary fiscal policy helps to raise Y_0 to Y_1, thereby reducing the extent of cyclical unemployment.

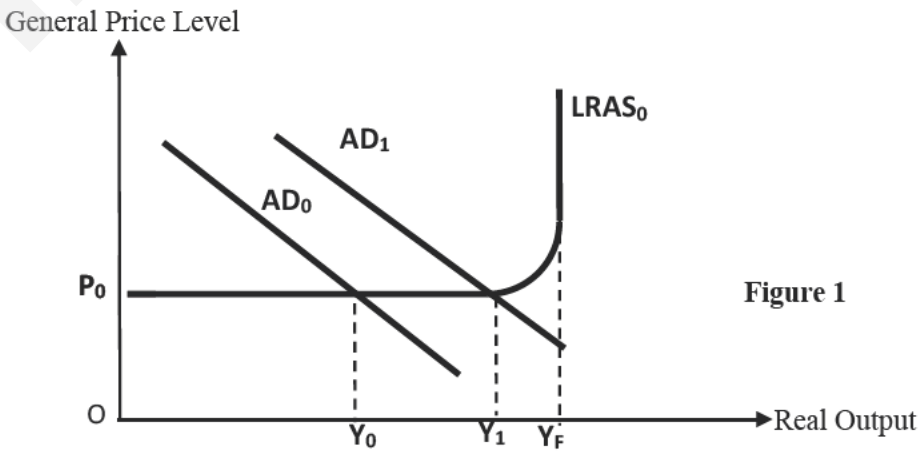


Figure 1

Anti-thesis – Explain how expansionary fiscal policy may not be that effective, due to limitations as well as highlight situations which warrant the use of other policies

The above paragraphs show that expansionary fiscal policy is somewhat effective at reducing cyclical unemployment, but it is not without its limitations. Specifically, Singapore's import-reliant nature means that any attempt to increase AD lead to high leakages in the form of import expenditure (M) especially. This greatly reduces the multiplier effect in raising NY. Furthermore, the bleak outlook is likely to make households save up any tax rebates rather than spend it, hence weakening the overall impact on AD.

Note however, that despite the limitations, fiscal policy can still create an impact in Singapore. Targeted transfers at the lower income group generally have a relatively higher multiplier. Measures such as the GST credits (where more credits are given to the low income) do help to raise C quite substantially because the lower income group tend to spend most of what they receive. Also, due to our efficient tax and CPF systems, the government can implement policy measures/ distribute any cash transfers quickly with a relatively short implementation lag.

Given our export-oriented nature, it may be more effective to use exchange rate policy instead to reduce the degree of cyclical unemployment in the export-related industries, especially in the wake of worldwide economic uncertainty, and it can serve to complement the use of fiscal policy. MAS can depreciate the Sing dollar and when that is done, the prices of Singapore exports become relatively lower in terms of foreign currencies and prices of imports become more expensive in local currencies. Given that the Marshall Lerner condition is satisfied in Singapore as the demand for Singapore exports is price elastic, (X-M) will increase and subsequently increase AD and NY, reducing cyclical unemployment. Despite the above, Singapore has seldom allowed the Sing dollar to depreciate and they had only allowed it to float on a neutral stance in 2009.

With the continuous changing structure of Singapore's economy to better deal with the challenges from the emerging economies, and the various government schemes to increase productivity, structural unemployment have resulted in Singapore. Fiscal policy is not that effective or relevant in tackling the structural unemployment. Instead, supply-side measures will be more effective. Specifically, to reduce the degree of mismatch between skills and available jobs, the government has undertaken widespread measures to equip/ train workers with the relevant skills. For e.g., to help older low-wage workers, the Workfare Training Scheme (WTS) has the government providing up to 95% course subsidies and absentee payroll to employers so as to encourage them to send workers for training. On the other hand, the Skills Training for Excellence Programme (STEP) targets the PMETs by offering scholarships, customized training plans, course subsidies for them to attend courses to develop more proficient skills, broaden their knowledge in management, human resources and update themselves on new trends in the sectors they work in. Ideally, these measures aim to quickly train workers so that they will not remain structurally unemployed for too long.

In reality however, such supply-side measures usually requires a high capital outlay from the government i.e. it is costly to fund training**.** Besides cost, such measures often have very long time lag and their success are usually not guaranteed. **Specifically, the government can devote huge sums to train (and it has, under the CET), but workers may still not be adequately trained or they may not be trained 'fast enough' to take on the jobs created by the fast paced developments in the economy. Also, there will surely exist some groups of workers whose skills are too low to begin with, which makes training them very difficult**.

Finally, a lot also depends on workers' attitudes as well as firms' receptiveness to the measures. If they are slow in taking up these incentives to train or innovate, the desired outcomes will not take place, or the gains may be uneven across different sectors**. Most firms, especially the small, medium enterprises (SMEs) usually have other more 'worrying' or short term concerns such as lowering cost and thus do not think too far about training their workers. Most importantly, in Singapore's case, training is usually given to those who have a job in the first place. However, for those who are unemployed to begin with,**

they often have few avenues and financial means to even go for training. Hence, the structurally unemployed usually remain so for quite some time.

Conclusion:

In conclusion, cyclical and structural unemployment do exist in the economy and hence, a policy mix is usually required. Nonetheless, in times of recession, fiscal policy is key to keep unemployment low but in times of recession, it itself is not sufficient enough but have to be accompanied with exchange rate policy.

Knowledge, Application, Understanding and Analysis		
L3	For a developed discussion on how fiscal policy and supply-side policies are used to tackle cyclical and structural unemployment respectively.	9-11
L2	For an undeveloped discussion on the effectiveness of fiscal policy and other policies to tackle the various types of unemployment in Singapore. Or For a developed explanation on the effectiveness of fiscal policy to tackle unemployment in Singapore but failed to acknowledge effectiveness of other policies to tackle structural unemployment.	5-8
L1	Smattering of valid points	1 – 4
Evaluation		
E2	Limitations of macroeconomic policies designed to tackle unemployment are well explained, coupled with further evaluation.	3 - 4
E1	Limitations of macroeconomic policies designed to tackle unemployment are superficially explained.	1 - 2

2013 RVHS H2 Case Study Q2

(a) With reference to the data in Table 2,

(i) Compare Australia's wage rate and labour productivity with that of the United States for the first quarter of 2011. [2]

Australia's wage rate increased at a higher rate than the US while the productivity fell at a faster rate than the US.

(ii) Explain one reason why the data suggests the Australian economy was likely to be in full employment. [2]

Any of the following:

Wages tend to increase during a tight labour market as competition of labour intensified (2)

Labour productivity tends to fall as some workers were not putting in as much effort as the opportunity cost of doing so decreased in a tight labour market. (2)

(b) What evidence is contained in the data to suggest the Australian economy suffered from cost-push inflation? [4]

Based on Table (1), Australian's unit labour cost increased drastically in 1st Quarter of 2011, suggesting the increase in wages was excessive. (2)

Extract 1 highlighted the Australia's still powerful union movement was demanding hefty wage increases for their workers, suggesting the increase in wages was excessive. (2)

(c) (i) Explain how a mining boom could have substantial positive impact on the rest of the economy. [4]

During a mining boom, investment in the mining sector increases. This increase in investment in the mining sector will mean there will be more workers employed in the sector, thereby increasing the income generated in this sector. With this increase in income, the workers in the mining sector will spend a portion of it on consumption. This increase in consumption will benefit the other industries and hence enabling them to hire more workers. Likewise, the increase in employment in these other industries will lead to further consumption and income. Hence, there could be substantial impact on the rest of the economy.

(ii) Explain the underlying factor that determines the extent of the above impact. [2]

Possible explanations:

- The multiplier, specifically the value of mpc.
- Amount of spare capacity available
- Initial state of the economy

(d) (i) Explain how the mining boom is a blow to the current account. [4]

The growth in the mining sector causes the value of the Aussie dollar to strengthen as shown in Figure 1. However, this strengthening of the Aussie dollar causes the price of to be more expensive and price of imports to be cheaper. Assuming Marshall-Lerner condition is satisfied, this will cause net exports to fall.

This higher earning of the mining industry mentioned earlier, however, will lead to higher outflow of investment income. This outflow is significant given the high foreign ownership of the major Australian mining companies as given in Table 3, contributing to the blow to the current account.

(ii) Explain one factor that would mitigate the blow to the current account. [2]

If the MRRT, given in Extract 9, is successfully passed, the outflow will be less.

(e) With the help of the data, discuss the extent to which a rate cut would be a boost to the different sectors in the Australian economy.[8]

Based on Extract 6, a cut in the benchmark interest rate would lead to a cut in the other interest rates, which would be a boost to the retail, housing, tourism and export sectors in the Australian economy.

Firstly, a lower interest rate implies a lower cost of borrowing and reward for savings. This would cause consumers to increase spending on consumer durables like cars, furniture and consumer electronics, hence translating to higher earnings for the retail sector.

Secondly, with lower borrowing cost, there would also be higher demand for residential investment. This would translate to higher prices and sales for housing sector.

Thirdly, the tourism and export sectors. A relatively lower interest rate to other economies could also lead to short-term capital outflow, thereby causing the currency to weaken. This would make Australian goods relatively more price competitive and Australia a more attractive destination to visit. Assuming the demand for exports is price elastic, it would cause quantity demanded to increase more than proportionately, boosting the tourism and export sectors.

Nonetheless, the above analysis was based on certain assumptions. Hence, if these assumptions do not hold, the above impact will not be observed.

A rate cut does not necessarily cause consumers to spend more if consumers become more pessimistic about the economy.

Although a rate cut can lead to a lower exchange rate and boost the tourism and export sectors, it is clearly not the only factor. There are other factors that affect exchange rate or the extent of the impact of exchange rate on these sectors. Moreover, the impact also depends on the extent of the rate cut.

Even if all other factors remain constant, the appreciation of the exchange rate may not be a boost to the export sector especially in the short run. This can be attributed to the time needed for consumers and investors to alter the expenditure pattern.

In conclusion, the impact of a rate cut on the different sectors is uncertain as the impact is influenced by economic outlook, external economic condition, the extent of the rate cut and the time period which we are concerned.

Level 3	7-8	Developed discussion of the extent to which a rate cut would be a boost to the retail, housing, export and tourism sectors.
Level 2	4-6	Developed discussion of the extent to which a rate cut would be a boost to the retail, housing, export and tourism sectors. Developed explanation of the extent to which a rate cut would be a boost to the retail, housing, export and tourism sectors.
Level 1	1-3	A smattering of valid points. No linkage made to any sector.

2013 Y6 RVHS H1 Economics Prelim Essay Q3

(a) Explain the central economic problem of a society and the rationale of how the optimal choice is made. [10]

Explain the central economic problem of a society

- Identify and explain scarcity
- Resources have to be allocated to maximise society's welfare

Explain the rationale of how the optimal choice is made

- Define MSB and MSC
- Society gains from producing an additional unit when MSB>MSC. It is worthwhile for the society to produce that last unit whenever MSB> MSC.
- Society losses from producing the last unit when MSC>MSB. Production should be decreased until MSB=MSC.

Level	Descriptors	Marks
L3	A developed explanation on the central economic problem AND how optimal choices are made.	8-10
L2	Either a developed explanation of the central economic problem OR how optimal choices are made. OR An underdeveloped explanation on the central economic problem AND how optimal choices are made.	4-7
L1	A smattering of valid points	1-3

(b) Discuss the view that a good is best provided by the government when the market fails. [15]

Introduction

- Define market failure.
- Highlight that public goods and merit goods as causes of market failure.

Body

Part 1. Public good

- State and explain the characteristics of public goods.
- Explain how non-rivalry leads to market failure.
    - Supply of public good does not deplete with additional use→ MC of serving an additional user= 0
    - For efficient allocation of resources, public good has to be provided at no charge. (P=MC)

    - While the firms might produce a non-rival good, any non-zero price would result in under-consumption → society's welfare is not maximised.
- Explain how non-excludability leads to market failure.
    - 'Free rider' problem arises given the difficulty in excluding non-paying users from enjoying a public good.
    - Consumers are not willing to reveal their preferences for public goods→ firms find it difficult to charge and would not provide these goods at all.

Due to complete market failure, public goods must be provided by the government.

Part 2. Merit good

- Define merit good and explain how a merit good leads to market failure.

Thesis: A merit good is best provided by the government

- Explain how government provision of merit good reduces/solves market failure
    - Provision of merit good will increase the SS of merit good and shift it to the right until the market output coincides with the socially optimal output.
- Limitations: expertise of the government in providing the good, financial ability of the government to provide the good.

Anti-thesis: A merit good is not best provided by the government

Although the outcome is inefficient, the market does provide the good→ merit good may not be best provided by the government.

- State alternative measures that can be used to solve market failure and their limitations.
    - Subsidies
    - Grants
    - Campaigns
    - Legislation

Synthesis: Is merit good best provided by the government?

- Government provision is not preferred over alternative measures when there is incomplete market failure because both approaches complement each other.

Level	Descriptors	Marks
L3	Developed explanation for why public good is best provided by the government AND developed explanation for why merit good can be provided by both the government and the private firms.	9-11
L2	Undeveloped explanation for why public good is best provided by the government AND undeveloped explanation for why merit good can be provided by both the government and the private firms. Developed explanation for why public good is best provided by the government OR developed explanation for why merit good can be provided by both the government and the private firms.	6-8
L1	A smattering of valid points	1-5
E2	Judgement based on analysis	3-4
E1	Mainly unexplained judgement	1-2

2013 Y6 RVHS H1 Economics Prelim Essay Q4

(a) Explain why it is important to keep unemployment and inflation rate low. [10]

Introduction

- Define unemployment and inflation
- How unemployment and inflation rates are measured

Why it is important to keep inflation rate low

- Low inflation rate → ensures that the prices of goods and services will not be distorted by inflation → minimize wastage of resources in an economy and prevents producers from making the incorrect decision in the allocation of resources.
- Internal price stability → contributes to external stability since it helps an economy to maintain export competitiveness → explain how a low inflation can improve BOT, economic growth and employment in export-related industries.

Why it is important to keep unemployment rate low

- Low unemployment → more workers earning an income which allows them to spend on goods and services → higher material standard of living
- Low rate of unemployment → less welfare benefits (e.g. unemployment benefits) given out and government can collect more tax revenue → less burden on the government's budget → amount that no longer needs to be channelled to unemployment benefits can now be channelled towards other uses which can then better improve society's non-material standard of living

LORMS		
L3	A developed explanation on why it is important to keep both unemployment and inflation rate low. Explanation on why inflation rate must be kept low should consider the implications on both the internal and external sector of the economy.	7-10
L2	An underdeveloped explanation on why it is important to keep both unemployment and inflation rate low. OR A developed explanation on why it is important to keep either unemployment or inflation rate low.	4-6
L1	Smattering of valid points.	1-3

RIVER VALLEY HIGH SCHOOL
YEAR 6 Preliminary Examination
in preparation for General Certificate of Education Advanced Level
Higher 2

ECONOMICS **9732/01**

Paper 1 Case Study **17 September 2013**

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.

Answer **all** questions.

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

Answer **all** questions.

Question 1

The UK Energy Sector

Extract 1: Japan's power crunch will be felt globally

It may seem insensitive to suggest that British households and businesses face higher gas and electricity prices as a result of a disaster that has claimed thousands of lives, but the disaster engulfing the Fukushima power station could change the global energy landscape.

Japan is the world's biggest buyer of liquefied natural gas (LNG), with some 30% of Japanese power generation coming from gas. But another 20% comes from nuclear and with 11 out of 54 reactors being shut down and huge question marks over the safety of the others, there is going to be a big hole to fill.

As Japan faces rolling power blackouts, LNG tankers are already being rerouted to Japanese ports. In the LNG spot market, tankers set sail but can be quickly diverted if a buyer slaps down a higher bid for the cargo. Price is up about 6% since the earthquake struck, the highest level since 2008. That is bad news for the UK which relied on gas for about a third of its power supply over the past winter.

Source: guardian.co.uk, 14 March 2011

Extract 2: The UK gas interconnectors

The UK gas interconnectors are gas pipelines capable of bi-directional operation, meaning they can either export natural gas from the UK to continental Europe ("forward mode"), or the pipelines can import natural gas into the UK ("reverse mode").

"Flows against price difference" (FAPD) in the gas market seemed more frequent on the Dutch–UK interconnection. From April 2012 to September 2012, gas flew from the high price area to the low price area in 26 days out of 121 for which observations are available in that period.

Source: Quarterly Report on European Gas Markets,
April - September 2012, European Commission

Extract 3: Big six energy firms face fresh accusations of profiteering

The big six energy companies have been repeatedly taking advantage of brief spikes in the wholesale price of electricity to pass on much longer-term increases to households, new analysis for the Guardian shows. Npower, British Gas and others have denied claims of profiteering and blamed the new climate change levy for increasing costs.

In 2004, retail electricity prices were on average £1.93 per 100 kilowatt hour higher than the wholesale measure. By 2010 this gap had more than doubled to over £4. It narrowed in 2011 as a result of well-publicised cost increases in the wholesale market.

Statistics suggested around 80% of the winter price spike was passed to the consumer price, but when wholesale markets fell in summer, retail prices moved only around 50% of the amount. The data also shows that when wholesale prices suddenly spike, consumer prices rapidly follow suit. However, prices fall back more slowly and to a lesser degree after the wholesale prices spike abates.

A household is said to be in fuel poverty if it needs to spend more than 10% of its income on fuel to maintain a satisfactory heating regime. Energy price rises has since seen the total number of households in fuel poverty increase from 2 million in 2004 to an estimated 4.8 million in 2010.

Centrica, the parent company of British Gas upset critics earlier this year when it reported annual pre-tax profits of £1.9bn, its largest ever, and then months later raised consumer gas and electricity prices by 18% and 16% respectively. This came amid mounting political pressure for a competition inquiry into the energy sector.

Source: The Guardian, 2 December 2011

Extract 4: Energy regulator proposes radical reform of the energy market

A furious row has broken out between the big six energy firms and the energy regulator, Ofgem (The Office of Gas and Electricity Markets). Ofgem had in effect accused the utilities firms of profiteering by increasing their profit per dual-fuel customer by 733%, from £15 to £125, through a slew of price rises. Ofgem was determined to ensure that these firms provide simple tariffs and clearer bills to help consumers baffled by the 400 different tariffs currently provided. The complexity of the market with its many and varied tariffs has been identified as a key reason for the lack of consumer engagement. A high proportion of customers are unlikely or unwilling to switch energy supplier in the near future.

But the figures used by the regulator were immediately criticised by the energy firms. The chief executive of RWE npower, said his company made just £1.50 profit on every £100 spent, while making a loss per average customer between 2004 and 2009. "These are not the figures associated with an industry that is profiteering or uncompetitive, and despite this challenging financial climate, RWE still invested over £1bn into new, more efficient energy infrastructure for the UK in each of the last three years," he argued.

An undercover investigation by the consumer body Which? revealed that the number of energy tariffs available to householders is so vast, and the options so complex that even the staff at energy companies have no idea which is the best deal. Despite being asked clearly for the lowest cost option in each case, in nearly a third of the calls the firms failed to offer their cheapest tariff. Staff also gave questionable advice about potential savings and cashback deals. Ofgem has already threatened energy companies with a formal referral to the Competition Commission if they do not transform their pricing structure to stop confusing customers.

Source: The Guardian, 14 October 2011

Table 1: Estimated contributory factors to domestic energy price rises Feb 2004 to Jan 2011

	Gas	Electricity
Overall price increase	121%	79%
% of increase in unit costs due to:		
Wholesale energy	66%	54%
Transmission, distribution and metering	20%	13%
Carbon price	-	9%
Renewables	-	6%
Energy efficiency funding	7%	13%
VAT	5%	5%
Estimated increase in annual bill (2004 to 2010)	£295	£160

Source: UK household energy bills, Committee on Climate Change, December 2011

Table 2: UK Imports and Exports of Fuels (Quantity in Million Tonnes)

Year	2002	2003	2004	2005	2006	2007	2008	2009	2010
Total imports	93.8	104.0	127.9	136.7	151.8	148.3	150.7	147.0	152.0
Total exports	134.3	127.7	115.5	102.7	100.0	96.4	96.9	97.5	98.8
Total net exports	40.5	23.7	-12.4	-34.0	-51.9	-52.0	-53.8	-49.4	-53.1
Breakdown for Net exports									
Coal and other solid fuel	-19.3	-21.9	-24.8	-30.1	-34.2	-28.1	-27.6	-23.2	-14.6
Crude oil	42.5	27.3	4.8	-3.9	-9.5	3.0	-9.9	-8.0	-9.8
Petroleum products	10.4	10.6	9.9	7.4	3.1	-7.9	9.1	9.3	7.0
Natural gas	7.8	7.8	-1.6	-6.6	-10.6	-18.5	-24.5	-27.4	-35.5
Electricity	-0.7	-0.2	-0.6	-0.7	-0.6	-0.4	-0.9	-0.2	-0.2

Source: Department of Energy and Climate Change, UK

Questions

(a) **(i)** Compare the changes in UK's total imports and total exports of fuels from 2002 to 2010. [2]

(ii) Given the information contained in Table 2, identify the fuel which UK was increasingly dependent on over time. Justify your answer. [3]

(b) Explain **one** factor which has led to the increase in liquefied natural gas prices. [2]

(c) Extract 2 mentioned that "gas flew from the high price area to the low price area". Explain why such cross-border trade in the UK gas market can be considered a distortion. [2]

(d) Explain why the gap between wholesale and retail energy prices narrowed in 2011 as a result of well-publicised cost increases in the wholesale market. [3]

(e) With reference to the data where appropriate, discuss the extent to which energy firms in the UK can continue to pass on increases in wholesale prices to the consumers. [8]

(f) Extracts 3 and 4 suggest that the government should regulate the market for energy in the UK. With the help of the extracts, discuss the validity of this argument. [10]

[Total: 30]

Question 2

The Australian Economy

Table 3: Quarter on quarter percentage change in selected economies

	Wage rate		Labour productivity	
	Q4 2010	Q1 2011	Q4 2010	Q1 2011
Australia	0.4	2.3	-0.1	-1.2
United States	0.5	1.0	0.7	-0.3

Source: OECD

Extract 5: Labour Shortages in Australia

The floods in Queensland and Victoria this summer have exacerbated the problem of wage inflation. Prior to the Queensland floods, the Sunshine state was already experiencing labour shortages, partly because of the expansion of the minerals sector and the major infrastructure improvements. Emboldened by the jobless figures that show near full employment and citing cost of living pressures, Australia's still powerful union movement is demanding hefty wage increases for their workers.

Source: BBC News, 6 April 2011

Extract 6: Australia Central Bank cuts key rate

The Reserve Bank of Australia (RBA) lowered its benchmark interest rate today for the first time since April 2009 as recent data suggests the subdued demand conditions and the high exchange rate have contained inflation.

Australian Prime Minister Julia Gillard said the decision brought 'welcome relief' to households. Commonwealth Bank of Australia, the nation's biggest lender, and Westpac Banking Corp. matched the RBA's rate reduction. Westpac said the lower borrowing costs announced today would save customers A$41 monthly on a A$250,000 mortgage.

A government report today also showed Australian house prices declined in the three months through September, the third straight quarterly drop. "The rate cut is especially good news for the retail and housing sectors," said Craig James, a Sydney-based senior economist at Commonwealth Bank. "Even tourism and export sectors will receive a boost."

Source: Bloomberg, 1 November 2011

Extract 7: Mining the truth

The mining industry in Australia has boomed, surging from around four per cent of GDP in 2004 to around nine per cent today. Much has been said about the changing face of the mining industry, where the effects of the boom have been both substantial and positive. But until very recently there has been far less discussion of the impact of the mining boom on the rest of the economy, including those areas which have suffered as a result. While one might assume that any expansion in the mining industry simply adds to the overall size of the Australian economy, in reality the operation of the macro economy is far more complex.

Indeed, much of the growth in mining comes at the direct expense of expansion in other parts of the economy. The study conducted by the Australia Institute also reveals that the mining boom is driving a blow out in the current account deficit with the International Monetary Fund expecting the current account deficit to reach 6.5 per cent of GDP in the medium term.

Source: The Australia Institute, 9 Sept 2011

Extract 8: Australia mining tax clears hurdle, after much debate

The Australian government's plan to impose a 30% tax on big mining companies has cleared a major hurdle, passing through parliament's lower house. It will go to the upper senate early next year, but is expected to pass.

The Minerals Resource Rent Tax (MRRT) Bill will tax coal and iron profits. When the tax becomes law, mining companies will have to pay about A$11bn in charges in the first three years of the tax.

Australia's iron ore exports rose to a record high in September of A$6.3bn, with the biggest demand coming from China and India.

The tax has sparked intense debate in Australian society, one that has been raging for 18 months. The conservative opposition is against the tax, arguing that it would deter foreign investment in the mining sector driving it overseas and resulting in job losses for Australians.

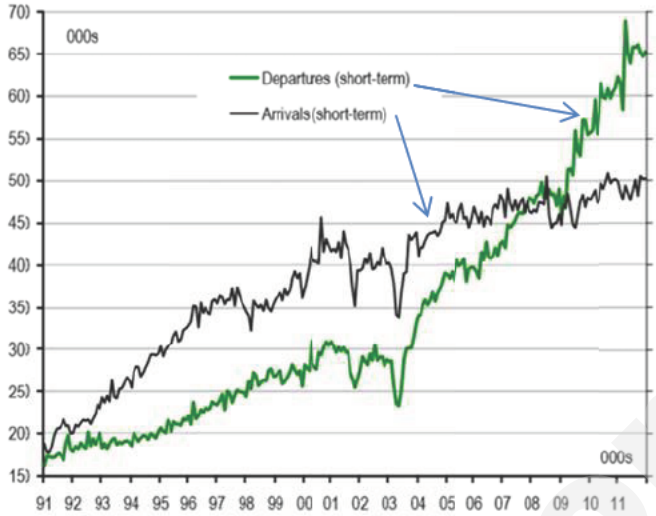
Source: BBC News, 23 November 2011

Table 4: Degree of foreign ownership of major Australian mining companies

Company	Foreign ownership (%)
BHP Billiton	76
Rio Tinto	83
Woodside Petroleum	24
Newcrest Mining	75
Fortescue Metals Group	40

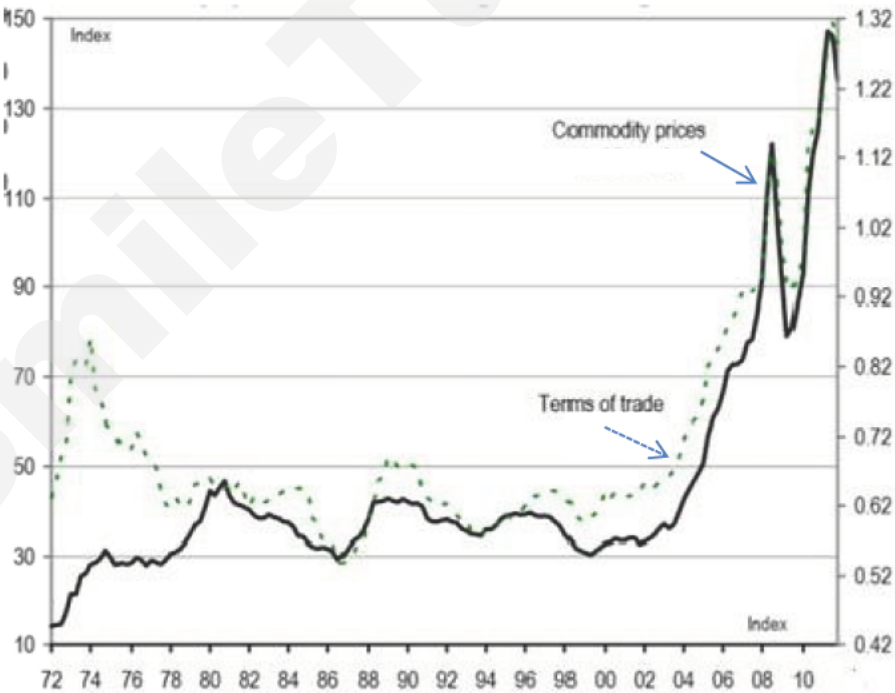
Source: The Weekend Australian 2011

Figure 1: Touris n flows of Australia



S urce: Australian Bureau of Statistics

Figure 2: Com iodity prices and Terms of Trade



Source: Australian Bureau of Statistics

Figure 3: Trade-weighted exchange rate of the Australian dollar

Source: Reserve Bank of Australia

Questions

(a) With reference to the data in Table 3,

(i) Compare Australia's wage rate and labour productivity with that of the United States for the first quarter of 2011. [2]

(ii) State **two** reasons why the data suggests the Australian economy was likely to be in full employment. [2]

(b) What evidence is contained in the data to suggest the Australian economy suffered from cost-push inflation? [3]

(c) **(i)** Explain how a mining boom could have substantial positive impact on the rest of the economy. [3]

(ii) Explain the underlying factor that determines the extent of the above impact. [2]

(d) With reference to the data, assess the direction of Australia's current account balance. [8]

(e) With the help of the data, discuss the extent to which a rate cut would be a boost to the different sectors in the Australian economy. [10]

[Total: 30]

RIVER VALLEY HIGH SCHOOL
YEAR 6 Preliminary Examination
in preparation for General Certificate of Education Advanced Level
Higher 2

ECONOMICS **9732/02**

Paper 2: Essay Questions **23 September 2013**

2 hour 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.

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 sheet of paper.

At the end of the examination, fasten your work securely together.
Your answers for Section A and B are to be handed in **separately**, with the cover page placed on top.

Indicate on the cover page the question(s) you have attempted for that section.

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

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 The rate of closure of bookstores in Singapore has been startling, with six stores in the prime district pulling down its shutters in the last seven months. While the stated reason has been the rentals, the cause has also been attributed to the rise in the number of tablet manufacturers.

(a) Explain how the above have affected the retail market for print books. [10]

(b) Discuss whether the closure of outlets and exiting the Singapore market are appropriate moves for the book retailers. [15]

2 With the growing numbers of people connected to the internet, electronic commerce (e-commerce) is gaining rapid acceptance.

Discuss whether increasing development of the internet and e-commerce necessarily implies that monopolistic competition will gradually become the more prevalent market structure. [25]

3 **(a)** Explain why the Singapore government intervenes in the market for healthcare. [10]

(b) Discuss whether such intervention is sufficient in view of the changing demographic conditions in Singapore. [15]

Section B

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

4 **(a)** Analyse how standard of living can be potentially higher with globalisation. [10]

(b) Discuss how far the standard of living in Singapore is determined by macroeconomic policies. [15]

5 Singapore's ageing population has now become a greater challenge amidst weaker foreign labour growth.

Explain how raising productivity gains can give rise to conflicts in government macroeconomic objectives and discuss whether current policies adopted in Singapore need to be adjusted. [25]

6 **(a)** Explain why protectionism can be justified by economic theory. [8]

(b) Discuss whether pattern of trade is increasingly consistent with the prediction based on the economic theory. [17]

Suggested answer key for Case Study: The UK Energy Sector

(a)(i)	Compare the changes in UK's total imports and total exports of fuels from 2002 to 2010.	[2]
	Differences: • There is an overall increase in total imports of fuels whereas there is a decrease in the total exports of fuels from 2002 to 2010. • Total imports changed at a faster rate (62.0%) compared to the changes in total export (26.4%) from 2002 to 2010.	
(ii)	Given the information contained in Table 2, identify the fuel which UK was increasingly dependent on over time.	[3]
	• UK was increasingly dependent on natural gas over time. • Prior to 2004, UK was a net exporter of natural gas. However from 2004 onwards, UK became a net importer of natural gas. • This implies a rising usage of natural gas in the UK as the net export value is getting more negative over time.	
(b)	Explain **one** factor which has led to the increase in liquefied natural gas prices.	[2]
	• Japan's nuclear reactor shutdown caused a decrease in supply of nuclear energy as the production of nuclear energy is disrupted. Price of nuclear energy will increase. • Given the disruption to nuclear energy production domestically and the rise in domestic nuclear energy prices, Japan needs to source for alternative energy sources. Consumers then switch over to consume LNG which is a substitute in consumption. This drives up demand for LNG and hence increasing LNG prices worldwide.	
(c)	Extract 2 mentioned that "gas flew from the high price area to the low price area". Explain why such cross-border trade in the UK gas market can be considered a distortion.	[2]
	• The price mechanism, through the interactions of demand and supply, plays an important role of signalling where resources should be allocated. High prices are signals from consumer of their high demand and supplier should increase their output by reallocating resources away from the production of goods with low prices (indicative of low demand). • This implies that goods should flow from a low price area to a high price area. Hence when "gas flew from the high price area (UK) to the low price area (continental Europe)" this is contrary to the price mechanism and thus the cross-border trade in the UK gas market can be considered a distortion.	
(d)	Explain why the gap between wholesale and retail energy prices narrowed in 2011 as a result of well-publicised cost increases in the wholesale market.	[3]
	• According to Table 1, wholesale costs of energy were the main driver and most significant amongst various contributory factors to domestic energy price rises. • Well-publicised increases in the wholesale cost of energy provided greater awareness and transparency of information for the consumers. • This reduced the ability of the energy firms to "hide" their profit margin and lead to a fall in supplier margins which narrowed the gap between wholesale and retail energy prices in 2011.	
(e)	With reference to the data where appropriate, discuss the extent to which energy firms in the UK can continue to pass on increases in wholesale prices to the consumers.	[8]

- The extent to which the energy firms (producers) can shift or pass on the increase in wholesale prices to the consumers depends on the relative price elasticities of demand and supply which are determined by the factors affecting both the price elasticity of demand (PED) and price elasticity of supply (PES)
- Generally, the more price inelastic side of the market will pay for more of the cost increase and bear a greater burden since it is less responsive to price changes.

Determinants of **|PED|:**
- Substitutes (number + closeness), Degree of Necessity, Adjustment Time Period

|PED| < 1
- Extract 4: A high proportion of customers are unlikely or unwilling to switch energy supplier in the near future
- Consumers' ability to switch to alternative/rival energy firms is relatively low in the short run.

Over time (LR):
- Extracts 3&4: if the UK Competition Commission launches inquiry into the energy sector, this will force the firms to show greater transparency in their pricing structure allowing consumers to make more informed decisions about which tariff plans are the best deal. In addition, inquiry could result in greater contestability in the market.

Determinants of **PES:**
- Type of Industry, Time Period, Level of Stock, Amt of spare Capacity, Barriers to Entry

PES <1
- Utilities industry has limited ability to build up inventory level or expand spare capacity quickly
- High BTE given the high set up costs which might limit the number of firms in the industry

Over time (LR):
- If the Competition Commission inquiry results in reduction in BTE into the industry
- Over time, production capacity can be increased with new infrastructure being developed

Thesis: Energy firms in UK can continue to pass on a larger extent of increases in wholesale prices to consumers (i.e. consumers bear a greater burden of the cost increase)
- This occurs when **|PED| < PES** i.e. demand is relatively less price elastic than supply
- Increase in retail price is due to an increase in cost of production which shifts the SS curve of the energy firms from S_0 to S_1 (refer to fig 1).
- The per unit increase in COP is P_1P_2, where P_0P_1 is borne by the consumers and P_0P_2 is borne by the producers.
- Hence, consumers will bear a larger proportion of the increase in wholesale price and energy firms can continue to pass on a larger extent of the cost increase to them.

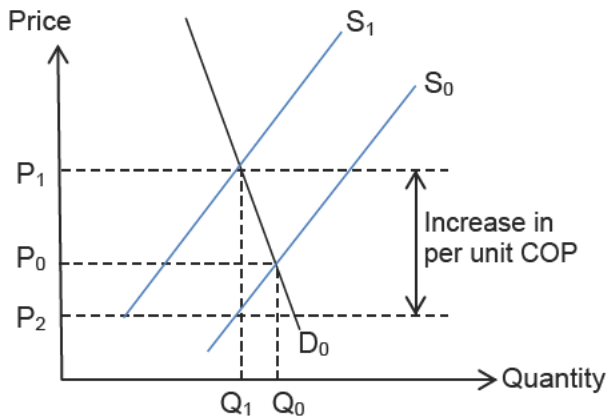


Fig 1: |PED| < PES

Anti-Thesis: Energy firms in UK cannot continue to pass on increases in wholesale prices to consumers (i.e. producers will bear a greater burden of the price increase)

- This occurs when **|PED| > PES** i.e. demand is relatively more price elastic than supply
- For a given per unit increase in COP, the portion borne by the consumer will be less than that borne by the producers since the latter is the more price inelastic party of the two
- Hence, energy firms will bear a larger proportion of the cost increase and cannot continue to pass on a larger extent of the increase in wholesale price to consumers

L3	Developed discussion of the determinants of PED, PES with good reference to case data, and both scenarios of relative elasticities. Comes to a conclusion on the extent of who bears the burden of costs increase in the longer term.	7-8
L2	Developed explanation of the determinants of PED, PES and one scenario of relative elasticities. Undeveloped discussion of the determinants of PED, PES and relative elasticities with limited attempt to link to case data	4-6
L1	Smattering of valid points which show awareness of PED and PES	1-3

(f)	Extracts 3 and 4 suggest that the government should regulate the market for energy in the UK. With the help of the extracts, discuss the validity of this argument.	[10]

Introduction:

- Whether there is a cause for government regulation in the UK energy market depends on the degree of MF and the cost effectiveness of the proposed modes of regulation.
- Possible sources of MF: market imperfections (market dominance, imperfect info) resulting in allocative inefficiency, productive inefficiency and inequity

Thesis: Govt should regulate the market for energy in the UK	**Anti-Thesis: Govt should not regulate the market for energy in the UK**
Market Imperfections: Market dominance • Extract 3: Big six energy firms able to pass on ST spikes in prices as LT price increase to consumers. Centrica reported highest ever supernormal profits, and yet raised gas and electricity prices, reduced consumer welfare. • Extract 4: Ofgem accused the utilities firms of profiteering increasing dual-fuel customer by 733% **Implications:** • Market structure of the UK energy firms seems to be oligopoly with high barriers to entry which gave rise to market power to influence price and earn supernormal profits • Such market dominance leads to MF as allocative and productive efficiencies cannot be achieved. • Fig 2: Since $Q_m<Q_s$, there is under-allocation of resources. At output Q_m, P_m>MC Allocative inefficiency has also resulted in deadweight loss to society indicated by the area ABC.	**Supernormal profits and R&D** • Supernormal profit earned may not be excessive to warrant regulation. • Extract 4: RWE npower made just £1.50 profit on every £100 spent, while making a loss per average customer between 2004 and 2009 • Extract 4: RWE has invested in new, more efficient energy infrastructure in the UK for the last 3 years" • Any attempt at regulation reduce the ability and incentive of the energy firms in investing in energy infrastructure **Ability to tap on IEOS** • Nature of energy market, greater potential to tap on EOS and reduce average cost of production if the firms are allowed to operate on a larger scale instead of being forced to break up into smaller entities.

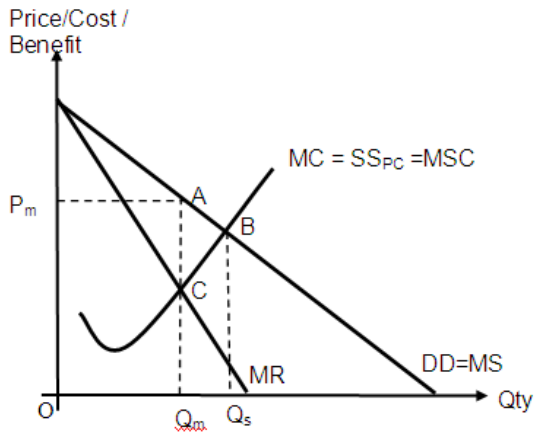


Fig 2: Under-allocation of resources due to market dominance

Market Imperfections: Imperfect Info

- Extract 4: consumers are baffled by complexity of energy market, varied and numerous tariff choices which even the staff at energy companies are unsure of the best deal option and may give questionable advice
- The UK energy market fails to allocate resources efficiently due to imperfect info primarily in the form of complex or misleading info
- Consumers acting on such info make inefficient or erroneous choices about which tariff plan and which provider to subscribe to. Most consumers would probably not be consuming the lowest cost option to match their household needs.

Inequity

- Extract 3: Energy price rises has led to increased number of British households falling into fuel poverty.
- Energy is a basic necessity which should be made affordable and accessible to all household, especially the low-income groups to maintain a satisfactory heating regime.

L3	Developed discussion of the arguments for the need for govt intervention with good reference to case data. Reasoned conclusion on the validity of argument.	7-10
L2	Developed explanation of the two main sources of MF (mkt dominance with diagram, imperfect info) with good reference to case data, largely one-sided argument for why they are cause for govt intervention Undeveloped discussion of the main sources of MF (mkt dominance, imperfect info) with limited attempt to link to case data	5-6
L1	Smattering of valid points which show awareness of some sources of MF	1-4

2013 RVHS H2 Case Study Q2

Questions

(a) With reference to the data in Table 3,

(i) Compare Australia's wage rate and labour productivity with that of the United States for the first quarter of 2011. [2]

Australia's wage rate increased at a higher rate than the US while the productivity fell at a faster rate than the US.

(ii) State two reasons why the data suggests the Australian economy was likely to be in full employment. [2]

Wages tend to increase during a tight labour market as competition of labour intensified (1)

Labour productivity tends to fall as some workers were not putting in as much effort as the opportunity cost of doing so decreased in a tight labour market. (1)

(b) What evidence is contained in the data to suggest the Australian economy suffered from cost-push inflation? [3]

Based on Table (1), Australian's unit labour cost increased drastically in 1st Quarter of 2011, suggesting the increase in wages was excessive. (2)

Extract 1 highlighted the Australia's still powerful union movement was demanding hefty wage increases for their workers, suggesting the increase in wages was excessive. (1)

(c) (i) Explain how a mining boom could have substantial positive impact on the rest of the economy. [3]

During a mining boom, investment in the mining sector increases. This increase in investment in the mining sector will mean there will be more workers employed in the sector, thereby increasing the income generated in this sector. With this increase in income, the workers in the mining sector will spend a portion of it on consumption. This increase in consumption will benefit the other industries and hence enabling them to hire more workers. Likewise, the increase in employment in these other industries will lead to further consumption and income. Hence, there could be substantial impact on the rest of the economy.

(ii) Explain the underlying factor that determines the extent of the above impact. [2]

Possible explanations:

- The multiplier, specifically the value of mpc.
- Amount of spare capacity available
- Initial state of the economy

(d) With reference to the data, assess the direction of Australia's current account balance. [8]

The direction of the current account balance depends on how these components will change.

Fig 2: shows the upward trend of the commodity prices, supported probably by the economic growth of China. This will bring about higher export earnings for Australia.

This growth in the mining sector causes the demand and hence the *value of the Aussie dollar to strengthen as shown in Figure 3*. However, this strengthening of the Aussie dollar, as Extract 7 has highlighted, can have a negative impact on the net exports. This is because the strengthening of the Aussie dollar will make exports more expensive and imports cheaper. Assuming Marshall-Lerner condition is satisfied, this will cause net exports to fall. In addition, *as depicted in Fig 1, the strong Aussie dollar has also made Australia more expensive to visit relative to other holiday destinations*.

Thus, the improvement in the goods and services balance, if any, is likely to be minimum.

- The income flow

This higher earning of the mining industry mentioned earlier, however, will lead to higher outflow of investment income. This outflow is significant given *the high foreign ownership of the major Australian mining companies as given in Table 4*, hence mitigating the improvement in current account expected from the higher commodity prices. Nonetheless, if the MRRT is successfully passed, this will reduce the outflow in terms of profits and mitigate the adverse impact on the current account.

- Conclusion

With the investment flow balance worsening and the goods and services balance, at best, having insignificant improvement, the current account balance is likely to worsen. This is as *predicted by the IMF*.

Level 3	7-8	Developed explanation with a reasoned conclusion <u>Points to highlight</u> • Reasoned conclusion on the different components of the current account. • The prediction by IMF
Level 2	5-6	Developed explanation of the direction of the current account • Good use of Table 2, Figure 1, Figure 2, Fig 3 • Break down into the components of current account
Level 1	1-3	Undeveloped explanation of the direction of the current account

(e) With the help of the data, discuss the extent to which a rate cut would be a boost to the different sectors in the Australian economy.[10]

Based on Extract 6, a cut in the benchmark interest rate would lead to a cut in the other interest rates, which would be a boost to the retail, housing, tourism and export sectors in the Australian economy.

Firstly, a lower interest rate implies a lower cost of borrowing and reward for savings. This would cause consumers to increase spending on consumer durables like cars, furniture and consumer electronics, hence translating to higher earnings for the retail sector.

Secondly, with lower borrowing cost, there would also be higher demand for residential investment. This would translate to higher prices and sales for housing sector.

Thirdly, the tourism and export sectors. A relatively lower interest rate to other economies could also lead to short-term capital outflow, thereby causing the currency to weaken. This would make Australian goods relatively more price competitive and Australia a more attractive destination to visit. Assuming the demand for exports is price elastic, it would cause quantity demanded to increase more than proportionately, boosting the tourism and export sectors.

Nonetheless, the above analysis was based on certain assumptions. Hence, if these assumptions do not hold, the above impact will not be observed.

A rate cut does not necessarily cause consumers to spend more if consumers become more pessimistic about the economy. This is especially possible given uncertainty over the sustainability of the Chinese economy. In addition, If consumers expect housing prices to fall, the rate cut may be of little boost to the housing market.

Although a rate cut can lead to a lower exchange rate and boost the tourism and export sectors, it is clearly not the only factor. There are other factors that affect exchange rate or the extent of the impact of exchange rate on these sectors. Moreover, the impact also depends on the extent of the rate cut.

Even if all other factors remain constant, the appreciation of the exchange rate may not be a boost to the export sector especially in the short run. This can be attributed to the time needed for consumers and investors to alter the expenditure pattern.

In conclusion, the impact of a rate cut on the different sectors is uncertain as the impact is influenced by economic outlook, external economic condition, the extent of the rate cut and the time period which we are concerned.

Level 3	9-10	Developed discussion of the extent to which a rate cut would be a boost to the retail, housing, export and tourism sectors with a reasoned assessment made with reference to the Australian economy.
	7-8	Developed discussion of the extent to which a rate cut would be a boost to the retail, housing, export and tourism sectors.
Level 2	4-6	Developed discussion of the extent to which a rate cut would be a boost to

		the retail, housing, export and tourism sectors. Developed explanation of the extent to which a rate cut would be a boost to the retail, housing, export and tourism sectors.
Level 1	1-3	A smattering of valid points. No linkage made to any sector.

ST ANDREW'S JUNIOR COLLEGE
PRELIMINARY EXAMINATIONS – 2013
General Certificate of Education Advanced Level
Higher 1

ECONOMICS 8819/01

Paper 1 **29 August 2013**

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 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 **8** printed pages.

[Turn Over

Section A

Answer **all** questions in this section.

Question 1 Chocolate and Soda – Love them, Hate them

Extract 1: Higher Chocolate Prices May Follow Africa's Cocoa Shortfall

Villagers in West Africa, which produces 70 percent of the world's cocoa, are abandoning the crop because its price is volatile, farms are too small to be economical, yields haven't risen for decades, and alternative crops such as rubber are more lucrative. "They produce half a ton per hectare of cocoa, and it has been that way forever. All major agricultural products have improved their yields by a factor of 5 to 10 in the last 50 years, and cocoa hasn't," says Barry Parkin, the head of global procurement and sustainability at Mars, whose products include M&M's, the best-selling chocolate candy in the U.S. He reckons that demand will outpace production by 1 million tons by the end of the decade.

To deal with more frequent cocoa shortages, confectioners have been shrinking the size of chocolate bars, adding more air bubbles to chocolate, or simply substituting more vegetable oil for cocoa butter. They also can pull from global stockpiles, which stood at 1.8 million metric tons as of Sept. 30, according to the International Cocoa Organization. But experts say it will be tougher to cope beyond 2020 without improved production.

Source: Bloomberg Business Week, 7 February, 2013

Extract 2: **Tax chocolate to beat obesity, say doctors**

Chocoholics face a fight with doctors who want to slam heavy taxes on their favourite treat. Doctors say too much chocolate makes them fat and it should be priced up – like alcohol and tobacco – so they buy less.

Nutritionist Dr David Walker yesterday claimed chocolate is a big factor in the obesity epidemic and the explosion of conditions such as Type 2 diabetes. "I see chocolate as a major player in this and the related medical conditions and I think a tax on products containing chocolate could make a real difference."

But the sweet-toothed masses and industry chiefs branded the idea unfair and stupid. Julian Hunt, of the Food and Drink Federation, declared: "Taxes on foods that consumers love would result only in lighter wallets, not smaller waists. We already have to pay VAT on all our chocolates. While good for grabbing headlines, there is no evidence to suggest such 'fat taxes' would work in reality. Such a tax won't make people lose weight, it will just make them spend more money."

"Education and information are needed to help make the right food choices and people should be encouraged to increase physical activity."

Source: Mirror News, Mar 13, 2009

Extract 3: Chocolate bars to be made smaller in Government anti-obesity drive

The Government is set to order manufacturers to shrink the size of chocolate bars and fizzy drinks. The Health Secretary will tell firms such as Mars, Coca-Cola and Nestlé that smaller versions of their products should be available in all garages and corner shops to help stop people piling on weight. He will also say small packs of dried fruit, nuts and fresh fruit should be widely available at places where people buy on impulse and warn that sugar levels must be cut in all products.

The obesity drive is part of the Change4 Life campaign and could lead to tougher regulation if the warnings go unheeded. The Government believes businesses can create a new world leading 'healthy market' to help drive down obesity.

Source: The Daily Mail, 5 February 2009

Extract 4: Chocolate price hikes won't put off consumers, predict analysts

Confectioners will probably get away with increasing prices on chocolate bars without significantly denting demand because they are generally low ticket items bought as treats in an area with high brand loyalty, analysts have predicted.

Everybody is raising prices in this industry right now; the million dollar question is to what extent retailers will absorb rises or pass them on to the consumer. The consumer will ultimately decide whether he will pay. But while 10 percent is a pretty hefty and aggressive increase, they will probably get away with it.

Source: http://www.foodnavigator-usa.com, 4 Apr 2011

Extract 5: The Battle Over Taxing Soda

This soda debate is probably going to be around for some time. Cities and counties, desperate to find money to pay for schools and roads, are starting to see a soda tax as a way to raise revenue. The tax also appears to be one of the most promising ways to attack obesity, given the huge role sugary drinks play in the epidemic.

The argument for a soda tax is the same as the argument for a tax on tobacco or pollution. When an activity imposes costs on society, economists have long said that the activity should be taxed. Doing so accomplishes two goals: it discourages the activity, and it raises money to help pay society's costs.

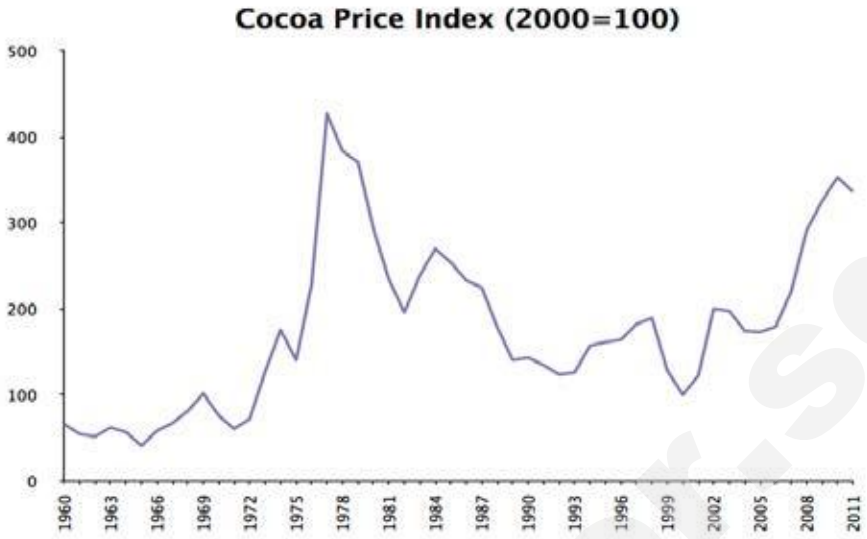
In the case of soda, those costs come in the form of medical bills for diabetes, heart disease and other side effects of obesity. We're all paying these bills, via Medicare, Medicaid and private insurance premiums. Obesity has become a significant cause of our swelling long-term budget deficit.

However, small tax changes don't always change behavior, as a recent study by the RAND Corporation found. So a small soda tax could actually have a worse impact on some families' budgets than a substantial one — by raising the price of soda without affecting consumption.

Such a tax would certainly raise the cost of living for some heavy soda drinkers, just as cigarette taxes have stretched the budgets of some smokers and mandatory seat belts have added costs to car production. But consider the benefits from those other public health initiatives. They have vastly outweighed the costs.

Source: The New York Times, 19 May 2010

Figure 1: Cocoa Prices (1960 – 2011)



Source: UNCTAD

Questions

(a) **(i)** Describe the trend in the price of cocoa from 1990 onwards. [2]

(ii) Explain how the above trend can affect the market for chocolate candy bars. [2]

(b) Explain the impact of the following on the market for cocoa:

(i) a more lucrative rubber production; [1]

(ii) the greater availability of “small packs of dried fruit, nuts and fresh fruit”. [3]

(c) Is the information in Extract 1 sufficient to suggest that West African countries have a comparative advantage in the production of cocoa? Explain your answer. [4]

(d) **(i)** Do you agree that government should intervene in the market for chocolate and soda? Justify your answer. [6]

(ii) With reference to relevant case material, discuss the factors that the government needs to take into consideration when intervening in the market for goods like chocolate and soda. [12]

[Total: 30]

Question 2 Eurozone Crisis – Within and Beyond

Table 1: Budget Position as a percentage of GDP

	2010	2011	2012
India	-7.3	-7.8	-8.4
Spain	-9.7	-9.4	-10.6
Germany	-4.2	-0.8	0.2
Greece	-10.8	-9.6	-6.9
UK	-10.0	-7.9	-6.5
Singapore	7.7	9.5	2.0
China	-0.7	0.1	-2.0

Adapted from OECD Economic Outlook No. 92 as of December 2012

Table 2: GDP figures (US$ billions)

	2010	2011	2012
India	1,710	1,842	1,872
Spain	1,380	1,476	1,349
Germany	3,284	3,600	3,400
Greece	292	289	245
UK	2,256	2,444	2,435
Singapore	217	245	254
China	5,930	7,321	8,227

Source: data.worldbank.org

Table 3: Human Development Index

	2010	2011	2012
India	0.547	0.551	0.554
Spain	0.884	0.885	0.885
Germany	0.916	0.919	0.920
Greece	0.866	0.862	0.860
UK	0.874	0.875	0.875
Singapore	0.892	0.894	0.895
China	0.689	0.695	0.699

Source: hdr.undp.org

Extract 6: Eurozone's Second Crisis: Inflation At Six Month High

As if the recession is not bad enough, the Eurozone is hit with another crisis.

According to Eurostat, prices in the Eurozone were 2.7 per cent higher in September 2012 compared with the year before, and up from the previous month's 2.6 per cent rate. Eurostat did not provide any reasons for the increase as the figure was only a preliminary estimate, although higher energy costs are likely to blame. Economists believe that a sales tax in Spain could have also contributed to the increase.

The increase will likely prove to be another headache for European Central Bank (ECB) rate setters in the run up to their next policy meeting. The ECB has had to contend with a faltering eurozone economy and turbulent financial markets in trying to stick to its mandate of keeping inflation just below two per cent.

Six Eurozone economies[1] are in recession and more are expected to follow in coming months. The Eurozone economy has struggled recently as the region's debt crisis has knocked investor and consumer confidence and caused governments to introduce tough austerity measures.

[1] France, Italy, Spain, Finland, Portugal, Cyprus

Many believe that quantitative easing measures would help the Eurozone economy pick up. Usually, central banks try to raise the amount of lending and activity in the economy indirectly, by cutting interest rates. But when interest rates can go no lower, a central bank's only option is to pump money into the economy directly. The central bank does this is by buying assets - usually government bonds. The institutions selling those bonds will then have "new" money in their accounts, which then boosts the money supply.

A number of economists forecast another interest rate cut this year from the current record low of 0.75 per cent. “We continue to see the ECB leaving policy rates unchanged at next week’s meeting – a view that is (at the margin) reinforced by this latest increase in inflation,” said James Ashley, an economist at RBC Capital Markets.

Adapted from European Business News Portal, 2012

Extract 7: Living beyond our means

The UK and US’s governments face a conundrum. To achieve economic recovery, aggregate demand needs to expand. But the government is introducing tough austerity measures to reduce the size of the public-sector deficit and debt; exports are being held back by the slow recovery, or even return to recession, in the Eurozone and the USA; and investment is being dampened by business pessimism. For recovery, High Street spending needs to rise.

But herein lies the dilemma. For consumer spending to rise, people need to save less and/or borrow more. But UK and US saving rates are already much lower than in many other countries. Also, household debt is much higher in the UK and USA. This has been largely the result of the ready availability of credit through credit cards and other means. The government is keen to encourage people to save more and to reduce their reliance on debt – in other words, to start paying off their credit-card and other debt. But this will hardly help recovery.

Adapted from John Sloman, Economics

Extract 8: Going beyond the Eurozone

The outcome has been as expected: Two years into the crisis, at the mid-year mark in 2012, Europe is indeed in deep denial and recession, and uncertainty looms large in both its policy spheres and decision-making ability.

In Asia, especially China has been impacted only modestly by the slowdown, and is now positioned to begin a consolidated phase of growth leadership in Asia. Singapore, Hong Kong and Taiwan – the region’s most open or export-dependent economies – are likely to take the biggest economic hit and India's foreign trade account is hovering around a negative $10 billion per month. Foreign indirect investment flows do appear to have come down near term, due to the widely predicted monetary tightening performance during this period has been mixed.

Adapted from The Wall Street Journal, 2012

Extract 9: How can the world move forward?

The European Central Bank is banking on the lowering of interest rates and introduces a programme of quantitative easing.

This plan may help some states but will, of course, be terrible for Germany. Unlike the rest, Germany’s economy has resurged thanks to its incredible competitiveness – Germany now runs a bigger external surplus than China. The loose monetary policy would save Italy, but the bulk of the inflation would be in Germany, where there is no spare capacity. German exports would decline and the businesses that produce them would lose out and have to sack workers.

But for Europe overall, that is ideal. Indebted countries like Greece, Italy and Spain and even the UK, need to export their way back to prosperity. For this to happen, Germany needs to start importing. The easiest way to achieve that is to make German goods more expensive – exactly what a big dose of inflation would do.

The Asian countries have their own battle at home to fight with in light of the rampant food and energy shortages. Central banks of these market countries need to determine how fast they will tighten monetary policy. In Asia, authorities have lifted interest rates to slow double-digit inflation, reduce credit growth and narrow the trade deficit. On top of that, this crisis has amplified the need for Asia countries to look beyond reliance on the Western markets for trade.

Adapted from Telegraph.co.uk, 2012

Questions

(a) **(i)** Compare the budget position as a percentage of GDP of India with that of Greece from 2010 to 2012. [2]

(ii) With reference to Table 2, how might the observation in **(a) (i)** explain the changes in national income in India and Greece? [3]

(b) Using AD-AS analysis, explain how the Eurozone can suffer from a recession and yet still face inflation as seen in Extract 6. [3]

(c) With reference to Extract 7, explain the possible factors that may hinder economic recovery in the UK and the US. [4]

(d) Discuss how the living standards in Asian economies could be affected by the Eurozone Crisis. [8]

(e) Assess the appropriateness of the policy options adopted by the European Central Bank and the Asian economies in solving the macroeconomic problems they are facing. [10]

[Total: 30]

Section B

Answer **one** question from this section.

3 The use of e-cigarettes, a battery-powered device that provides inhaled doses of nicotine vapour and flavorings, has been growing rapidly. This comes at a time where the Australian government announced a 60 per cent increase in tobacco taxes over the next four years, dealing another blow to cigarette manufacturers.

Adapted from *Yahoo News*, 1 August 2013

(a) Explain how the increasing use of e-cigarettes and a rise in tobacco tax affect the market for cigarettes. [10]

(b) Assess the degree to which the above measures are able to improve welfare of a society. [15]

4 **(a)** Explain the possible causes of unemployment in an economy. [10]

(b) Comment on the view that globalisation has increased employment opportunities in developing countries more than in developed countries. [15]

~ End ~

ST ANDREW'S JUNIOR COLLEGE
PRELIMINARY EXAMINATIONS – 2013
General Certificate of Education Advanced Level
Higher 1

Suggested Answers and Mark Schemes

ECONOMICS 8819/01

Paper 1 **29 August 2013**

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 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 **30** printed pages.

[Turn Over

Section A

Answer **all** questions in this section.

Question 1 Chocolate and Soda – Love them, Hate them

Extract 1: Higher Chocolate Prices May Follow Africa's Cocoa Shortfall

Villagers in West Africa, which produces 70 percent of the world's cocoa, are abandoning the crop because its price is volatile, farms are too small to be economical, yields haven't risen for decades, and alternative crops such as rubber are more lucrative. "They produce half a ton per hectare of cocoa, and it has been that way forever. All major agricultural products have improved their yields by a factor of 5 to 10 in the last 50 years, and cocoa hasn't," says Barry Parkin, the head of global procurement and sustainability at Mars, whose products include M&M's, the best-selling chocolate candy in the U.S. He reckons that demand will outpace production by 1 million tons by the end of the decade.

To deal with more frequent cocoa shortages, confectioners have been shrinking the size of chocolate bars, adding more air bubbles to chocolate, or simply substituting more vegetable oil for cocoa butter. They also can pull from global stockpiles, which stood at 1.8 million metric tons as of Sept. 30, according to the International Cocoa Organization. But experts say it will be tougher to cope beyond 2020 without improved production.

Source: Bloomberg Business Week, 7 February, 2013

Extract 2: **Tax chocolate to beat obesity, say doctors**

Chocoholics face a fight with doctors who want to slam heavy taxes on their favourite treat. Doctors say too much chocolate makes them fat and it should be priced up – like alcohol and tobacco – so they buy less.

Nutritionist Dr David Walker yesterday claimed chocolate is a big factor in the obesity epidemic and the explosion of conditions such as Type 2 diabetes. "I see chocolate as a major player in this and the related medical conditions and I think a tax on products containing chocolate could make a real difference."

But the sweet-toothed masses and industry chiefs branded the idea unfair and stupid. Julian Hunt, of the Food and Drink Federation, declared: "Taxes on foods that consumers love would result only in lighter wallets, not smaller waists. We already have to pay VAT on all our chocolates. While good for grabbing headlines, there is no evidence to suggest such 'fat taxes' would work in reality. Such a tax won't make people lose weight, it will just make them spend more money."

"Education and information are needed to help make the right food choices and people should be encouraged to increase physical activity."

Source: Mirror News, Mar 13, 2009

Extract 3: Chocolate bars to be made smaller in Government anti-obesity drive

The Government is set to order manufacturers to shrink the size of chocolate bars and fizzy drinks. The Health Secretary will tell firms such as Mars, Coca-Cola and Nestlé that smaller versions of their products should be available in all garages and corner shops to help stop people piling on weight. He will also say small packs of dried fruit, nuts and fresh fruit should be widely available at places where people buy on impulse and warn that sugar levels must be cut in all products.

The obesity drive is part of the Change4 Life campaign and could lead to tougher regulation if the warnings go unheeded. The Government believes businesses can create a new world leading 'healthy market' to help drive down obesity.

Source: The Daily Mail, 5 February 2009

Extract 4: Chocolate price hikes won't put off consumers, predict analysts

Confectioners will probably get away with increasing prices on chocolate bars without significantly denting demand because they are generally low ticket items bought as treats in an area with high brand loyalty, analysts have predicted.

Everybody is raising prices in this industry right now; the million dollar question is to what extent retailers will absorb rises or pass them on to the consumer. The consumer will ultimately decide whether he will pay. But while 10 percent is a pretty hefty and aggressive increase, they will probably get away with it.

Source: http://www.foodnavigator-usa.com, 4 Apr 2011

Extract 5: The Battle Over Taxing Soda

This soda debate is probably going to be around for some time. Cities and counties, desperate to find money to pay for schools and roads, are starting to see a soda tax as a way to raise revenue. The tax also appears to be one of the most promising ways to attack obesity, given the huge role sugary drinks play in the epidemic.

The argument for a soda tax is the same as the argument for a tax on tobacco or pollution. When an activity imposes costs on society, economists have long said that the activity should be taxed. Doing so accomplishes two goals: it discourages the activity, and it raises money to help pay society's costs.

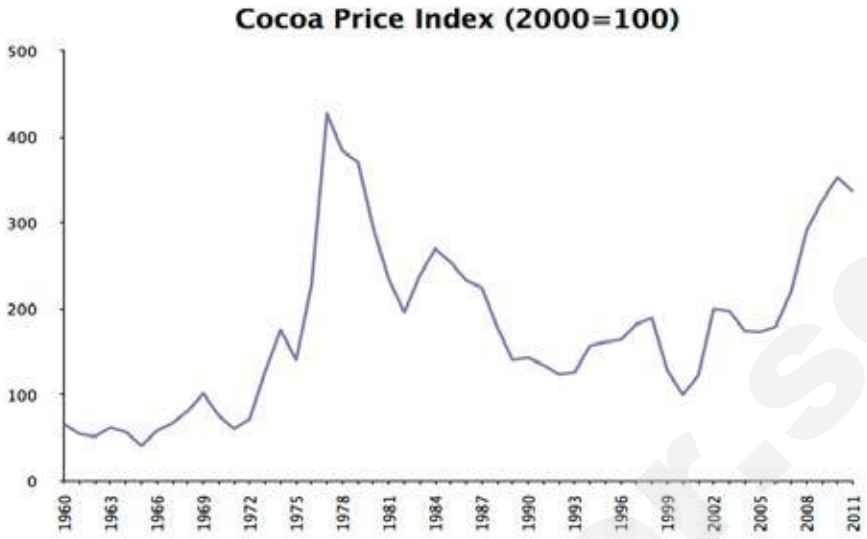
In the case of soda, those costs come in the form of medical bills for diabetes, heart disease and other side effects of obesity. We're all paying these bills, via Medicare, Medicaid and private insurance premiums. Obesity has become a significant cause of our swelling long-term budget deficit.

However, small tax changes don't always change behavior, as a recent study by the RAND Corporation found. So a small soda tax could actually have a worse impact on some families' budgets than a substantial one — by raising the price of soda without affecting consumption.

Such a tax would certainly raise the cost of living for some heavy soda drinkers, just as cigarette taxes have stretched the budgets of some smokers and mandatory seat belts have added costs to car production. But consider the benefits from those other public health initiatives. They have vastly outweighed the costs.

Source: The New York Times, 19 May 2010

Figure 1: Cocoa Prices (1960 – 2011)



Source: UNCTAD

Questions

(a) **(i)** Describe the trend in the price of cocoa from 1990 onwards. [2]

(ii) Explain how the above trend can affect the market for chocolate candy bars. [2]

(b) Explain the impact of the following on the market for cocoa:

(i) a more lucrative rubber production; [1]

(ii) the greater availability of "small packs of dried fruit, nuts and fresh fruit". [3]

(c) Is the information in Extract 1 sufficient to suggest that West African countries have a comparative advantage in the production of cocoa? Explain your answer. [4]

(d) **(i)** Do you agree that government should intervene in the market for chocolate and soda? Justify your answer. [6]

(ii) With reference to relevant case material, discuss the factors that the government needs to take into consideration when intervening in the market for goods like chocolate and soda. [12]

[Total: 30]

Question 2 Eurozone Crisis – Within and Beyond

Table 1: Budget Position as a percentage of GDP

	2010	2011	2012
India	-7.3	-7.8	-8.4
Spain	-9.7	-9.4	-10.6
Germany	-4.2	-0.8	0.2
Greece	-10.8	-9.6	-6.9
UK	-10.0	-7.9	-6.5
Singapore	7.7	9.5	2.0
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But herein lies the dilemma. For consumer spending to rise, people need to save less and/or borrow more. But UK and US saving rates are already much lower than in many other countries. Also, household debt is much higher in the UK and USA. This has been largely the result of the ready availability of credit through credit cards and other means. The government is keen to encourage people to save more and to reduce their reliance on debt – in other words, to start paying off their credit-card and other debt. But this will hardly help recovery.

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4 **(a)** Explain the possible causes of unemployment in an economy. [10]

(b) Comment on the view that globalisation has increased employment opportunities in developing countries more than in developed countries. [15]

~ End ~

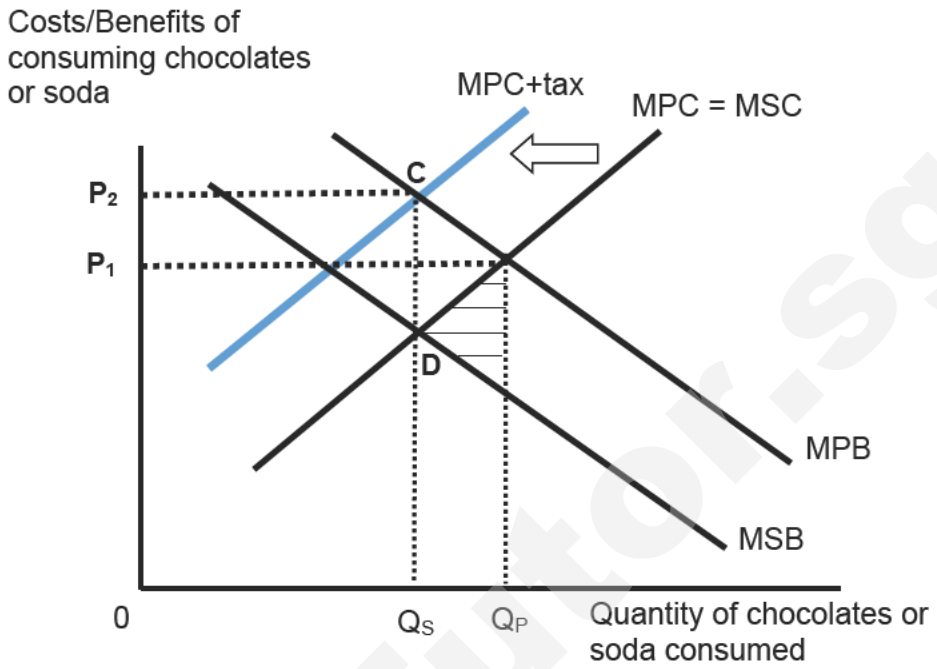
Suggested Answers

Question 1: Chocolate and Soda – Love them, Hate them

(a)	**(i)**	**Describe the trend in the price of cocoa from 1990 onwards.**	**[2]**
		There was an increasing trend in the price of cocoa from 1990 onwards. [1] The rate of increase was increasing **or** the largest/sharpest increase was from 2005 to 2011 **or** there was a sudden dip in prices in 2000. [1]	
	(ii)	**Explain how the above trend can affect the market for chocolate candy bars.**	**[2]**
		Chocolate candy bars require cocoa as a factor of production, hence when the price of cocoa increases, the cost of producing chocolate candy bars increases. - 1 mark for "cost of production increases". This will decrease the supply of chocolate candy bars and result in an increase in the price and a decrease in the equilibrium quantity of chocolate candy bars. - 1 mark for "decrease in supply" **and** "increase in the equilibrium price" **and** "decrease in the equilibrium quantity".	
(b)	**Explain the impact of the following on the market for cocoa:**		
	(i)	**a more lucrative rubber production;**	**[1]**
		A more lucrative rubber production will mean that producers will substitute rubber for cocoa and this results in a decrease in the supply of cocoa and an increase in price of cocoa (1 mark for "competitive supply" **and** "fall in supply" **and** "an increase in the equilibrium price" **and** "a decrease in the equilibrium quantity").	
	(ii)	**the greater availability of "small packs of dried fruit, nuts and fresh fruit".**	**[3]**
		Small packs of dried fruit, nuts and fresh fruit are seen as substitutes of chocolate and hence, the demand for chocolate candy bars will decrease (1 mark for "substitute"). Since cocoa is a factor of production of chocolate candy bars, a decrease in the demand for chocolate will decrease the demand for cocoa (1 mark for "factor of production" **or** "derived demand"). As the demand for cocoa falls, price and quantity of cocoa decreases (1 mark for "equilibrium price decrease" **and** "equilibrium quantity decrease").	

(c)	**Is the information in Extract 1 sufficient to suggest that West African countries have a comparative advantage in the production of cocoa? Explain your answer.**		**[4]**
		Theory of comparative advantage states that of two countries, specialisation and trade can benefit both countries if each country has a comparative advantage or a lower opportunity cost in producing one good over the other country. Lower opportunity costs can be due to availability of factor endowments (1 mark for definition). Extract 1 seems to suggest that cocoa is an agriculture product that is produced by West African countries as 70% of the world's cocoa is produced there. In this case, agriculture can be produced at a lower opportunity cost by West African countries if the factor endowment, such as availability of farmland or large amount of low skilled workers, is widely available (70% of the world's cocoa suggests that West Africa has comparative advantage - 1 mark). However, to explain why West African countries have a comparative advantage, there is a need for more information about their factor endowment (e.g. large acres of farmland to produce cocoa or low cost / unskilled labour). The large quantity of exports could also be due to other reasons such as government intervention by giving out subsidies to boost production, which in this case is not given in the extract (2 marks for lack of information and government intervention).	
(d)	(i)	**Do you agree that government should intervene in the market for chocolate and soda? Justify your answer.**	**[6]**
		<u>Introduction</u> Market failure is defined as the misallocation of resources in the free market without government intervention such that maximum social welfare is not attained. Demerit goods are goods deemed undesirable by the government and over-consumed. It will also result in external cost incurred by third parties not involved in consumption of the good. Hence government intervention in this case would be to reduce the consumption of chocolate or soda to increase society's welfare. Doctors claim that chocolate is a big factor in the obesity epidemic and the explosion of conditions such as Type 2 diabetes (Extract 2 paragraph 2). This may also increase the medical cost incurred by society as patients and their families' outlay on medical bills rise to treat such illnesses. Such medical condition that harms individuals suggests that chocolates or soda are considered demerit goods that generate negative externalities (e.g. medical cost that have to be paid for by other family members or society). If individuals only consider their net private benefit, they would consume chocolates or soda at Qp in the diagram below, where MPB=MPC. However, this level of consumption exceeds the socially optimal level at Qs, where	

society's welfare is maximised. Hence the government should intervene to bring about a more socially optimal level of consumption at Qs.



However, government intervention may not be justifiable if it results in a loss of welfare to the society. If the policies implemented results in lower welfare to the in terms of lower net benefits (benefit – cost), then society is better off without government intervention.

Level (Marks)	Knowledge, Application, Understanding and Analysis
L3 (5 – 6)	Developed explanation and evaluation of how government intervention is justified or not justified. Both sides of the argument are sufficiently presented. Evaluation clearly show the understanding that whether justifiable or not depends on various factors.
L2 (3 – 4)	Developed explanation of how government intervention is justified or not justified. Both sides of the argument are sufficiently presented. Definitions or concepts are incomplete or lacking although the general understanding that chocolates are deemed to be demerit goods is clearly stated. Answers focused on negative externalities without mentioning demerit goods (max 4 marks)
L1 (1 – 2)	Smattering of valid points without a clear structure. I.e. undeveloped explanation of how government intervention is justified or answers are one-sided or lack economic analysis.

	(ii)	**With reference to relevant case material, discuss the factors that the government needs to take into consideration when intervening in the market for goods like chocolate and soda.**	**[12]**
		<u>Introduction</u> The government needs to reduce the consumption of chocolate and soda due to these goods being deemed as demerit goods that generate negative externalities so as to maximise social welfare. Government intervention can take the form of taxes and education (Extract 2) or reducing the size of chocolate bars (Extract 3). However, whether or not the intervention should be undertaken depends on the consideration of various factors. **<u>Body</u>** ① Government budget The government may not have sufficient budget to increase spending on educating the public on the ills of consuming chocolate or soda. Hence a tax is used instead as it also raises tax revenue for the government. Such revenue can also be used to pay for the cost of the medical bills of diabetes patients in the lower income groups. As mentioned, obesity has become a significant cause of the swelling long-term budget deficit, hence, the choice of the policy could hinge upon whether the policy worsens the budget balance or not. ② Elasticity As mentioned in Extract 2, taxes on food that consumers love 'would result only in lighter wallets, not smaller waists'. The impact of a small tax increase will have a minimal impact on consumption. This is because the demand for chocolates and soda is price inelastic where a price increase would cause a less than proportionate decrease in the quantity demanded. Hence, such a policy would have limited effect on the reduction of consumption of chocolate and soda. As mentioned in Extract 2, education and information are needed so as to enable consumers to make the right decisions. Therefore, information of how chocolates and soda can cause diabetes or obesity would be better suited to reducing consumption than a tax. ③ Effects on cost of living An increase in tax may cause an increase in the cost of living for heavy soda drinkers due to the elasticity reason above. Hence, it may add to the cost of living of consumers in the country where the tax is implemented. As such a measure would reduce quantity consumed proportionately less than the increase in price, it adds to the cost of living of families. Examples of such goods are tax on cigarettes and mandatory seat belts where it adds to the cost of consuming such goods. Hence it adds to the expenditure and stretches the budgets of these families.	

Conclusion/Evaluation

Whether or not the government chooses to implement a particular policy should depend on whether the society's welfare will increase after its implementation. If the policy adds more cost to society than benefits, then it should not be implemented. For instance, when a tax is implemented, the cost of implementing the policy could be rather large (e.g. tax that results in higher prices and higher cost of living) while the benefits (e.g. reduction in consumption of demerit goods), are small. Hence policies should be considered based on their net benefits (benefit minus cost) to society instead of only benefits (of reducing quantity of demerit goods).

Similarly, whether or not the policies are implemented could be dependent on the accuracy of the data collected. For instance, if the data collected for a particular policy is more accurate than another policy, then the policy should be implemented as the government is more assured of the benefits due to the accuracy of the information.

Level (Marks)	Knowledge, Application, Understanding and Analysis
L3 (6 – 8)	Well-developed explanation and discussion of the factors that the government needs to take into consideration before deciding which policy to take. Justification could take into account the context of the country involved, the government's budget conditions, the well-being of the people of the country, etc.
L2 (4 – 5)	Developed explanation of the factors that the government needs to take into consideration. But such explanation may lack substantial economic analysis or substantial development.
L1 (1 – 3)	Smattering of valid points without a clear justification based on the factors that affect government's decision. Mainly explained the different types of government intervention without focus on the factors. Only consider the effects of policies. A maximum of 1 factor.
E2 (3 – 4)	Able to give a well justified opinion on the factors that affect government's decision on the appropriate measures used.
E1 (1 – 2)	Assessment given but not substantiated.

Question 2 Eurozone Crisis – Within and Beyond

(a) (i) **Compare the budget position as a percentage of GDP of India with that of Greece from 2010 to 2012.** **[2]**

	2010	2011	2012
India	-7.3	-7.8	-8.4
Greece	-10.8	-9.6	-6.9

Similarity: from 2010 – 2012, both India and Greece suffered from a budget deficit. [1]

Difference: Greece had a falling budget deficit as a percentage of GDP while India suffered from a rising budget deficit. [1]

(ii) **With reference to Table 2, how might the observation in (a) (i) explain the changes in national income in India and Greece?** **[3]**

Pointing out the changes in NY in both India & Greece [1]
India enjoyed a rise in NY while Greece suffered from a fall in NY.

*Linking the observation in **(a) (i)** to the change in NY for both India and Greece:*
Greece's falling budget deficit could possibly imply that the government may have been adopting a contractionary fiscal policy or austerity measures. The fall in government expenditure and/or a rise in tax revenue would thus result in a fall in NY, hence accounting for the falling NY. [1]

On the other hand, India's rising budget deficit could possibly imply that Indian government may have been adopting an expansionary fiscal policy, to raise government expenditure or reduce taxes, hence accounting for the rising NY. [1]

(b) Using AD-AS analysis, explain how the Eurozone can suffer from a recession and yet still face inflation as seen in Extract 6. **[3]**

Inflation – GPL is still rising.

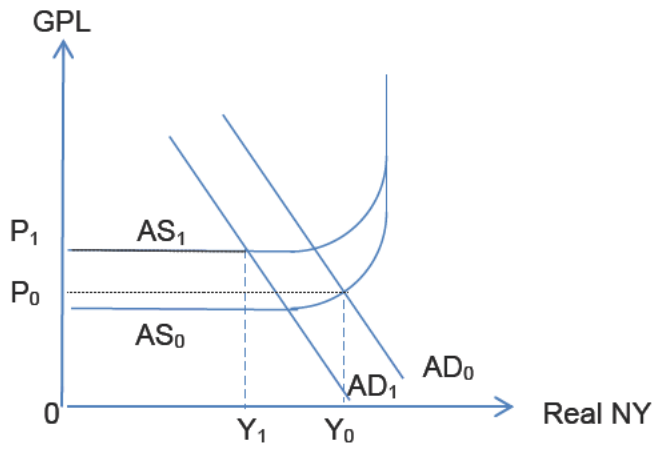
¯C and ¯I in Eurozone due to pessimism ® ¯AD
It is also coupled with - in higher energy costs à - COP à ¯ in SRAS

OR

Sales tax (e.g. on intermediate goods and services) will also - COP à cause a further ¯ in SRAS.

Students need to point out both changes in AD & AS to show resultant rise in price level, hence Eurozone can suffer from a recession and still face the problem of inflation.

DD reason, SS reason & reflecting rise in price level and fall in output on diagram. If no diagram is drawn, clear explanation on why there is a rise in price and fall in output is expected.



[**Note**: AD/AS diagram is not required.]

(c)	**With reference to Extract 7, explain the possible factors that may hinder economic recovery in UK and US.** Any 2 factors. 2m to be awarded for clear explanation for each factor. In order to achieve economic recovery, AD needs to ↑ (as stated in Extract 7) • However tough austerity measures to reduce budget deficit by ↓G and/or ↑T → would instead result in a fall in AD instead, hence hindering economic recovery. • High existing household debts – C cannot increase significantly especially when the UK and the US rely on domestic markets to stimulate growth. Income earned could have been used to repay debts, hence hindering economic recovery. • Business pessimism → expectation of rate of return is low → MEI shifts to the left → at every interest rate, firms choose to ↓ I, minimal rise in AD, assuming ceteris paribus, hence hinder economic recovery.	**[4]**

(d) **Discuss how the living standards in Asian economies could be affected by the Eurozone Crisis.** **[8]**

SOL – students need to explain impact on material and non-material SOL & positive and negative impact on **ASIAN** countries and making reference to CS evidence/data.

Impact may be negative:
Explain why the impact may be negative: Eurozone Crisis could have caused a fall in material SOL in Asian countries.

Students should make reference to data in Extract 8:
Eurozone Crisis:
® countries like Spain, Greece, UK all suffered negative growth rates. Fall in GDP would reduce countries' ability to purchase from Asian countries.

® Countries like India, Hong Kong, Taiwan and Singapore will suffer a fall in X revenue, fall in AD, assuming ceteris paribus, fall in countries' NY.

® fall in ability of residents in Asian countries to purchase more goods and services ® fall in material SOL.

Impact may not be negative:
Not all countries are negatively hit by the fall in national income (for material SOL).

Some countries like China, as Extract 8 points out, may only have been modestly affected by the Eurozone Crisis. This could be due to China's ability to rely on her domestic sources of growth instead of exports to EU. Hence the fall in NY may only be very small and temporal. Overall material SOL may not have fallen.

Non-material SOL
Based on HDI statistics (which measure life expectancy, education and income indices) ® the Asian countries reflect rising figures.

	2010	2011	2012
India	0.547	0.551	0.554
Singapore	0.892	0.894	0.895
China	0.689	0.695	0.699

Explain how life expectancy and education indicates the non-material SOL of Asian countries.

Evaluation:
Make a stand about overall impact on SOL. Overall SOL is still rising for both material & non-material. Evidence from case: Table 2 shows that Asian countries may not be as negatively affected as explained, as NY figures are still rising & HDI statistics also reflect a rise.

Hence how negative the impact of the Eurozone on Asia's countries' SOL depends on how reliant the country may be on exports to Eurozone and if the country has alternative sources of growth it can turn to (diversification of other trading partners).

OR

Point out what other pieces of data would be needed in order to more holistically deduce about SOL in Asian countries.

Level (Marks)	Knowledge, Application, Understanding and Analysis
L3 (5 – 6)	For a well-elaborated answer using information from the case study. Answer elaborates on how Eurozone Crisis may have a positive and negative impact on both material and non-material SOL for Asian countries.
L2 (3 – 4)	For one-sided answer (positive or negative, material or non-material SOL) on how the Eurozone Crisis could have an impact on material and non-material SOL. Undeveloped answer with gaps in economic analysis.
L1 (1 – 2)	Serious conceptual errors evident or answer is irrelevant and does not answer the question. Answer is a smattering of points without any obvious or strong attempt in referring to the extracts.
E1 (1 – 2)	Making a judgement – the severity of the impact depends on how close the trading relationship is between Eurozone countries and specific Asian countries.

(e) Assess the appropriateness of the policy options adopted by the European Central Bank and the Asian economies in solving the macroeconomic problems they are facing. **[10]**

<u>Macroeconomic Problems identified</u>:

(1) Persistent budget deficit though it is decreasing.
(2) Recession
(3) Inflation (Eurozone – cost-push inflation; Asia – demand-pull inflation & cost-push inflation)
(4) Current Account deficit (in Greece, Italy and Spain)

Students can bring in any 2 PROBLEMS & 2 policies (for ECB & Asia) to address. Students can combine similar problems between the countries e.g.: Inflation & recession

<u>European Central Bank</u>

Policies adopted: ¯ i/r + quantitative easing

è ↓i/r à COB↓ à ↑C & ↑I à ↑AD à ↑NY à achieving actual economic growth

è Quantitative easing [Extract 6] à ↑Ms à ↑C & ↑I à ↑AD à ↑NY

<u>Policy has been appropriate given the current situation</u>:

è Explain how the policy can work to solve the problem, hence the policy is appropriate given the current situation.

è Evidence from case: 'The loose monetary policy would save Italy' [Extract 8], hence justifying that the policy has been appropriate since it is anticipated to effectively solve the problem in Europe.

è Moreover, when Germany started importing as given in Extract 9 à assuming Germany imported more goods and services from other states in Eurozone à X revenue rose in Greece, Spain, Italy, assuming ceteris paribus à ↑AD à ↑NY

è Alternatively, fall in interest rates à capital flight of hot money à depreciation of currency à exports become more competitive in foreign markets and imports become less competitive domestically à ↑AD à ↑NY

<u>Policy may not be appropriate</u>:

è If more money in circulation but no ↑in output à might result in worsening of inflation and Europe is suffering from cost-push inflation.

è Conflict of policies – Quantitative easing supposedly to - NY but due to business pessimism, I will not rise sufficiently to solve the problem (I is interest inelastic). Policy is inappropriate to solve the problem.

è Eurozone faced different economic problems as evidence from Extract 9 when Germany experienced BOP surplus while other states of Europe needed to "export its way back to success" à however ECB adopted the same policy, which may not have been appropriate to all states.

<u>Asian Economies</u>

Problems Identified: Cost-push inflation due to food and energy shortages (Extract 9) + trade deficit due to their trading partners in the West suffering (Extract 7).

Policies adopted:

1) Tighten monetary policy (↓Ms or ↓credit)
2) Trade policies

è ↓Ms à - i/r à ↑COB à ↓C & ↓I à ↓AD à ↓DD-pull inflation
è ↓credit growth à ↓M / ↓C à ↓trade deficit /↓C à ↓DD-pull inflation
è Signing of more FTAs beyond Western markets à tap on the growth of other countries & reduce reliant on Western markets for growth & diversify risk.

<u>Policy has been appropriate given the current situation</u>:

è *In Asia, the economy has been impacted only modestly by the slowdown, and is now positioned to begin a consolidated phase of growth leadership in Asia [Extract 8].* Reiterates that policy has been appropriate and effective to address the problems, as the economy has only been impacted modestly.

<u>Policy may not be appropriate</u>:

è 'Singapore, Hong Kong and Taiwan – the region's most open or export-dependent economies – are likely to take the biggest economic hit and India's foreign trade account is hovering around a negative $10 billion per month' [Extract 8]. Despite the use of policies, given the severity of the impact and how reliant these countries are on exports, the policy may not solve the problem.

è 'Foreign indirect investment flows do appear to have come down near term, due to the widely predicted monetary tightening performance during this period has been mixed' [Extract 8]. Due to pessimism/poor investor

confidence, policy will not be appropriate to revive the situation in Asia.

Evaluation:
Whether the policies adopted by ECB and Asian government are appropriate depend on the root cause of the problems as well as the country implementing it. Due to the limitations of the Eurozone needing to adopt a common policy, they are unable to tackle different economic problems faced by the respective countries. Blanket measures might not be suitable or could possibly even worsen the problem of another country.

In Asia, if rampant food and energy prices are mainly due to imported cost-push inflation, the policies of tightening money supply would serve to reduce demand-pull inflation but limited in its appropriateness in tackling the root cause of the problem. In that case, an appreciation of her exchange rate might be more appropriate in reducing the inflation instead.

Level (Marks)	Knowledge, Application, Understanding and Analysis
L3 (7 – 8)	Thorough analysis using appropriate economic analysis (AD/AS framework) is evident throughout the answer. Clear scoping of answer to identify the problems in the countries before moving on to examine the policies. Clear link between problems and policies. Well-elaborated answer on how the policies suggested by ECB and the Asian economies could be adopted or are relevant in solving the identified problems. (1 problem & 1 measure to be discussed and analysed – for ECB & Asian govt)
L2 (4 – 6)	Attempt to respond to the question is evident though not consistently done. Undeveloped answer and lack economic analysis (AD/AS framework) on how the policies suggested by ECB and the Asian economies could be adopted or are relevant in solving the identified problems.
L1 (1 – 3)	Smattering of points. For an answer that shows very weak understanding of the policies and how these policies can affect the problems mentioned. No reference to CSQ evidence.
E2 (2)	Evaluation is thorough and based on economic analysis. Ability to recognise that there is a need to consider the cause of the problem and country's unique characteristics before deducing its appropriateness.
E1 (1)	For unexplained evaluative comments. Mere listing of stand / weak evaluative comments.

[Total: 30]

3(a) Explain how the increasing use of e-cigarettes and a rise in tobacco tax affects the market for cigarettes. [10]

Introduction

- The interactions of demand and supply determine the equilibrium price and quantity in a market.
- Hence, a given change in demand and/or supply of cigarettes would affect the equilibrium price and quantity of cigarettes bought and sold in the market.

Body

1. Increasing use of e-cigarettes
- E-cigarettes are substitutes for cigarettes as the consumption of either fulfills the same need/want.
- Assuming that consumer consume either traditional cigarettes or e-cigarettes, the increasing use of e-cigarettes could imply that demand for e-cigarettes has increased and may mean a fall in demand for cigarettes.

2. Rise in tobacco tax
- A rise in tobacco tax would cause an increase in cost of production for cigarette manufacturers, as tobacco, being a factor of production for cigarettes, costs more than before.
- An increase in cost of production would cause a fall in the supply of cigarettes.

Combining the two factors:
- With a fall in demand for cigarettes and a lower quantity of cigarettes being supplied at each price, equilibrium quantity of cigarettes transacted will fall.
- The outcome on equilibrium price of cigarettes can be determined by the magnitude of the fall in demand for and supply of cigarettes.

  - Case #1:
    If the fall in demand were greater than the fall in supply, there would be a fall in the equilibrium price of cigarettes.

  - Case #2:
    If the fall in demand were less than the fall in supply, there would be a rise in the equilibrium price of cigarettes.

  - Case #3:
    If the fall in demand were the same as the fall in supply, there would be no change in the equilibrium price of cigarettes.

Note: Candidates should explain at least one of the three cases, with the relevant justification of the extent of the fall in demand and supply of cigarettes. Workings of price mechanism to reach new equilibrium quantity and price are required.

Conclusion

Hence, the increasing use of e-cigarettes and a rise in tobacco tax would cause a fall in the equilibrium quantity and an indeterminate change in the equilibrium price of cigarettes.

Level (Marks)	Knowledge, Application, Understanding and Analysis
L3 (7 – 10)	A detailed and well-analysed answer which demonstrated good use of demand-supply analysis, justified considerations of the relative magnitude of demand and supply changes, and a clear explanation of the price mechanism in determining the outcome on equilibrium price and quantity in the market.
L2 (5 – 6)	An under-developed answer which shows some use of demand-supply analysis, with a fundamental understanding of the workings of the price mechanism in determining equilibrium price and/or quantity in the market. Responses are likely to consider the extent of change in demand and supply, but without justification.
L1 (1 – 4)	A largely descriptive response, with little use of demand-supply analysis and a weak explanation of the working of the price mechanism. Answer tends to contain conceptual errors and may not address the impact on both equilibrium price and quantity in the market.

3(b) Assess the degree to which the above measures are able to improve welfare of a society. [15]

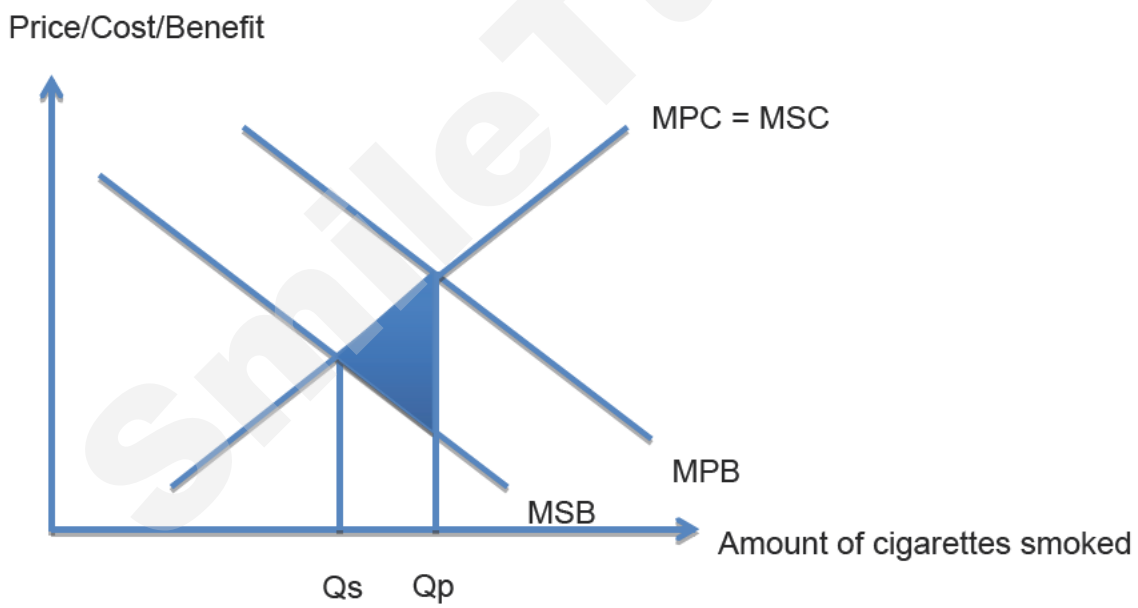
Introduction

- The market for cigarettes, deemed to be a demerit good, provides a case of market failure.
- Thus, with the existence of market failure, welfare of a society is not maximised.
- The degree of success of the above measures depends on certain factors such as degree of substitutability between e-cigarettes and conventional cigarettes and PED of cigarettes and availability/accuracy of information.

Body

Demerit goods as a source of market failure (briefly):

- The act of smoking results in a third party who is not involved in the economic transaction bearing an external cost. Such costs would not be taken into consideration by smokers in their decision on how many sticks of cigarettes to smoke per day. As the marginal social benefit is less than the marginal private benefit for each stick of cigarettes smoked, privately optimal (Qd = Qs, at market equilibrium output) amount of cigarettes smoked will be higher than that of the society (MSB = MSC). This thus leads to market failure – too much resources have been devoted to the production and hence consumption of cigarettes in the market.



The impact of e-cigarettes in improving welfare of a society:

- E-cigarettes do not burn and produce smoke. Hence, the external cost to third parties falls, causing a smaller divergence between MPB and MSB.
- Hence, this will bring Qp closer to Qs, thus reducing deadweight loss and improving welfare to society.

To assess the degree to which welfare of a society has been improved, we need to consider the degree of substitutability of e-cigarettes for traditional cigarettes.

- This will determine the extent to which the demand for cigarettes falls and therefore, the extent to which Qp moves closer to Qs.
- However, while there has been a rise in the use of e-cigarettes, the uptake of e-cigarettes may still be small as it is likely that they are not close substitutes to traditional cigarettes and smokers may still have a preference for traditional cigarettes instead, hence limiting the improvement in social welfare.

<u>The impact of a rise in tobacco tax in improving welfare of a society</u>:

- A rise in tobacco tax would cause an increase in cost of production for cigarette producers, thus shifting the MPC (supply) curve to the left.
- The new equilibrium (Qp_2) will now be nearer to Qs, hence decreasing the deadweight loss and improving welfare to society.

To assess the degree to which welfare of a society has been improved, we need to consider the price elasticity of demand (PED) of cigarettes.

- The rise in tobacco tax will only prove effective in improving society's welfare if demand for cigarettes is more price elastic.
- The resulting increase in price of cigarettes would cause a more than proportionate fall in quantity demanded for cigarettes. With a substantial fall in the sticks of cigarettes smoked, the external costs will also fall significantly, thereby reducing the deadweight loss incurred by the society.
- However, even with a rise in tobacco tax, given that smoking is a habitual good, demand for cigarettes is likely to be highly price inelastic. As such, given an increase in price of cigarettes, there would be a less than proportionate fall in quantity demanded for cigarettes. This would limit the effectiveness of the tax as it may only result in a slight improvement in welfare of society.

<u>Evaluation/Conclusion</u>

Combining the effects of the two measures,

SR: Unlikely to improve welfare of a society by much. While there has been increasing use of e-cigarettes in recent years, given that it is still a relatively new product in the market, it would take more time before we see a large uptake of e-cigarettes over the conventional cigarettes. Furthermore, in view of tobacco tax as a pre-existing policy and a highly price inelastic demand for cigarettes, a rise in tobacco tax may not be very effective in further reducing consumption of cigarettes.

LR: Given that the price elasticity of demand for cigarettes is not likely to change in the long term, e-cigarettes can be considered to be a more sustainable solution to improving society's welfare than tobacco taxes. Over time, smokers find e-cigarettes more acceptable (perhaps due to improvement in the design and quality of e-cigarettes, or receptiveness and attitude towards e-cigarettes), more smokers may switch to e-cigarettes and social welfare will improve more significantly.

All things being considered, the combined effect of two measures is a step in the right direction in improving welfare of a society. However, given that the market failure attached to smoking is likely to continue to exist, the government should continue to be open to different measures that can be implemented to continue improving welfare to society.

Level (Marks)	Knowledge, Application, Understanding and Analysis
L3 (9 – 11)	A thoroughly-analysed response which considered workings of each measure and the extent to which each is able to improve society's welfare through the use of cost-benefit analysis and other relevant economic concepts.
L2 (6 – 8)	An under-developed argument which showed a rudimentary understanding of the relevance of cost-benefit analysis in determining the degree to which welfare of a society can be improved. Answer tended to touch on some limitations of each measure, but with insufficient depth.
L1 (1 – 5)	A largely theoretical answer which appeared largely descriptive and demonstrates little understanding of the use of cost-benefit analysis and/or consideration of the strengths and weakness of the two measures can improve welfare to a society.
E2 (3 – 4)	For a critically analysed judgement with the relevant economic substantiation of the degree to which welfare of a society can be improved.
E1 (1 – 2)	For unexplained judgement, mere stating of stand or weak evaluative comments without economic justification of the degree to which welfare of a society can be improved.

4(a) Explain the possible causes of unemployment in an economy. [10]

Introduction

- Unemployment refers to a situation in which a person who is actively seeking employment, and is willing and able to work is unable to find a job.
- There are four main types of unemployment an economy can experience:
    1. Structural unemployment
    2. Cyclical unemployment
    3. Seasonal unemployment
    4. Frictional unemployment

Note: Candidates are required to discuss at least three of the four types of unemployment, with the use of relevant examples to support.

Body

1. Structural unemployment:
- Is a result of a mismatch of skills of workers to the needs of the economy.
- Is usually due to changes in the structure of an economy.

Possible causes of structural unemployment:
- o A likely cause of structural unemployment in an economy is due to capital-labour substitution in industries such as heavy manufacturing.
- o Due to the occupational immobility of workers, these unemployed workers tend to find it difficult to gain re-employment without retraining.
- o For instance, in the late 1990s, there was a technology bubble that created high demand for computer specialists. However, when this bubble burst in the year 2000, the structural unemployment faced by many of these computer specialists resulted in them having to be retrained to find suitable employment opportunities again.

2. Cyclical unemployment:
- Cyclical unemployment is a result from a fall in demand by either of or combination of 4 sectors in the economy, causing a fall in aggregate demand (AD).
- As labour is a derived demand, this fall in AD would result in a fall in the demand for labour, giving rise to cyclical unemployment.

Possible causes of cyclical unemployment:
- o The involuntary unemployment that arises from cyclical unemployment is largely due a recession, usually caused by a fall in AD for goods and services. As such, many who were gainfully employed would likely be retrenched due to possible cost-cutting measures employed by firms to stay afloat during crisis.
- o The recent U.S. subprime crisis was an example of a recession that resulted in the collapse of many large financial institutions as well as the bailout of banks by national governments.
- o The recession caused declines in consumer and investor confidence, which further attributed to a downturn in economic activities, thus aggravating the level of cyclical unemployment.

3. Seasonal unemployment:

· Seasonal unemployment occurs when people become unemployed at certain times of the year, because they work in industries where they are not needed all year round.

Possible causes of seasonal unemployment:

- o Seasonal unemployment is relatively regular and predictable, where the declines in particular industries or occupations over the course of a year often correspond with the climatic seasons.
- o For example, construction workers can expect unemployment during the winter months or periods of inclement weather. The employment of farm workers varies in a predictable manner with the end of seasonal planting and harvesting activities.

4. Frictional unemployment:

· Frictional unemployment is a type of transitional unemployment due to people moving between jobs.

Possible causes of frictional unemployment:

- o Some possible causes of frictional unemployment are the transitional period in which university graduates may take to find appropriate jobs at wage rates they are prepared to accept.
- o This transitional phase of temporary unemployment can also be observed with experienced labour due to the time involved in job search. Imperfect information in the labour market may make frictional unemployment worse if the jobless are unaware of the available employment opportunities.

<u>Conclusion</u>

While there are four main categories of unemployment that an economy may experience, each type of unemployment tend to stem from different causes. Arguably, different economies will find different causes to be the chief culprit of the unemployment, depending on the structure of the economies. Certain countries (e.g. Singapore) would even be unlikely to face seasonal unemployment due to non-varying seasonal climate all year round.

Level (Marks)	**Knowledge, Application, Understanding and Analysis**
L3 (7 – 10)	A well-analysed response which examined possible reasons that could lead to the different types of unemployment in an economy. Answer contained good use of real-life examples to illustrate points.
L2 (5 – 6)	An answer that attempted to explain possible causes for the different types of unemployment in an economy, but tended to be under-developed. Responses incorporated some use of examples, although mainly hypothetical.
L1 (1 – 4)	A largely theoretical answer which merely identified the different types of unemployment in an economy, with little/no explanation of the possible underlying reason for the various types of unemployment.

4(b) Comment on the view that globalisation has increased employment opportunities more in developing countries than developed countries. [15]

Introduction

- Globalisation refers to the growing interdependence of countries worldwide through increasingly volume and variety of cross-border transactions, largely in goods and services and greater flows of international capital, labour and technology.
- There is much controversy surrounding the impact that globalisation has had on an economy in term of creating employment.
- In order to assess the outcome of increasing employment in developed and developing countries, we need to consider the characteristics of these economies as well as the extent to which employment has increased.

Body

Thesis: Globalisation has increased employment opportunities more in developing countries than developed countries.

1. Outsourcing
   - It refers to firms contracting out part of a business/production process to another a third party.
   - The advent of globalisation has made it a common occurrence for outsourcing to take place between developed countries and developing countries.
   - Many developed countries tend to face higher cost of production due to high labour or factor cost and as such, they tend to outsource part of their production process to a developing country to enjoy a lower cost of production.
   - For example, in the US, Apple outsources the assembly of iPhones, iPads, etc. to China.
   - In this case, globalisation has resulted in the loss of job opportunities in the developed countries and created job opportunities in developing countries.

2. Changes in comparative advantage
   - The idea of comparative advantage builds on the idea of the relative opportunity cost that an economy incurs in the production of goods and services.
   - With a progressively interconnected global economy, globalisation has caused shifts and losses in comparative advantage of some economies relative to others.
   - Given that the manufacturing sector tends to be fairly labour-intensive, in comparison to developed countries, developing countries stand to be more competitive given the lower wage costs.
   - As such, developing countries such as Vietnam is likely to incur a relatively lower cost in the production of manufactured goods and services than a developed country such as the U.S. This may then translate into lower prices, leading to relatively more price competitive exports produced in Vietnam than U.S.
   - Hence, this loss in comparative advantage of developed countries may have caused an increase in structural unemployment, especially in export-oriented industries in the U.S. and increased job opportunities in developing countries instead.

Anti-thesis: Globalisation has not increased employment opportunities more in developing countries than developed countries.

While it would seem that developing countries might be experiencing more advantages in the area of employment than developed countries, this may not always be the case.

1. More established firms in developed countries
   - It is noteworthy that not all industries in developing countries are benefitting in the form of increased employment.
   - This is because developed countries tend to have more established firms that are more renown in the global market and this may cause issues for competing firms in developing countries.
   - For instance, in the air travel market, the top airline carriers tend to come from developed countries, with a good reputation and a large consumer base. E.g. Qatar Airways, Asiana Airlines, Cathay Pacific Airways, Emirates, etc.
   - In the face of a more globalised market and strong international competition, developing countries tend to be at a disadvantage even in light of a larger consumer market and increasing air travel.
   - Hence, developing countries may not experience increases in employment in certain industries that tend to benefit developed countries instead.

2. Larger consumer base in the international market
   - Globalisation has allowed for all economies to enjoy a larger consumer base.
   - However, the ability to take advantage of this increase in market size may be limited for developing countries, especially if these industries tend to be small.
   - For example, recent years have seen the expansion of many multinational corporations into new markets, especially in developed countries.
   - Furthermore, the industrialisation of developing countries would mean greater demand for technology and capital goods from developed countries to further develop the infrastructure of their economy.
   - Thus, globalisation may have increased employment in developed countries in such industries more so than that of developing countries.

Note: Points are non-exhaustive. Other examples of changes in employment opportunities that are linked to the phenomenon of globalisation are acceptable as well.

Evaluation/Conclusion

- Each country, regardless of its state of development, will experience both job creation and destruction to different extent in face of globalisation.
- To better understand the impact of globalisation on the employment of each country, it is also crucial to consider the characteristics of each country in question. Less open economies tend to experience a smaller impact of globalisation and as such, may not see large changes in terms of job creation/destruction, regardless of the state of economic development of the country.
- However, the reaches of globalisation are likely to continue to expand and the impact that it may have is likely to continue to increase in **magnitude.**
- Thus, it is increasingly important for all governments to be forward-looking in their policy making in order to continue to ride the wave of globalisation, such that it best benefits the country in sustaining high employment rates in the economy.

Level (Marks)	Knowledge, Application, Understanding and Analysis
L3 (9 – 11)	A comprehensive analysis of the relative cost and benefits of globalisation faced by developed as well as developing countries in the area of employment with good use of economic theory and real-life examples to substantiate the arguments put forth.
L2 (6 – 8)	An under-developed response which attempted to explore both sides of the argument, but lacked depth in analysis due to conceptual errors, insufficient use of economic concepts/theories, lack of real-life examples, etc.
L1 (1 – 5)	A one-sided answer which tended to be largely descriptive and /or theoretical or for a response that demonstrates little use of the relevant economic analysis to justify arguments made.
E2 (3 – 4)	For a critically-analysed judgement with the relevant economic substantiation of how globalisation has affected employment opportunities in developing as well as developed countries.
E1 (1 – 2)	For unexplained judgement, mere stating of stand or weak evaluative comments without economic justification of how globalisation has affected employment opportunities in developing as well as developed countries.

~ End ~

H

ST. ANDREW'S JUNIOR COLLEGE
PRELIMINARY EXAMINATIONS – 2013
General Certificate of Education Advanced Level
Higher 2

ECONOMICS **9732/01**

Paper 1: Case Study Questions **29 August 2013**

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 **all** questions in this section.

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.

[Turn Over

Answer all questions

Question 1 The Sweet Deal

Extract 1: Higher Chocolate Prices May Follow Africa's Cocoa Shortfall

Villagers in West Africa, which produces 70 percent of the world's cocoa, are abandoning the crop because its price is volatile, farms are too small to be economical, yields haven't risen for decades, and alternative crops such as rubber are more lucrative. "They produce half a ton per hectare of cocoa, and it has been that way forever. All major agricultural products have improved their yields by a factor of 5 to 10 in the last 50 years, and cocoa hasn't," says Barry Parkin, the head of global procurement and sustainability at Mars, whose products include M&M's, the best-selling chocolate candy in the U.S. He reckons that demand will outpace production by 1 million tons by the end of the decade.

To deal with more frequent cocoa shortages, confectioners have been shrinking the size of chocolate bars, adding more air bubbles to chocolate, or simply substituting more vegetable oil for cocoa butter. They also can pull from global stockpiles, which stood at 1.8 million metric tons as of Sept. 30, according to the International Cocoa Organization. But experts say it will be tougher to cope beyond 2020 without improved production.

Source: Bloomberg Business Week, 2013

Extract 2: Canada charges Nestlé and Mars with price-fixing

Two of the world's biggest chocolate companies, Nestlé and Mars, have been charged in Canada with price-fixing. The charges come after a five-year investigation by the Competition Bureau in Canada. The Canadian arms of Mars and Nestlé, along with the Canadian branch of Hershey and the distributor ITWAL, are alleged to have colluded to keep the price of chocolate confectionary artificially high.

John Pecman, the Bureau's Interim Commissioner, said he was determined to stamp out "anti-competitive behaviour". He added: "Price-fixing is a serious offence and today's charges demonstrate the Competition Bureau's resolve to stop cartel activity in Canada." The Competition Bureau, as an independent law enforcement agency, ensures that Canadian businesses and consumers prosper in a competitive and innovative marketplace.

Adapted from The Independent and Competition Bureau of Canada website, 2013

Extract 3: Kraft takes over Cadbury

The intervention of a government minister in Kraft's battle to buy Cadbury says much about the strength of British feeling for their favourite chocolate-maker. The American food giant's sweetened offer, too toothsome to turn down, was accepted by Cadbury's board on Tuesday January 19th.

In business terms, Kraft's acquisition may be a good deal for both companies. They have complementary markets across the globe in which to cross-sell their products: Kraft has little presence in Britain's confectionery market, where Cadbury is strong, but it has thriving businesses in mainland Europe, where Cadbury has made few inroads. Cadbury has a booming chewing-gum business, particularly in Europe and Latin America, an area where Kraft has little expertise. And between them they can make up lost ground in China, where Mars, the world's second-placed sweet-maker when the deal goes through, holds the upper hand. The deal is also set to yield cost savings of $675m a year. Greater scale of production may help the two develop in the emerging markets that probably hold the key to future fortune. That will be good news for Cadbury's workers, wherever they are based.

Yet, there are understandable fears that Kraft will be more likely than Cadbury to axe British jobs. Cadbury's unions opposed the move, worried about job cuts, but the firm's board has reasoned that the price is right to bring together the two companies to create the world's biggest confectioner.

Adapted from The Economist, 2010

Extract 4: Cadbury fights sales slump with a chocolate bar just for women

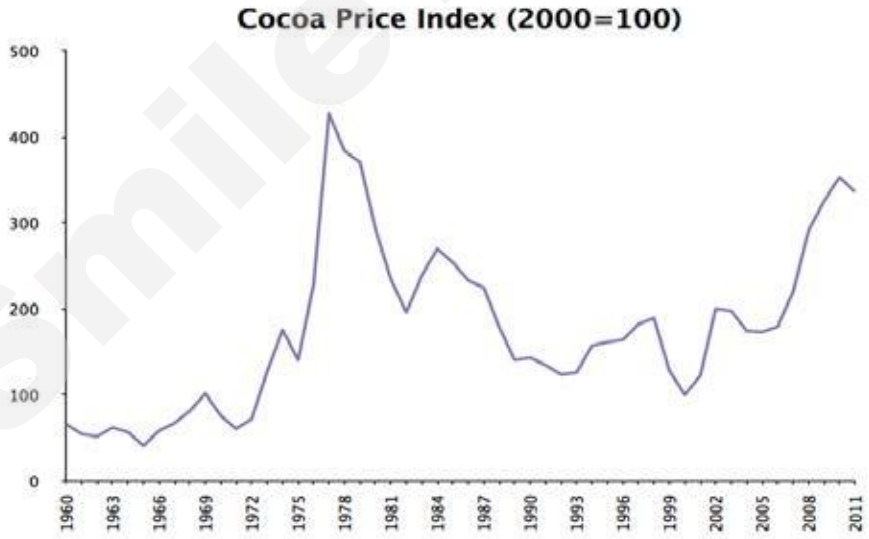
Cadbury is launching a chocolate bar aimed at women in an attempt to win back lost sales among the diet-conscious. The Crispello is the first new chocolate bar launched by the company since the 1990s and will be backed by a £7million advertising campaign.

Industry research shows that annual sales of single chocolate bars have fallen by some 6.6 per cent in a market worth around £800million a year. Evidence suggests that this slump is almost entirely caused by women buying less chocolate.

Cadbury, owned by American food company Kraft, believes the Crispello will particularly appeal to women who are worried about putting on weight. The new bar comes in at 165 calories, compared with 260 for a Mars bar. The Crispello, which is similar in taste and consistency to Ferrero Rocher chocolates, has three chocolate-covered wafer shells with a soft milk chocolate filling. It is designed with a resealable pack so it can be eaten one piece at a time.

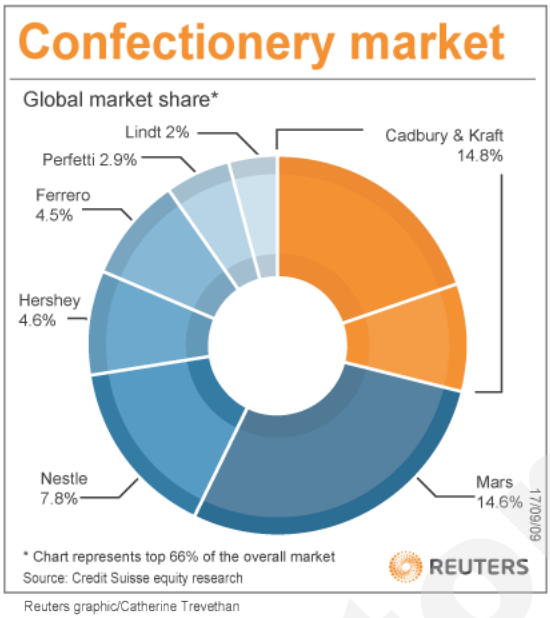
Source: Daily Mail 2012

Figure 1: Cocoa Prices (1960 – 2011)



Source: UNCTAD

Chart 1: The Global Confectionery Market



Source: Reuters, 2012

Questions

(a) **(i)** Describe the trend in the price of cocoa from 1990 onwards. [2]

(ii) With the aid of a diagram, account for the above trend. [4]

(b) **(i)** Identify and justify the type of market structure that exists in the global confectionery market. [2]

(ii) Comment on the strategies that firms are likely to adopt in this market structure. [6]

(c) Discuss the factors that Kraft is likely to consider before acquiring Cadbury. [6]

(d) With reference to the relevant case material, discuss the different views of the importance of competition in the retail confectionery market in Canada and the UK. [10]

[Total: 30]

Question 2 Eurozone Crisis – Within and Beyond

Table 1: Budget Position as a percentage of GDP

	2010	2011	2012
India	-7.3	-7.8	-8.4
Spain	-9.7	-9.4	-10.6
Germany	-4.2	-0.8	0.2
Greece	-10.8	-9.6	-6.9
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Singapore	7.7	9.5	2.0
China	-0.7	0.1	-2.0

Adapted from OECD Economic Outlook No. 92 as of December 2012

Table 2: GDP figures (US$ billions)

	2010	2011	2012
India	1,710	1,842	1,872
Spain	1,380	1,476	1,349
Germany	3,284	3,600	3,400
Greece	292	289	245
UK	2,256	2,444	2,435
Singapore	217	245	254
China	5,930	7,321	8,227

Source: Data.worldbank.org, 2012

Table 3: Human Development Index

	2010	2011	2012
India	0.547	0.551	0.554
Spain	0.884	0.885	0.885
Germany	0.916	0.919	0.920
Greece	0.866	0.862	0.860
UK	0.874	0.875	0.875
Singapore	0.892	0.894	0.895
China	0.689	0.695	0.699

Source: United Nations Human Development Reports, 2012

Extract 5: Eurozone's Second Crisis: Inflation At Six Month High

As if the recession is not bad enough, the Eurozone is hit with another crisis.

According to Eurostat, prices in the Eurozone were 2.7 per cent higher in September 2012 compared with the year before, and up from the previous month's 2.6 per cent rate. Eurostat did not provide any reasons for the increase as the figure was only a preliminary estimate, although higher energy costs are likely to blame. Economists believe that a sales tax in Spain could have also contributed to the increase.

The increase will likely prove to be another headache for European Central Bank (ECB) rate setters in the run up to their next policy meeting. The ECB has had to contend with a faltering eurozone economy and turbulent financial markets in trying to stick to its mandate of keeping inflation just below two per cent.

Six Eurozone economies[1] are in recession and more are expected to follow in coming months. The Eurozone economy has struggled recently as the region's debt crisis has knocked investor and consumer confidence and caused governments to introduce tough austerity measures.

Many believe that quantitative easing measures would help the Eurozone economy pick up. Usually, central banks try to raise the amount of lending and activity in the economy indirectly, by cutting interest rates. But when interest rates can go no lower, a central bank's only option is to pump money into the economy directly. The central bank does this is by buying assets - usually government bonds. The institutions selling those bonds will then have "new" money in their accounts, which then boosts the money supply.

A number of economists forecast another interest rate cut this year from the current record low of 0.75 per cent. "We continue to see the ECB leaving policy rates unchanged at next week's meeting – a view that is (at the margin) reinforced by this latest increase in inflation," said James Ashley, an economist at RBC Capital Markets.

Adapted from European Business News Portal, 2012

Extract 6: Living beyond our means

The UK and US's governments face a conundrum. To achieve economic recovery, aggregate demand needs to expand. But the government is introducing tough austerity measures to reduce the size of the public-sector deficit and debt; exports are being held back by the slow recovery, or even return to recession, in the Eurozone and the USA; and investment is being dampened by business pessimism. For recovery, High Street spending needs to rise.

But herein lies the dilemma. For consumer spending to rise, people need to save less and/or borrow more. But UK and US saving rates are already much lower than in many other countries. Also, household debt is much higher in the UK and USA. This has been largely the result of the ready availability of credit through credit cards and other means. The government is keen to encourage people to save more and to reduce their reliance on debt – in other words, to start paying off their credit-card and other debt. But this will hardly help recovery.

Adapted from John Sloman, Economics

Extract 7: Going beyond the Eurozone

The outcome has been as expected: Two years into the crisis, at the mid-year mark in 2012, Europe is indeed in deep denial and recession, and uncertainty looms large in both its policy spheres and decision-making ability.

In Asia, especially China has been impacted only modestly by the slowdown, and is now positioned to begin a consolidated phase of growth leadership in Asia. Singapore, Hong Kong and Taiwan – the region's most open or export-dependent economies – are likely to take the biggest economic hit and India's foreign trade account is hovering around a negative $10 billion per month. Foreign indirect investment flows do appear to have come down near term, due to the widely predicted monetary tightening performance during this period has been mixed.

Adapted from The Wall Street Journal, 2012

[1] France, Italy, Spain, Finland, Portugal, Cyprus

Extract 8: How can the world move forward?

The European Central Bank is banking on the lowering of interest rates and introduces a programme of quantitative easing.

This plan may help some states but will, of course, be terrible for Germany. Unlike the rest, Germany's economy has resurged thanks to its incredible competitiveness – Germany now runs a bigger external surplus than China. The loose monetary policy would save Italy, but the bulk of the inflation would be in Germany, where there is no spare capacity. German exports would decline and the businesses that produce them would lose out and have to sack workers.

But for Europe overall, that is ideal. Indebted countries like Greece, Italy and Spain and even the UK, need to export their way back to prosperity. For this to happen, Germany needs to start importing. The easiest way to achieve that is to make German goods more expensive – exactly what a big dose of inflation would do.

The Asian countries have their own battle at home to fight with in light of the rampant food and energy shortages. Central banks of these market countries need to determine how fast they will tighten monetary policy. In Asia, authorities have lifted interest rates to slow double-digit inflation, reduce credit growth and narrow the trade deficit. On top of that, this crisis has amplified the need for Asia countries to look beyond reliance on the Western markets for trade.

Adapted from Telegraph.co.uk, 2012

Questions

(a) **(i)** Compare the budget position as a percentage of GDP of India with that of Greece from 2010 to 2012. [2]

(ii) With reference to Table 2, how might the observation in **(a) (i)** explain the changes in national income in India and Greece? [3]

(b) Using AD-AS analysis, explain how the Eurozone can suffer from a recession and yet still face inflation as seen in Extract 5. [3]

(c) With reference to Extract 6, explain the possible factors that may hinder economic recovery in UK and US. [4]

(d) Discuss how the living standards in Asian economies could be affected by the Eurozone Crisis. [8]

(e) Assess the appropriateness of the policy options adopted by the European Central Bank and the Asian economies in solving the macroeconomic problems they are facing. [10]

[Total: 30]

~ End of paper ~

ST ANDREW'S JUNIOR COLLEGE

PRELIMINARY EXAMINATIONS – 2013
General Certificate of Education Advanced Level
Higher 2

ECONOMICS **9732/02**

Paper 2: Essay Questions **04 September 2013**

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.

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 the midst of fast pace technological advancement and economic recovery in 2010, the iPad, a revolutionary tablet computer, was launched. Featuring next generation multi-touch applications (apps), it was an instant hit with sales exceeding 20 million units.

Assess the impact of the above-mentioned recent events on relevant markets. [25]

2 Many fast food chains pride themselves in offering various menus by adopting various pricing strategies. For example, KFC offers discounts for students while McDonald's offers 6-piece nuggets at $4.40 and 9-piece nuggets at $5.70.

(a) Explain the factors that are necessary for price discrimination to occur. [10]

(b) Discuss whether price discrimination in the fast food industry is desirable. [15]

3 **(a)** Explain how the price mechanism allocates resources efficiently. [8]

(b) A government imposes taxes on a variety of goods and services which include alcohol, fuel and some imported goods.

Discuss whether taxation would lead to a more efficient allocation of resources. [17]

Section B

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

4 A government can employ a variety of macroeconomic policies to improve on the country's economic performance. These interventions may result in trade-offs between different macroeconomic policy objectives.

Discuss whether consideration of such trade-offs is relevant to a government in its macroeconomic policy decisions. [25]

5 Supported by strong employment creation, the unemployment rate declined to a 14-year low in 2011. This is due to strong hiring from the services sector, for example integrated resorts and construction sectors which are boosted by public projects and the economy recovering from the 2009 recession.

Source: Singapore Ministry of Manpower, 31 Jan 2012

(a) Explain possible reasons that led to the decline in unemployment rate in Singapore. [10]

(b) To what extent would standard of living in Singapore be improved as a result of the government's intervention to reduce unemployment? [15]

6 **(a)** Explain the factors that facilitate the move towards globalisation. [10]

(b) Discuss the extent to which globalisation might lower the general price level in an economy. [15]

H

ST. ANDREW'S JUNIOR COLLEGE
PRELIMINARY EXAMINATIONS – 2013
General Certificate of Education Advanced Level
Higher 2

Suggested Answers and Mark Schemes

ECONOMICS 9732/01

Paper 1: Case Study Questions **29 August 2013**

2 hours 15 minutes

Additional Materials: Answer Paper

READ THESE INSTRUCTIONS FIRST

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

This document consists of **7** printed pages.

[Turn Over

Answer all questions

Question 1 The Sweet Deal

Extract 1: Higher Chocolate Prices May Follow Africa's Cocoa Shortfall

Villagers in West Africa, which produces 70 percent of the world's cocoa, are abandoning the crop because its price is volatile, farms are too small to be economical, yields haven't risen for decades, and alternative crops such as rubber are more lucrative. "They produce half a ton per hectare of cocoa, and it has been that way forever. All major agricultural products have improved their yields by a factor of 5 to 10 in the last 50 years, and cocoa hasn't," says Barry Parkin, the head of global procurement and sustainability at Mars, whose products include M&M's, the best-selling chocolate candy in the U.S. He reckons that demand will outpace production by 1 million tons by the end of the decade.

To deal with more frequent cocoa shortages, confectioners have been shrinking the size of chocolate bars, adding more air bubbles to chocolate, or simply substituting more vegetable oil for cocoa butter. They also can pull from global stockpiles, which stood at 1.8 million metric tons as of Sept. 30, according to the International Cocoa Organization. But experts say it will be tougher to cope beyond 2020 without improved production.

Source: Bloomberg Business Week, 2013

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Source: Daily Mail 2012

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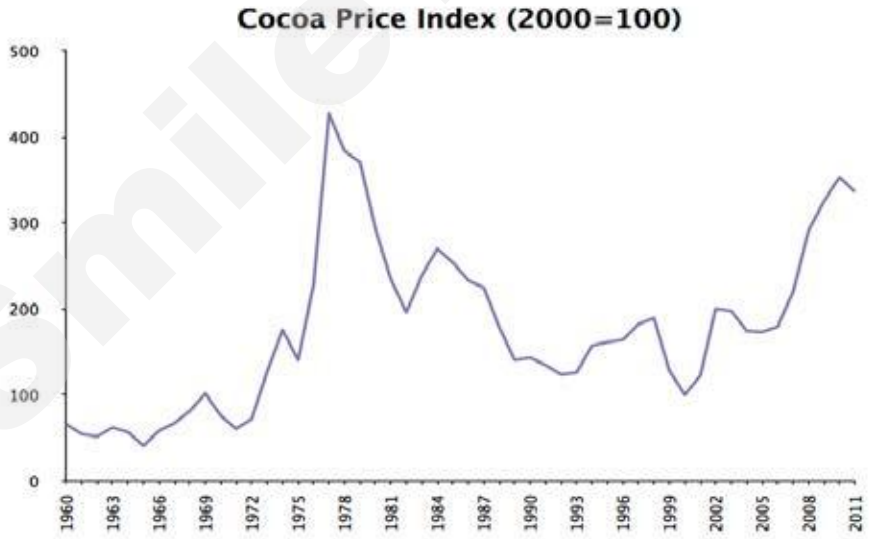

Source: UNCTAD

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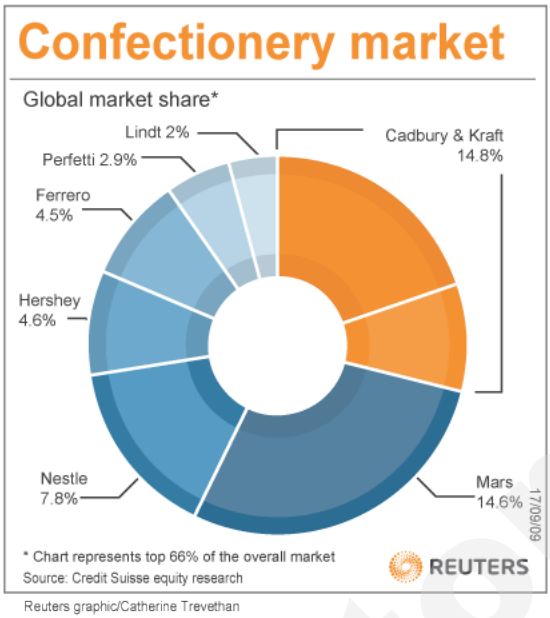
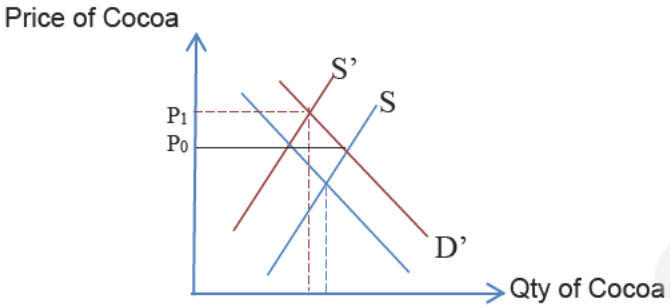


Source: Reuters, 2012

Questions

(a)	**(i)**	Describe the trend in the price of cocoa from 1990 onwards. · Rising trend [1m] · Refinement [1m] for any of the following: o A significant fall *from 1998 to 2000* o Greater volatility between 1990 to 2005 compared to post 2005 which registered a consistent rise in price till 2010 *N.B: No mark to be awarded for "slight fall in 2010" or "a rapid rise from 2006 – 2011". Reason for the latter: not insightful – rise is consistent with the trend in terms of direction of change and rapid doesn't suggest any comparison.*	[2]
	(ii)	With the aid of a diagram, account for the above trend. Supply-side factors: o Fall/stagnant in supply (extract 1 para1) § Too small to be economical -- no economies of scale § Yields hasn't increased for decades § Other crops are more lucrative è ***competitive supply*** – shift to cultivation of other crops Demand-side factors: o Rise in Demand – "demand for chocolate candy will outpace production by 1 million tons by the end of the decade" (*probable factor to be suggested*) – derived demand – input in the production of chocolate candy – ***derived demand*** à increase in demand for cocoa § Possibly an increase in income à increase in demand or any plausible reason e.g increase in global population	[4]

		Increase in demand plus decrease in SS ➔ Shortage at the original price P_0 (*shortage must be mentioned with reference to a specific price e.g P_0*)→ exerts upward pressure on price → P increase  • *Correctly and fully labelled diagram and brief explanation of adjustment: 1m* • *2 well-explained factors: 3m* • *If **only** demand-side **or** supply-side factor: mark to a max of **2m (out of 3m)** even if these are well-explained* *N.B. There must be evidence of conceptual application such as competitive supply &/or derived demand – mere quotation / lifting from the extract is not acceptable and doesn't warrant full credit.*	
(b)	**(i)**	Identify and justify the type of market structure that exists in the global confectionery market. • Oligopoly [1] • Apply concentration ratio to show understanding [1]	[2]

	(ii)	Comment on the strategies that firms are likely to adopt in this market structure.
		
		Objective of Strategies: increasing market share in the global market, increase market power by creating barriers to entry.
		
		Recognise that price competition is not the preferred strategy because it can possibly lead to a price war which will ultimately affect the firms' profit level adversely. These in such an oligopolistic market, strategies like the following can be adopted.
		• Non-price competition Strategies
		  ○ Different kinds of candies – e.g Cadbury inroad into Europe (Extract 3)
		  ○ Innovation & Research – e.g chocolate bar for women (Extract 4)
		  ○ Advertisement – backed by £7 million (Extract 4)
		• ***"Comment"*** ⇒ Sustainability? Limitations? Feasibility of the strategies?
		
		In order to sustain its market power, firms have to constantly strategise to maintain their market share because of the high mutual
			[6]

inter-dependence / rival consciousness.

Note:
*Merger or collusion alone is **NOT** acceptable. The merged entity must still take action i.e work out strategies to achieve whatever goal they have. Hence a development on the manner in which they compete is necessary.*
*Thus, **NO mark is awarded** for a mere mention or suggestion of merger / collusion without further elaboration of the strategy nor comments about the strategy.*

Level (Marks)	Descriptors
L1 (1 – 2)	· Smattering of points · No reference to case materials · No evaluative comments
L2 (3 – 4)	· Application of economic framework – driver behind the strategies) · 2 well-explained and well-considered strategies – strategies are not linked to goal or features of oligopoly · No "comments"
L2 (5 – 6)	· 2 well-explained and well-considered strategies · Strategies are linked to goal and features of oligopolistic market. · Evaluative comments are made w.r.t the suggested strategies.

(c) Discuss the factors that Kraft is likely to consider before acquiring Cadbury. [6]

Aim: increasing sales to gain market power / share and enhance long-run profitability.

<u>Hindering Factors ("Cost" / Disadvantages)</u>

· Existing Legislation

  o The existence / strength of Competition Act

· Strength of Labour Union in Britain – can increase the costs of laying off workers when the firms merged / increased cost if merged entity is forced to retain workers made redundant by the merger through threat of industrial strike.

· Monetary cost to be paid to Cadbury's booard – is it a fair value for the benefits that Kraft is going to enjoy from the merger? Does Kraft have the finances to pay for the acquisition?

· Lack of management capability to deal with international co-ordination and appreciate differences in cross-border work culture and labour relations – can lead to diseconomies of scale as management get more complex co-ordination gets more difficult à increase in average cost which can lead to loss of

competiveness.

Favourable considerations (Benefits / Advantages)

- Presence of other dominant firms in other markets – Mars holds an upper hand in China (Extract 3) – acquisition will give Kraft more heft to compete more effectively against the other dominant producers – increased total market share (14.8%) against Mars' 14.6% the global market (Chart 1) Þ effect on total revenue and hence profitability

- 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 à higher advertising cost can be more than offset by higher joint output / consumer base.
- Cadbury's existing presence in places where Kraft has little / no presence – ease market penetration e.g Britain, Europe and Latin America (Extract 3) Þ effect on Total Revenue and hence Long Run profitability.
- Weigh cost savings against expected revenue to ensure some profitability.

Level (Marks)	Descriptors
L1 (1 – 2)	· Smattering of relevant points · No reference to case materials
L2 (3 – 4)	· Considers costs and benefits / hindering and favourable factors · Offers at least 2 well-considered and distinctly different points (e.g NOT economies of scale (benefit) and diseconomies of scale (cost) as this is too narrow in scope) · **Max 3m** for the following cases: o Narrow scope of analysis (e.g economies of scale (benefit) and diseconomies of scale (cost) o If only either hindering or favourable conditions but analysis is supported by evidence and is well-developed o Answer is mainly descriptive
L3 (5 – 6)	· Balance: Considers costs and benefits – hindering and favourable factors · 2 well-considered factors that are clearly linked to goal(s) of acquisition · Evaluative comments are offered after weighing the costs and benefits. · *If points are not linked to objective(s) of firms –max 5 marks*

(d)		With reference to the relevant case material, discuss the different views of the importance of competition in the retail confectionery market in Canada and the UK.	[10]

Given the pursuit of self-interest, in so far as the firms are concerned, they will not welcome competition. This is one of the reasons firms try to set up / strengthen the barriers to entry to prevent new firms from entering the market to protect their market share, market power and profit level.

Thus, to answer the question, candidates can view the Importance of competition from the perspective of

1) Canadian Government
2) UK Government

Canadian Government's perspective: Competition is important
Evidence: Extract 2 – Competition Bureau of Canada's intervention to prevent price-fixing by Mars, Nestle and Hersheys

- ***Allocative efficiency***
  - Reduce Market dominance –pricing, choice (explain how it affects consumers) – reduced monopolistic power à reduced price-setting ability of confectioners à increased consumer surplus => reduce the appropriation of consumer surplus by confectioner through higher price by reducing the quanitity => less is available to the consumers.
- ***Dynamic efficiency***
  - Product and process innovation – how competition drives firms to stay ahead in terms of product differentiation and new products and lower average cost. Competition à greater incentive for product innovation to target different market segments e.g Crispello à more choices for consumers à consumer welfare enhanced

UK Government's Perspective: *Competition is important*
Evidence: "intervention in Kraft's battle to buy Cadbury"

- Worried about job cuts by Kraft Protection Extract 3:
- Loss of national pride
- *Resource allocation: if no longer efficiency or competitive in producing chocolate, should move resources into production of other goods in which it has comparative advantage.*

<u>Not important</u>
- *Allow acquisition – L/R – job creation if merged firm can compete successfully and effectively in the global market à market expansion – higher demand for their product à higher demand fro workers UK.*

Conclusion &/or evaluation:
In this case, less competition through acquisition is important because of the benefits of size in the global confectionery market. However, in so doing, competition amongst the existing firms is even more intense because there are now fewer firms competing for the common consumer base.

Level Marks	Descriptor

			L1 1m – 3m	· Failed to grasp the requirement of the question - 2 different views from 2 perspectives based on objectives · Theoretical explanation without reference to countries (max: 3m)		
			L2 4m – 6m	· Recognise the views of the government in the 2 countries o Competition is important o Competition is not important o Able to apply economic concepts to analyze the views of the government in the 2 countries · Able to surface evidence to support.		
			L3 7m – 8m	· Fulfil the requirement of the question (L2 descriptor plus…) o importance of competition or otherwise – perspectives, within country and global market · Shows clarity in putting forth a case.		
			E1 (1m)	· An evaluation statement without reasoned justification (see Script B)		
			E2 (2m)	· Able to take a stand and justify (see Script C, Script E)		

[Total: 30]

Question 2 Eurozone Crisis – Within and Beyond

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Germany	3,284	3,600	3,400
Greece	292	289	245
UK	2,256	2,444	2,435
Singapore	217	245	254
China	5,930	7,321	8,227

Source: Data.worldbank.org, 2012

Table 3: Human Development Index

	2010	2011	2012
India	0.547	0.551	0.554
Spain	0.884	0.885	0.885
Germany	0.916	0.919	0.920
Greece	0.866	0.862	0.860
UK	0.874	0.875	0.875
Singapore	0.892	0.894	0.895
China	0.689	0.695	0.699

Source: United Nations Human Development Reports, 2012

Extract 5: Eurozone's Second Crisis: Inflation At Six Month High

As if the recession is not bad enough, the Eurozone is hit with another crisis.

According to Eurostat, prices in the Eurozone were 2.7 per cent higher in September 2012 compared with the year before, and up from the previous month's 2.6 per cent rate. Eurostat did not provide any reasons for the increase as the figure was only a preliminary estimate, although higher energy costs are likely to blame. Economists believe that a sales tax in Spain could have also contributed to the increase.

The increase will likely prove to be another headache for European Central Bank (ECB) rate setters in the run up to their next policy meeting. The ECB has had to contend with a faltering eurozone economy and turbulent financial markets in trying to stick to its mandate of keeping inflation just below two per cent.

Six Eurozone economies[1] are in recession and more are expected to follow in coming months. The Eurozone economy has struggled recently as the region's debt crisis has knocked investor and consumer confidence and caused governments to introduce tough austerity measures.

Many believe that quantitative easing measures would help the Eurozone economy pick up. Usually, central banks try to raise the amount of lending and activity in the economy indirectly, by cutting interest rates. But when interest rates can go no lower, a central bank's only option is to pump money into the economy directly. The central bank does this is by buying assets - usually government bonds. The institutions selling those bonds will then have "new" money in their accounts, which then boosts the money supply.

A number of economists forecast another interest rate cut this year from the current record low of 0.75 per cent. "We continue to see the ECB leaving policy rates unchanged at next week's meeting – a view that is (at the margin) reinforced by this latest increase in inflation," said James Ashley, an economist at RBC Capital Markets.

Adapted from European Business News Portal, 2012

Extract 6: Living beyond our means

The UK and US's governments face a conundrum. To achieve economic recovery, aggregate demand needs to expand. But the government is introducing tough austerity measures to reduce the size of the public-sector deficit and debt; exports are being held back by the slow recovery, or even return to recession, in the Eurozone and the USA; and investment is being dampened by business pessimism. For recovery, High Street spending needs to rise.

But herein lies the dilemma. For consumer spending to rise, people need to save less and/or borrow more. But UK and US saving rates are already much lower than in many other countries. Also, household debt is much higher in the UK and USA. This has been largely the result of the ready availability of credit through credit cards and other means. The government is keen to encourage people to save more and to reduce their reliance on debt – in other words, to start paying off their credit-card and other debt. But this will hardly help recovery.

Adapted from John Sloman, Economics

Extract 7: Going beyond the Eurozone

The outcome has been as expected: Two years into the crisis, at the mid-year mark in 2012, Europe is indeed in deep denial and recession, and uncertainty looms large in both its policy spheres and decision-making ability.

In Asia, especially China has been impacted only modestly by the slowdown, and is now positioned to begin a consolidated phase of growth leadership in Asia. Singapore, Hong Kong and Taiwan – the region's most open or export-dependent economies – are likely to take the biggest economic hit and India's foreign trade account is hovering around a negative $10 billion per month. Foreign indirect investment flows do appear to have come down near term, due to the widely predicted monetary tightening performance during this period has been mixed.

Adapted from The Wall Street Journal, 2012

[1] France, Italy, Spain, Finland, Portugal, Cyprus

Extract 8: How can the world move forward?

The European Central Bank is banking on the lowering of interest rates and introduces a programme of quantitative easing.

This plan may help some states but will, of course, be terrible for Germany. Unlike the rest, Germany's economy has resurged thanks to its incredible competitiveness – Germany now runs a bigger external surplus than China. The loose monetary policy would save Italy, but the bulk of the inflation would be in Germany, where there is no spare capacity. German exports would decline and the businesses that produce them would lose out and have to sack workers.

But for Europe overall, that is ideal. Indebted countries like Greece, Italy and Spain and even the UK, need to export their way back to prosperity. For this to happen, Germany needs to start importing. The easiest way to achieve that is to make German goods more expensive – exactly what a big dose of inflation would do.

The Asian countries have their own battle at home to fight with in light of the rampant food and energy shortages. Central banks of these market countries need to determine how fast they will tighten monetary policy. In Asia, authorities have lifted interest rates to slow double-digit inflation, reduce credit growth and narrow the trade deficit. On top of that, this crisis has amplified the need for Asia countries to look beyond reliance on the Western markets for trade.

Adapted from Telegraph.co.uk, 2012

Questions

(a) (i) **Compare the budget position as a percentage of GDP of India with that of Greece from 2010 to 2012.** **[2]**

	2010	2011	2012
India	-7.3	-7.8	-8.4
Greece	-10.8	-9.6	-6.9

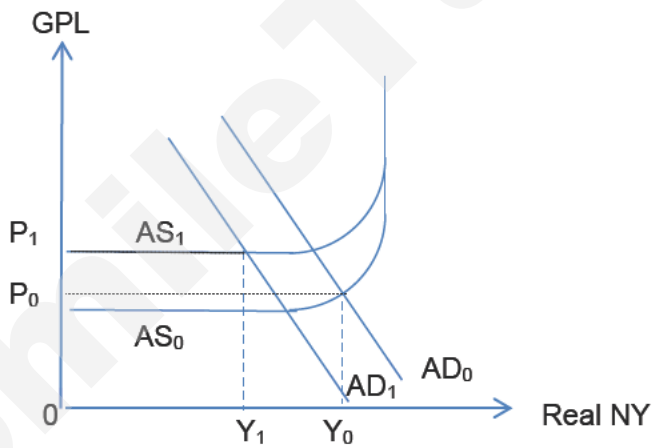
Similarity: from 2010 – 2012, both India and Greece suffered from a budget deficit. [1]

Difference: Greece had a falling budget deficit as a percentage of GDP while India suffered from a rising budget deficit. [1]

(ii) **With reference to Table 2, how might the observation in (a) (i) explain the changes in national income in India and Greece?** **[3]**

Pointing out the changes in NY in both India & Greece [1]
India enjoyed a rise in NY while Greece suffered from a fall in NY.

*Linking the observation in **(a) (i)** to the change in NY for both India and Greece:*
Greece's falling budget deficit could possibly imply that the government may have been adopting a contractionary fiscal policy or austerity measures. The fall in government expenditure and/or a rise in tax revenue would thus result in a fall in NY, hence accounting for the falling NY. [1]

		On the other hand, India's rising budget deficit could possibly imply that Indian government may have been adopting an expansionary fiscal policy, to raise government expenditure or reduce taxes, hence accounting for the rising NY. [1]	
(b)	**Using AD-AS analysis, explain how the Eurozone can suffer from a recession and yet still face inflation as seen in Extract 5.** Inflation – GPL is still rising. ↓C and ↓I in Eurozone due to pessimism → ↓AD It is also coupled with ↑ in higher energy costs → ↑COP → ↓ in SRAS **OR** Sales tax (e.g. on intermediate goods and services) will also ↑ COP → cause a further ↓ in SRAS. Students need to point out both changes in AD & AS to show resultant rise in price level, hence Eurozone can suffer from a recession and still face the problem of inflation. DD reason, SS reason & reflecting rise in price level and fall in output on diagram. If no diagram is drawn, clear explanation on why there is a rise in price and fall in output is expected.  [**Note**: AD/AS diagram is not required.]	[3]
(c)	**With reference to Extract 6, explain the possible factors that may hinder economic recovery in UK and US.** Any 2 factors. 2m to be awarded for clear explanation for each factor. In order to achieve economic recovery, AD needs to ↑ (as stated in Extract 6) • However tough austerity measures to reduce budget deficit by ↓G and/or ↑T → would instead result in a fall in AD instead, hence hindering economic recovery. • High existing household debts – C cannot increase significantly especially when the UK and the US rely on domestic markets to stimulate growth. Income earned could have been used to repay debts, hence hindering economic recovery.	[4]

	· Business pessimism à expectation of rate of return is low à MEI shifts to the left à at every interest rate, firms choose to ¯ I, minimal rise in AD, assuming ceteris paribus, hence hinder economic recovery.	
(d)	**Discuss how the living standards in Asian economies could be affected by the Eurozone Crisis.** SOL – students need to explain impact on material and non-material SOL & positive and negative impact on **ASIAN** countries and making reference to CS evidence/data. **<u>Impact may be negative:</u>** Explain why the impact may be negative: Eurozone Crisis could have caused a fall in material SOL in Asian countries. <u>Students should make reference to data in Extract 7:</u> Eurozone Crisis: ® countries like Spain, Greece, UK all suffered negative growth rates. Fall in GDP would reduce countries' ability to purchase from Asian countries. ® Countries like India, Hong Kong, Taiwan and Singapore will suffer a fall in X revenue, fall in AD, assuming ceteris paribus, fall in countries' NY. ® fall in ability of residents in Asian countries to purchase more goods and services ® fall in material SOL. **<u>Impact may not be negative:</u>** Not all countries are negatively hit by the fall in national income (for material SOL). Some countries like China, as Extract 7 points out, may only have been modestly affected by the Eurozone Crisis. This could be due to China's ability to rely on her domestic sources of growth instead of exports to EU. Hence the fall in NY may only be very small and temporal. Overall material SOL may not have fallen. **Non-material SOL** Based on HDI statistics (which measure life expectancy, education and income indices) ® the Asian countries reflect rising figures. [table below] Explain how life expectancy and education indicates the non-material SOL of Asian countries. **<u>Evaluation:</u>** Make a stand about overall impact on SOL. Overall SOL is still rising for both material & non-material. Evidence from case: Table 2 shows that Asian countries may not be as negatively affected as explained, as NY figures are still rising & HDI statistics also reflect a rise. Hence how negative the impact of the Eurozone on Asia's countries' SOL depends on how reliant the country may be on exports to Eurozone and if the	**[8]**

	2010	2011	2012
India	0.547	0.551	0.554
Singapore	0.892	0.894	0.895
China	0.689	0.695	0.699

country has alternative sources of growth it can turn to (diversification of other trading partners).

OR

Point out what other pieces of data would be needed in order to more holistically deduce about SOL in Asian countries.

Level (Marks)	Knowledge, Application, Understanding and Analysis
L3 (5 – 6)	For a well-elaborated answer using information from the case study. Answer elaborates on how Eurozone Crisis may have a positive and negative impact on both material and non-material SOL for Asian countries.
L2 (3 – 4)	For one-sided answer (positive or negative, material or non-material SOL) on how the Eurozone Crisis could have an impact on material and non-material SOL. Undeveloped answer with gaps in economic analysis.
L1 (1 – 2)	Serious conceptual errors evident or answer is irrelevant and does not answer the question. Answer is a smattering of points without any obvious or strong attempt in referring to the extracts.
E1 (1 – 2)	Making a judgement – the severity of the impact depends on how close the trading relationship is between Eurozone countries and specific Asian countries.

(e) **Assess the appropriateness of the policy options adopted by the European Central Bank and the Asian economies in solving the macroeconomic problems they are facing.** **[10]**

<u>Macroeconomic Problems identified</u>:

(1) Persistent budget deficit though it is decreasing.
(2) Recession
(3) Inflation (Eurozone – cost-push inflation; Asia – demand-pull inflation & cost-push inflation)
(4) Current Account deficit (in Greece, Italy and Spain)

Students can bring in any 2 PROBLEMS & 2 policies (for ECB & Asia) to address. Students can combine similar problems between the countries e.g.: Inflation & recession

<u>European Central Bank</u>

Policies adopted: ¯ i/r + quantitative easing

è ↓i/r à COB↓ à ↑C & ↑I à ↑AD à ↑NY à achieving actual economic growth

è Quantitative easing [Extract 5] à ↑Ms à ↑C & ↑I à ↑AD à ↑NY

<u>Policy has been appropriate given the current situation</u>:

è Explain how the policy can work to solve the problem, hence the policy is appropriate given the current situation.

è Evidence from case: 'The loose monetary policy would save Italy' [Extract 8], hence justifying that the policy has been appropriate since it is anticipated to effectively solve the problem in Europe.

è Moreover, when Germany started importing as given in Extract 8 à assuming Germany imported more goods and services from other states in Eurozone à X revenue rose in Greece, Spain, Italy, assuming ceteris paribus à ↑AD à ↑NY

è Alternatively, fall in interest rates à capital flight of hot money à depreciation of currency à exports become more competitive in foreign markets and imports become less competitive domestically à ↑AD à ↑NY

<u>Policy may not be appropriate</u>:

è If more money in circulation but no ↑in output à might result in worsening of inflation and Europe is suffering from cost-push inflation.

è Conflict of policies – Quantitative easing supposedly to - NY but due to business pessimism, I will not rise sufficiently to solve the problem (I is interest inelastic). Policy is inappropriate to solve the problem.

è Eurozone faced different economic problems as evidence from Extract 8 when Germany experienced BOP surplus while other states of Europe needed to "export its way back to success" à however ECB adopted the same policy, which may not have been appropriate to all states.

<u>Asian Economies</u>

Problems Identified: Cost-push inflation due to food and energy shortages (Extract 8) + trade deficit due to their trading partners in the West suffering (Extract 7).

Policies adopted:

1) Tighten monetary policy (↓Ms or ↓credit)
2) Trade policies

è ↓Ms à - i/r à ↑COB à ↓C & ↓I à ↓AD à ↓DD-pull inflation
è ↓credit growth à ↓M / ↓C à ↓trade deficit /↓C à ↓DD-pull inflation
è Signing of more FTAs beyond Western markets à tap on the growth of other countries & reduce reliant on Western markets for growth & diversify risk.

<u>Policy has been appropriate given the current situation</u>:

è *In Asia, the economy has been impacted only modestly by the slowdown, and is now positioned to begin a consolidated phase of growth leadership in Asia [Extract 7].* Reiterates that policy has been appropriate and effective to address the problems, as the economy has only been impacted modestly.

<u>Policy may not be appropriate</u>:

è 'Singapore, Hong Kong and Taiwan – the region's most open or export-dependent economies – are likely to take the biggest economic hit and India's foreign trade account is hovering around a negative $10 billion per month' [Extract 7]. Despite the use of policies, given the severity of the impact and how reliant these countries are on exports, the policy may not solve the problem.

è 'Foreign indirect investment flows do appear to have come down near term, due to the widely predicted monetary tightening performance during this period has been mixed' [Extract 7]. Due to pessimism/poor investor

confidence, policy will not be appropriate to revive the situation in Asia.

Evaluation:
Whether the policies adopted by ECB and Asian government are appropriate depend on the root cause of the problems as well as the country implementing it. Due to the limitations of the Eurozone needing to adopt a common policy, they are unable to tackle different economic problems faced by the respective countries. Blanket measures might not be suitable or could possibly even worsen the problem of another country.

In Asia, if rampant food and energy prices are mainly due to imported cost-push inflation, the policies of tightening money supply would serve to reduce demand-pull inflation but limited in its appropriateness in tackling the root cause of the problem. In that case, an appreciation of her exchange rate might be more appropriate in reducing the inflation instead.

Level (Marks)	Knowledge, Application, Understanding and Analysis
L3 (7 – 8)	Thorough analysis using appropriate economic analysis (AD/AS framework) is evident throughout the answer. Clear scoping of answer to identify the problems in the countries before moving on to examine the policies. Clear link between problems and policies. Well-elaborated answer on how the policies suggested by ECB and the Asian economies could be adopted or are relevant in solving the identified problems. (1 problem & 1 measure to be discussed and analysed – for ECB & Asian govt)
L2 (4 – 6)	Attempt to respond to the question is evident though not consistently done. Undeveloped answer and lack economic analysis (AD/AS framework) on how the policies suggested by ECB and the Asian economies could be adopted or are relevant in solving the identified problems.
L1 (1 – 3)	Smattering of points. For an answer that shows very weak understanding of the policies and how these policies can affect the problems mentioned. No reference to CSQ evidence.
E2 (2)	Evaluation is thorough and based on economic analysis. Ability to recognise that there is a need to consider the cause of the problem and country's unique characteristics before deducing its appropriateness.
E1 (1)	For unexplained evaluative comments. Mere listing of stand / weak evaluative comments.

[Total: 30]

~ End of paper ~

Suggested Answers and Mark Schemes

H

ST ANDREW'S JUNIOR COLLEGE
PRELIMINARY EXAMINATIONS – 2013
General Certificate of Education Advanced Level
Higher 2

ECONOMICS 9732/02

Paper 2: Essay Questions **04 September 2013**

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.

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 In the midst of fast pace technological advancement and economic recovery in 2010, the iPad, a revolutionary tablet computer, was launched. Featuring next generation multi-touch applications (apps), it was an instant hit with sales exceeding 20 million units.

Assess the impact of the above-mentioned recent events on relevant markets. [25]

2 Many fast food chains pride themselves in offering various menus by adopting various pricing strategies. For example, KFC offers discounts for students while McDonald's offers 6-piece nuggets at $4.40 and 9-piece nuggets at $5.70.

(a) Explain the factors that are necessary for price discrimination to occur. [10]

(b) Discuss whether price discrimination in the fast food industry is desirable. [15]

3 **(a)** Explain how the price mechanism allocates resources efficiently. [8]

(b) A government imposes taxes on a variety of goods and services which include alcohol, fuel and some imported goods.

Discuss whether taxation would lead to a more efficient allocation of resources. [17]

Section B

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

4 A government can employ a variety of macroeconomic policies to improve on the country's economic performance. These interventions may result in trade-offs between different macroeconomic policy objectives.

Discuss whether consideration of such trade-offs is relevant to a government in its macroeconomic policy decisions. [25]

5 Supported by strong employment creation, the unemployment rate declined to a 14-year low in 2011. This is due to strong hiring from the services sector, for example integrated resorts and construction sectors which are boosted by public projects and the economy recovering from the 2009 recession.

Source: Singapore Ministry of Manpower, 31 Jan 2012

(a) Explain possible reasons that led to the decline in unemployment rate in Singapore. [10]

(b) To what extent would standard of living in Singapore be improved as a result of the government's intervention to reduce unemployment? [15]

6 **(a)** Explain the factors that facilitate the move towards globalisation. [10]

(b) Discuss the extent to which globalisation might lower the general price level in an economy. [15]

Suggested Answers:

Section A:

Essay Question 1

In the midst of fast pace technological advancement and economic recovery in 2010, the iPad, a revolutionary tablet computer, was launched. Featuring next generation multi-touch applications (apps), it was an instant hit with sales exceeding 20 million units.

Assess the impact of the above-mentioned recent events on relevant markets. [25]

Introduction:

- When analysing changes in market conditions for any particular market, students need to bring in either: sales revenue or consumer expenditure (price x quantity)

- Identify the various product markets and the possible submarkets that will be assessed. 'Relevant' markets will be those mentioned in the question directly as well as inter-related markets. Some examples can include:

  1. iPad
  2. iPad's substitutes
     - other tablet computers
     - desktops
     - laptops
  3. iPad's substitutes in terms of functions
     - digital camera
     - MP 4 players
  4. iPad's complements
     - Internet providers
     - apps
     - accessories

Diagrams to illustrate the various effects on sales revenue / consumer expenditure arising from changes in DD and SS conditions should be included <u>and well-explained</u>

- Explain briefly how the recent events mentioned in the preamble may affect demand or supply in relevant markets.

  Fast pace technological advancement would reduce unit cost of production in many sectors and thus would probably cause supply to rise in many markets.

  Economic recovery implies rising income levels which can affect demand of different markets differently depending on income elasticity of demand.

  The launch of iPad would affect demand for its substitutes such as other tablet computers such as Samsung and demand for its complements such as applications.

Body:

Thesis: Markets involved are affected positively (i.e. sales revenue increase)

- **Explain the positive impact of the recent events on iPad market.**
- Technological advancements
  - Reduced costs of production of iPad components (advanced equipment, greater labour productivity)

- Reduced costs of shipping iPad

These would see an increase in supply of iPad; SS curve shifts to the right

- Ceteris paribus, holding demand constant and at the same time assuming demand for iPad is price elastic (luxury product, a relatively larger proportion of income spent, availability of many substitutes)
- A fall in equilibrium price leads to a more than proportionate increase in quantity. This will cause the **fall in revenue from the fall in price to be less than the gain in revenue from the increase in quantity transacted**
- Effect is a likely gain in total revenue for the iPad market

· Increase in demand for iPad due to consumers' strong desire to possess an iPad since it is a revolutionary product with unique features (change in tastes and preferences); Rising income levels could have led to a rise in demand for iPad as it is considered to be a luxury good (YED>1) especially in developing and emerging economies; DD curve shifts to the right

- Holding supply constant and given that supply is price elastic (manufactured product, existing stock of unfinished or semi-finished products, short production period)
- A rise in equilibrium price will lead to more than proportionate increase in quantity.
- Effect is rise in total revenue for iPad market

· **Overall effect: sales revenue increase**

Although both DD and SS rise, it is likely that **SS rises more than DD increases** (although the craze for new technology products among a large population of IT savy consumers would mean that demand rise significantly, the rise in SS is likely to outweigh since there is likely much more significant fall in cost of production as there had been very significant advancement in technology) A large rise in demand and even larger rise in supply given the fast technological advancement would result in a slight fall in equilibrium price and more significant rise in equilibrium quantity as given in the preamble as exceeding 20 million units. Therefore, total revenue would have risen greatly for the firm producing iPad.

Well-explained diagram to illustrate the net effect after the relative shifts of DD and SS curves.

· **Explain the impact of the recent events on markets of iPad's complements.**

Internet Service Providers:

§ Technological advancements (cheaper information and communications technology)

- Reduced costs of production for the internet providers (cheaper broadband / information and communications technology). Leads to increase in SS of internet services; SS curve shifts to the right
- Ceteris paribus, holding DD constant and at the same time demand for internet services is price inelastic (necessity in increasingly technology reliant economies, lack of available close substitutes)
- There will be a fall in equilibrium price and a less than proportionate increase in quantity for internet services
- Total revenue for the internet providers fall since the **fall in revenue due to the fall in price is more than the gain in revenue from the increase in quantity transacted**.

OR

- Assuming demand for paid internet services is price elastic (since there are many free Wi-Fi places iPad users can utilise)

- o Total revenue for the internet provider is expected to rise since the fall in revenue from the lowered price is lower than the gain in revenue from the increase in quantity.

§ Increase in demand is expected for internet services due to consumers wanting to have seamless and uninterrupted use of iPad (change in tastes and preferences)

§ Using cross-elasticity of demand: Internet services, as a complement to iPad, may see an increase in demand as consumers change their existing plans or purchase additional internet plans so that they are able to make better use of iPad , especially given the fall in price of iPad.

§ Using income elasticity of demand: Given the rise in income, there would be an increase in demand for internet services as it is considered as necessity (0<Yed<1) in developed countries and a luxury (Yed>1) in developing countries.
- o Holding supply constant and assuming supply is price elastic (once provided, it is easy to increase the amount of internet services to other subscribers)
- o Effect is a rise in total revenue for internet service providers

§ **Overall effect: sales revenue expected to increase in the internet services market (SS rise and DD rises)**

Apps Providers

§ Technological advancements
- o Reduced costs of production (faster and more efficient production processes, greater ease of producing apps). Leads to increase in SS of apps; SS curve shifts to the right
- o Assuming no change in demand conditions and demand for apps is price inelastic (necessity, a lower proportion of income spent)
- o There will be a fall in price of apps and a less than proportionate rise in quantity sold.
- o App producers will experience a fall in total revenue since **the fall in revenue from the fall in price is more than the gain in revenue from the increase in quantity sold**

§ Increase in demand may be experienced due to consumers wanting to consume more apps as they become more attached to iPad (change in tastes and preferences)

§ Using cross-elasticity of demand: iPad is popular partly due to wide array of applications that can be downloaded and enjoyed at a greater convenience. Apps are strong complements (Xed< 0) of iPad. Hence an increase in demand for iPad can also cause an increase in demand for apps.

§ Using income-elasticity of demand: Given the increase in income, there would be an increase in demand for apps as apps in general are considered to be necessity.

- o Holding supply constant and assuming supply to be price elastic (easier to increase the production of many apps)
- o Effect is a rise in total revenue for apps producers

§ **Overall effect: sales revenue increase (SS rises slower than DD increases)**

OR

iPad accessories

§ Technological advancement
- o Reduced costs of production (cheaper to produce covers and headphones specific to iPad dimensions). Leads to increase in SS of accessories, SS curve shifts to the right
- o Holding demand for accessories constant and assuming its demand is price elastic (many close substitutes)
- o There will be a fall in equilibrium price and a more than proportionate increase in quantity.
- o Total revenue is expected to increase as **the loss in revenue from the fall in price is less than the gain in revenue from the increase in quantity**

§ Increase in demand for accessories can be expected as there may be a rise in consumers wanting to embellish the look of their iPad (change in tastes and preferences).
§ Using cross-elasticity of demand: Accessories are weak *complements with* iPad, hence an increase in demand for iPad can also cause a less significant increase in demand for accessories.
§ Using income-elasticity of demand: Given the increase in income, there would be an increase in demand for accessories as accessories in general are considered to be necessity. DD rises; DD curve shifts to the right.
  o Holding supply constant and given a price elastic supply (short production period for manufacturing these accessories)
  o Effect is a rise in total revenue for producers of iPad accessories.

§ **Overall effect: sales revenue may or may not increase (depends on the rise in SS relative to the increase in DD)**

Anti-Thesis: Markets involved are affected negatively (i.e. sales revenue decrease)

· **Explain the negative impact of the recent events on markets of iPad's substitutes.**

Tablet computers(other brands)
§ Technological advancements
  o Reduced costs of production (more efficient production processes)
  o Reduced shipping cost
  o These would see an increase in supply of tablet computers; SS curve shifts to the right
  o Ceteris paribus, holding demand constant and assuming demand for tablet computer is price elastic (greater availability of close substitutes)
  o Net effect is a gain in total revenue for tablet computer producers as the **fall in revenue from the fall in price to be less than the gain in revenue from the increase in quantity transacted**
§ Using cross-elasticity of demand: demand for other tablet computers (Xed highly positive) fall as consumers switch to relatively cheaper iPad with more unique features.
§ Using income-elasticity of demand: Given the rise in income, there should be an increase in demand for tablet computers such as Samsung Galaxy Tab as it is considered to be a luxury good in developing and a necessity in developed countries.
Overall however, the demand for other tablet computers likely to fall as the preamble suggested the dominance of iPad over other rivals.
  o Holding supply constant and supply is price elastic (short production period)
§ Net effect is fall in total revenue earned from other tablet computers

§ **Overall effect: sales revenue fall (SS rise and DD falls)**
  o Likely that **DD falls more than SS increases** (there is a more significant fall in taste and preference compared to fall in cost of production since research and development cost is the most significant component of cost for such technology based firms and given such stiff competition, they are likely to face higher research and development costs in order to grab more market share from iPad's producers.

OR
Desktop Computers
§ Technological advancements in IT
  o Reduced costs of production (more efficient production and assembly processes)
  o Market for desktops would experience a large increase in supply (costs are significantly reduced)

- Hence, supply of desktop computers increases. Holding demand constant, the equilibrium price of desktop computers would fall

§ Using cross-elasticity of demand: desktop is a *substitute* with iPad
  - Hence with a fall in price of iPad, demand for desktop will fall
  - The extent of the fall in demand and hence impact on TR will depend on value of its XED.
  - Analyze when they are close substitutes with each other (because they both serve the same functions) or not close substitutes.(For home desktop, there could be more significant fall in demand compared to business models which may be necessary and more convenient compared to iPad for production processes.)

§ Using income elasticity of demand: Given the rise in income, there should be an increase in demand for desktop computers as it is considered to be a necessity in developing and a fall in demand in developed countries as it is considered as inferior good.

§ **However**, demand for desktops as a whole probably decreases as the effect of Xed likely outweighs that of Yed.

§ **Overall effect:** Effect on sales revenue would be a fall as the fall in DD likely to outweigh the rise in SS as there would be more significant fall in taste and preference as consumers prefer iPad more compared to fall in cost of production which has already been experienced prior to 2010.

Substitutes in terms of functions:
Digital cameras

§ Technological advancements
  - Lower cost of production due to more efficient production processes. SS rises
  - Holding demand constant and demand is price elastic (availability of close substitutes, a greater proportion of income spent). There would a fall in price of digital cameras and more significant rise in quantity sold.

§ Using cross-elasticity of demand: digital camera is a *substitute to camera function of iPad*
  - As a result, because iPad is much cheaper and more convenient, demand for digital cameras will fall.

§ Using income elasticity of demand: A rise in income would cause a rise in demand for digital camera as it is considered as a luxury good in developing countries and a necessity in developed countries.

§ Overall, demand for digital cameras are likely to fall in both developing and developed countries as the effect of the craze for iPad probably outweighs the effect of rising income on demand for digital cameras.

§ **Overall effect:** The fall in demand likely to outweigh the rise in supply as there is more significant fall in taste and preference compared to fall in cost of production as the technological advancement are probably in IT and computer field and not so significant in digital camera production. Total revenue for digital camera producers most probably would fall.

Note: Other possibilities that can be considered by students: cam-corders, MP4 players, play stations.

Evaluation:

§ Whether iPad continues its success in earning higher revenue depends on the speed at which it is updated and the extent it cannot be duplicated by other tablet computer producers. If competitors such as Samsung can innovate and come up with better quality models with unique or more user-

friendly features, then other tablet computers can become a closer substitute, hence the sale revenue increase may slow down for iPad.

§ Similarly, there is likely to be great competition in apps market, those more strongly favoured by consumers such as popular games or entertainment apps may net greater increase in total revenue compared to those apps less favoured such as more education-oriented.

§ The fall in price of many different versions of iPad accessories other than those sold by Apple result in more than proportionate increase in quantity demanded of these accessories and hence much greater increase in total revenue of other accessories producers compared to Apple.

Conclusion:

§ Producers of iPad's complements are more likely to gain a rise in total revenue while producers of iPad's substitutes are more likely to face a fall in total revenue.

Mark scheme		
Level	**Descriptors**	**Marks**
L3	A clear and coherent assessment of the impact on three markets with well-explained diagrams. A clear and thorough application of relevant concepts with consistent application to the given context.	18-21
	Impact on three markets is well-explained with diagrams. Some minor errors are present and there may not be a coherent presentation at times.	15-17
L2	Impact on two markets is well-explained with diagrams. Some minor errors are present and there may not be a coherent presentation at times. Or impact on three markets addressed but lack thorough development.	12-14
	Some attempt at assessment of impact on relevant markets but there are gaps in analysis. No diagrams or diagrams without explanations. Only impact on two markets is adequately explained.	10-11
L1	A weak application of demand and supply and elasticity concepts. Many errors are present. Relevant markets may not be identified and the answers are largely rehearsed with weak application to the context.	6-9
	Smattering of some valid points such as definitions but little attempt in application of demand and supply and elasticity concepts in assessing the impact on relevant markets.	1-5
Evaluation		
E2	Explained judgment of the extent of change in total revenue in different relevant markets.	3-4
E1	Judgment of the extent of change in total revenue in different relevant markets.	1-2

<u>Essay Question 2</u>

Many fast food chains pride themselves in offering various menus by adopting various pricing strategies. For example, KFC offers discounts for students while McDonald's offers 6-piece nuggets at $4.40 and 9-piece nuggets at $5.70.

(a) Explain the factors that are necessary for price discrimination to occur. [10]

(b) Discuss whether price discrimination in the fast food industry is desirable. [15]

Suggested Answers

(a) Explain the factors that are necessary for price discrimination to occur. [10]

Approach

Students should recognise that the factors are basically the conditions of price discrimination.

To score level 2, students are required to explain how the conditions would enable a firm to engage in different types of price discrimination.

To score level 3, students are required to support the above explanation with some real-life examples relating to the fast food industry.

Introduction

· **Define price discrimination and state its purpose.**

Price discrimination is the practice of selling a given product at different prices to different consumers and these price differences *are not caused by cost differences*.

Firms that engage in price discrimination would enable them to earn higher revenue from any given level of sales to increase profits.

Body

In order for firms to engage in price discrimination, the firms would need to ensure that the following factors/conditions are met:

1) ***The firm must possess market power to set its price.***

2) ***The markets must be separate. Consumers in the low priced market must not be able to resell the product in the high-priced market.***

3) ***Elasticity of demand must differ in each market. The firm will charge the higher price in the market where demand is less elastic and thus less sensitive to a price rise.***

Factor #1: Market Power to set prices

Explain how market power could lead to one firm's ability to engage in price discrimination

· **Explain why firms could enjoy market power**.

In the context fast food industry, McDonald's, KFC and Burger King, which are oligopolistic firms, could engage in price discrimination. This is because these large fast food joints hold large market share due to the presence of strong barriers to entry.

- Types of possible BTE in fast food industry are:
  - Strong branding established
  - Secret recipe

These BTEs enable these few large firms to dominate the fast food industry and enjoy strong market power.

· **Explain how market power could enable firms to set prices**.

Due to strong market power, the demand curve of each fast food restaurant is less price elastic. This is because the fast food restaurants provide set meals that are differentiated i.e. the set meals sold by each restaurant are not perfect substitutes.

As a result, each restaurant could control the price by manipulating the supply. For example, each restaurant could increase the price of its set meals by restricting the supply. These fast food restaurants could hike up the price as the quantity demanded would only fall less than proportionately.

- **Explain how the price setting ability would cause firms to engage in price discrimination**.

Hence, with such price setting ability, the restaurant could decide to price discriminate by setting high price for some customers while setting low price for other customers for the same set meal.

Factor #2: Market must be separate so that no reselling is possible
Explain how market separation which leads to non-resale of products could enable price discrimination to take place.

- **Explain why and how firms could separate their markets**.

Separation of markets
- Sub-Market 1 à Set meals are sold at a lower price to students
- Sub-Market 2 à Set meals are sold at a higher price to adults (i.e. non-students)

In the context fast food industry, McDonald's, KFC and Burger King, could separate their markets in such a way that the adults in sub-market 2 could not buy a set meal at a discount that is given to the students in sub-market 1. This separation could be done by enforcing the students to show their student identity cards as they purchase their set meals.

Furthermore, these students who bought their set meals at a lower price could not resell the same set meal to the adults who have to pay a higher price.

As a result, there is no resale market for fast food set meals

Hence, the ability to separate the market that prevents resale of products enables the firms to price discriminate.

Factor #3: *Elasticity of demand must differ in each market.*
Explain how differing demand elasticities could enable a firm to set a higher price for market where demand is price inelastic and a lower price for a market where demand is price elastic.

- **Explain why and how elasticity of demand could differ.**

In the context of fast food industry, the demand for fast food by working adults is price inelastic while the demand for fast food by students is price elastic.

This is because the adults spend a smaller proportion of their incomes on fast food meals while the students spend a larger proportion of their meagre allowances from their parents on the same set meals.

As a result, students would be more sensitive to price changes. When there is an increase in price, the quantity demanded for fast food by students will fall more than proportionately, whereas, the quantity demanded by working adults will fall less than proportionately.

§ **Explain how the different demand elasticities would result in different prices for the same kind of product.**

Due to the firm's incentive to make more profits, fast food restaurants would charge a higher price for working adults whereas a lower price for students.

This is because by engaging in third-degree price discrimination, fast food restaurants could earn greater revenue in both markets than by charging a single price across the two markets.

By setting a higher price for working adults, since total revenue (TR) = Price (P) x Quantity (Q), the less than proportionate fall in quantity as compared to the price increase would cause an increase in TR. On the other hand, by setting a lower price for students, there would be an increase in TR as well.

Assuming total cost does not increase more than the increase in TR, price discrimination would enable the firm to earn more profits

· **Explain how the ability to distinguish consumers according to differing elasticities enables price discrimination to take place.**

Therefore, if the nature of the industry or profile of the consumers allows the firms to differentiate their consumers according to their demand elasticities, the firms are able to engage in third-degree price discrimination in order to earn greater profits.

Mark Scheme

Level	Knowledge, Understanding, Application, Analysis
L3 (7 – 10)	Able to present a thorough explanation of factors that are well developed. Able to relate the factors to the fast food industry.
L2 (5 – 6)	Able to explain the factors. However, the development of the answers. Some application of examples to illuminate the points. Answers lack breadth and depth. Strong theoretical explanation of all factors without application of examples (i.e. Strong explanation of 3 factors without examples or examples not relating to fast food industry - max 6 m)
L1 (1 – 4)	For an answer that is mostly irrelevant and a few valid points that are not supported by economic analysis.

(b) Discuss whether price discrimination in the fast food industry is desirable. [15]

Introduction

Briefly state that price discrimination (PD) could bring about benefits and costs to the producers, consumers as well as the society of the fast food industry.

State that the benefits and costs to the producers, consumers and society could be measured by:

1) Producers' profits
2) Consumer surplus

3) Society's DWL

Body
Thesis

- **With the aid of a diagram, explain how fast food restaurants could earn more profits as a result of 2nd degree OR 3rd degree PD.**

- **With the same diagram, explain how consumer surplus will increase as a result of 2nd degree OR 3rd degree PD**

Example of 2nd degree PD
Referring to the preamble: ***McDonald's offers 6-piece nuggets at $4.40 and 9-piece nuggets at $5.70***

With the aid of a diagram, explain what second-degree PD is
According to the Diagram 1 below, McDonald's will charge a higher price, P_1 for a box of 6-piece nuggets whereas, a lower price P_2 for a box of 9-piece nuggets.

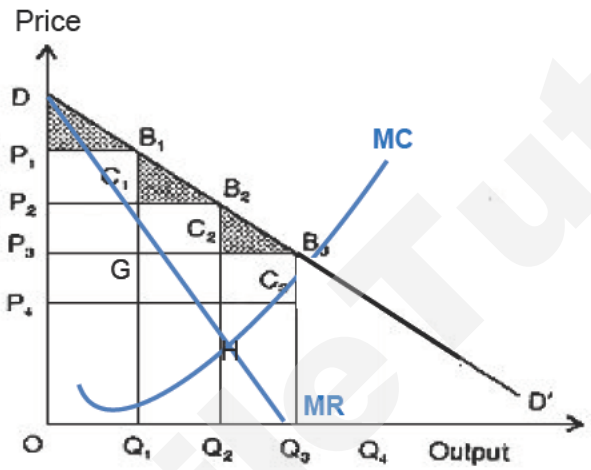


Diagram 1:
Second Degree Price Discrimination

Such pricing strategy is known as second-degree PD or block pricing. This second-degree PD takes place when the fast food restaurant identifies two or more different groups with different demand elasticities based on the quantities purchased.

Hence, based on the differences in the preferences to consume varying quantities of nuggets, fast food restaurants would charge consumers a higher price for consuming a limited/smaller quantity as their price elasticity of demand is lower. For consumers who are willing to consume larger quantity, the restaurants would charge a lower price as their price elasticity of demand is higher *(Along the demand curve, the PED value increases as quantity increases).*

With the aid of a diagram, explain why second-degree PD could increase profits and increase consumer surplus

2nd Degree PD: Benefits to Firms →Profits increases
If fast food restaurants engage in second degree PD, they could earn higher profits as compared to the situation when they charge a single price for the nuggets.

With reference to the Diagram 1, second degree price discrimination allows the McDonald's to earn a sum of total revenue equivalent to ($0P_1B_1Q_1 + Q_1C_1B_2Q_2$)

However, if the McDonald's were to just sell a fixed-quantity of nuggets i.e. only 9 piece nuggets at one single price (i.e. P_2) at the profit-maximising output, McDonald's could only earn a sum of total revenue equivalent to $0P_2B_2Q_2$.

In comparison, by engaging in second-degree PD would enable a firm to earn more revenue by the amount $P_1B_1C_1P_2$.

Hence, assuming total cost does not increase more than the total revenue, price discrimination would benefit firms in terms of profits.

2nd Degree PD: Benefits to Consumers à Consumer surplus increases

Furthermore, second-degree PD could benefit some consumers.

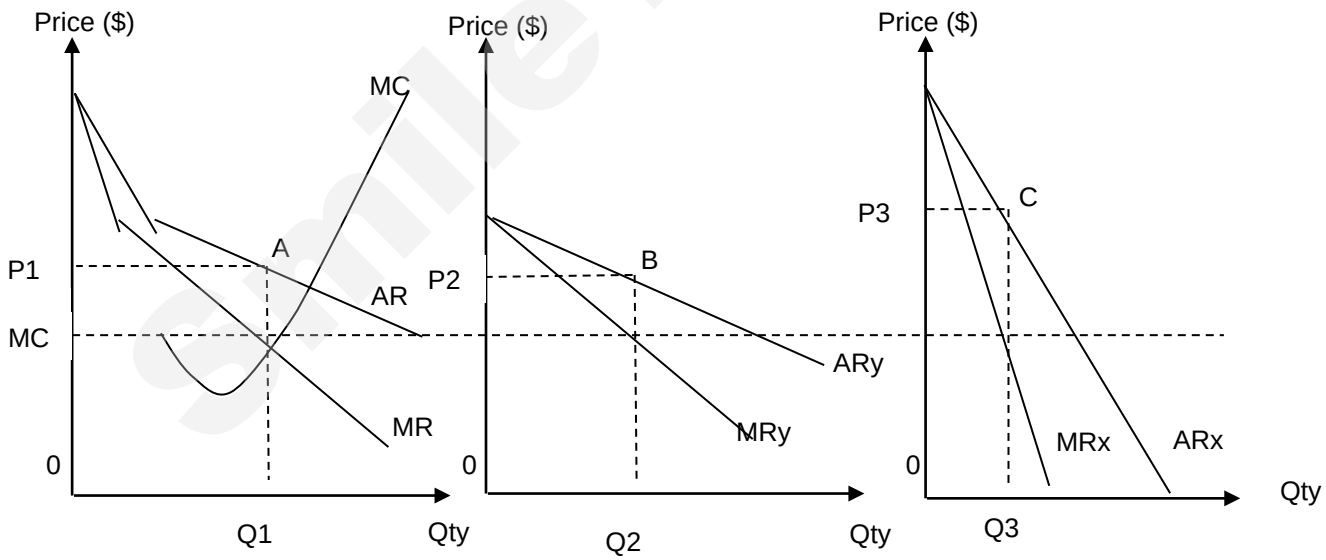
This is because consumers who prefer to consume larger quantity (i.e 20-piece nuggets) or lower quantity (6-piece nuggets) could now be able to do so. Due to greater choices that enable more consumer wants to be satisfied, consumer welfare and hence consumer surplus increases.

OR

Example of 3rd degree PD

Referring to the preamble: ***KFC offers discounts for students while charge regular price for working adults***

With the aid of a diagram, explain what third-degree PD is



(a) KFC Market as a whole (b) Students market (c) Working Adults

Diagram 2: Third Degree Price Discrimination

According to the Diagram 2, KFC will charge a higher price, P1, for working adults while a lower price P2 for students for their set meal.

This is because the demand for the KFC's set meal by working adults is price inelastic while the demand for the same set meal by students is price elastic.

This is because working adults will only spend a smaller proportion of their incomes on fast food meals as compared to students who will be spending a larger proportion of their meagre allowances from their parents.

As a result, students would be more sensitive to price changes. When there is an increase in price, the quantity demanded for the set meal from KFC by students will fall more than proportionately, whereas, the quantity demanded by working adults will fall less than proportionately.

Due to the firm's incentive to make more profits, KFC would charge a higher price for working adults whereas a lower price for students.

With the aid of a diagram, explain why third-degree PD could increase profits and increase consumer surplus

3rd Degree PD: Benefits to Firms à Profits increases

This is because by engaging in third-degree price discrimination, KFC could earn greater revenue in both markets than by charging a single price (i.e. P2) across the two markets.

By setting a higher price for working adults, since Total revenue (TR) = Price (P) x Quantity (Q), the less than proportionate fall in quantity as compared to price increase would cause an increase in TR. On the other hand, by setting a lower price for students, since TR=P x Q, the more than proportionate increase in quantity as compared to price decrease would cause an increase in TR.

With reference to Diagram 2, the KFC, which engage in third degree PD, would earn greater total revenue of (P1AQ10 + P2BQ20) as compared to a firm which charge single price of P3 (Total revenue is only P3CQ30)

Hence, assuming total cost does not increase more than the total revenue, price discrimination would benefit firms in terms of profits.

3rd Degree PD: Benefits to Consumers à Consumer surplus increases

Furthermore, third-degree PD could benefit some consumers.

This is because lower-income consumers who previously could not afford to buy the set meal from KFC could now satisfy their wants. As a result, these lower-income enjoy an increase in their welfare i.e. consumer surplus increases for this group of consumers.

Anti-Thesis

POSSIBLE POINT #1 à Overconsumption of Fast Food (i.e. a demerit good)

- As fast food restaurants are able to cater to more consumers wants and needs, there might be over-consumption of fast food due to imperfect information of the amount of calories intake that they need as well as the amount of calories that the fast food meals provide.
  - With the aid of MSB-MSC diagram, explain how the over-consumption of fast ok would lead to DWL (i.e**. disadvantage to society**)

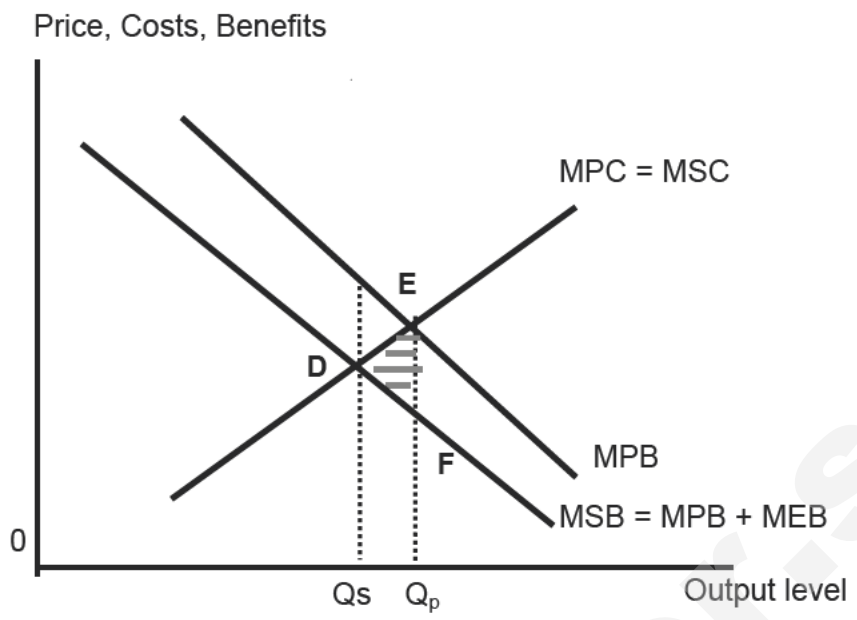


Diagram 3: Overconsumption of Fast Food – Demerit Good

As the consumers might be ignorant about the harmful effects (i.e. obesity, high cholesterol) of over-consuming fast food, they might over-value the benefits of consuming fast food.

As a result, MPB>MSB. As consumers aim to maximise their own satisfaction, they would decide to consume at 0Qp level of output where MPB=MPC. However, the society deems that the consumers should consume at the socially optimum level of output 0Qs where MSB=MSC. Since 0Qp>0Qs, there is overconsumption and hence over-allocation of resources to consume fast food. Due to inefficient allocation of resources, DWL of area DEF arises. The resources could have been allocated some other industry to improve the society welfare.

Hence, price discrimination is not necessary desirable if it leads to overconsumption of fast-food which is a demerit good.

POSSIBLE POINT #2 → Price War and Wastage of Resources

Fast food restaurants are oligopolistic firms and hence they are mutually interdependent. When one fast food restaurant were to compete in terms of price or non-pricing strategies, other fast food restaurants would follow suit. This is because they fear that by staying status quo could cause them to lose their market share.

Take for example, if McDonald's were to compete in terms of price by giving discounts to students or during lunch hours, other fast-food restaurants would also do likewise. This might lead to price wars which might hurt smaller firms' profits. In the long run, if the revenue earned does not cover the variable cost of engaging in price competition, the small firms might end up leaving the fast food industry.

If these small firms were to leave the industry, the consumers would no longer enjoy greater variety of fast food → consumer surplus decreases.

Furthermore, fast food restaurants might also compete in terms of non-price competition. Very often, restaurants that engage in price discrimination might give out discount coupons or pamphlets that advertise their promotions. However, such aggressive market strategies might resulting in wastage of resources → over-allocation of resources → DWL

Hence, price discrimination is not necessary desirable if there is excessive/unhealthy competition in the industry as it might lead to wastage of resources as well as market dominance of bigger firms, depriving consumer welfare.

POSSIBLE POINT #3 à Reduction of consumer surplus for some Consumers

Under third-degree price discrimination, some consumers (i.e. the working adults) who used to consume fast food at a lower price might end up paying a higher price. For such consumers, they might lose out in terms of consumer surplus.

POSSIBLE POINT #4 à Increase in inequity

Under second-degree price discrimination, the fast food joints earn greater revenue and hence profits by charging a higher price for consumers who choose to consume a lower quantity of nuggets (i.e. 6 nuggets). By doing so, the producers gain at the expense of some consumers. As these fast food joints are large firms which could earn supernormal profits even if there is no price discrimination, the practice of price discrimination could worsen income inequity if they set higher price for lower-income consumers who just want to consumer lower quantity of nuggets.

Conclusion

Whether PD is desirable depends

1) on the development of the country,
2) the level of competition in the industry.

If the development of country is high-developed nations like USA where due to busy lifestyles à prefer convenience food like fast food à most likely obesity problem will surface à over consumption of fast food leading to over-allocation of resources à DWL à PD might not be desirable lin these country in terms of society welfare.

If the level of competition in the industry is very high especially in a saturated market, it might be possible that PD is not desirable as it is highly possible that there might be excessive/unhealthy competition in the fast food industry. This might lead lead to wastage of resources as well as market dominance of bigger firms, depriving consumer welfare.

Level	Knowledge, Understanding, Application, Analysis
L3 (9 – 11)	For an answer that presents a thorough knowledge of facts and theory with an excellent ability to describe and explain in a precise manner. Clear evidence of the ability to present a logical and reasoned analysis with respect to the question. Excellent explanation and links to the positive (i.e. thesis) and negative impacts (anti-thesis) on consumer surplus, firms' profits and DWL with attempt to apply to the context of fast food industry
L2 (6 – 8)	For an accurate but undeveloped explanation of the answers. A generic and theoretical discussion without application to the context of fast food industry (thesis and anti-thesis present). Undeveloped explanation and undeveloped links to consumer surplus, DWL and profits
L1 (1 – 5)	For an answer that is mostly irrelevant and contains only a few valid points, made incidentally in an irrelevant context. Regurgitation of content without reference to any context.

	Response consists little more than definitions and disjointed sentences which, when pieced together, makes little sense. Thrust of the question has not been been properly grasped. No economic analysis applied at all (no link to consumer surplus, profits, DWL at all!) One-sided (i.e. thesis only) à award max 5

Evaluation	
E2 (3 – 4)	For sound evaluation with insights; supported with a strong conclusion.
E1 (1 – 2)	Judgement is incidental, no/little substantiation is given and/or not insightful.

Essay Question 3

(a) Explain how the price mechanism allocates resources efficiently [8]

Introduction:
Definition of price mechanism
- means by which consumers and firms interact to determine the allocation of scarce resources between competing uses.
- serves as a signal to firms on relative scarcities, to ration goods that are relatively scarce to those who are willing and able to pay for it
- State that in a free market i.e without government intervention, price is determined by the demand for and the supply of a good.
- Show price determination in a market using demand and supply framework => No shortages and no surpluses at equilibrium level of price and quantity
- State Assumptions
  - perfect competition (perfect factor mobility, perfect knowledge)
  - no externalities

Explain the meaning of efficient allocation of resources:
- no one can be made better off without someone being made worse off => society's welfare is maximized => any re-allocation of resources will result in welfare loss.
- Show and explain maximization of sum of consumer and producer surplus in the diagram
- Explain condition for attainment of efficient allocation of resources: P=MC where consumer valuation of the good is exactly equal to the cost of producing the last unit =>No welfare loss to society

Explain adjustment to new equilibrium price and quantity when there is a shortage caused by an increase in demand or fall in supply (state one possible factor that can cause this) i.e
- Explain how a shortage at the original price (identified in the diagram and noted in the answer) is cleared to bring about a new equilibrium – some consumers are willing to pay a higher price to acquire the good à upward pressure on price à as the price rises, quantity demanded falls. At the same time, the higher price induces producers to increase the quantity supplied. This process continues until the shortage is eliminated and a new equilibrium is established.
- Relate the above change to change in allocation of resources by comparing the new and original equilibrium quantity => efficient allocation of resources.
- Show and explain welfare loss to society at any output level below the new

equilibrium quantity => inefficient allocation of resources. As such, through the working of the price mechanism to establish a new equilibrium price and quantity, the welfare loss is eliminated and the sum of producer and consumer surplus are maximized.

Explain adjustment to new equilibrium price and quantity when there is a surplus caused by an increase in demand or fall in supply and state one possible factor that can cause this.

(Note: on explaining this 2nd scenario, it is good to show breadth of knowledge by shifting the supply curve if a shift in demand is already shown in scenario 1 above. Whether shortage / surplus is scenario 1 or 2 doesn't really matter. What matters is that the explanation for the adjustment in the 1st scenario must be more detailed than the 2nd)

- Explain how the surplus (identified in the answer) is cleared as resources are diverted away from the production of the good:
  - When demand for a good falls or supply increases, a surplus occurs at the original price à suppliers reduce price to clear the excess stocks à downward pressure on price.
  - As price falls, consumers are willing and able to buy more à quantity demanded rises. At the same time, producers are willing and able to supply less at a lower prices. This process continues until the surplus is eliminated => new equilibrium is established.
  - Compare new and original equilibrium to show re-allocation of resources à welfare maximization
- Reiterate that at any output level above the new equilibrium quantity, there is inefficient allocation of resources and welfare loss to society. => the price mechanism ensures that the welfare loss is eliminated => sum of producer and consumer surplus are maximized.

Conclusion:
Emphasize that the price mechanism in a free market (no government intervention) is only able to achieve efficient allocation of resources when there are no externalities in the production or consumption of a good and there is perfect knowledge as market imperfections can cause market failure, perfect mobility of resources which eases the reallocation of resources from one market to another dictated by the price mechanism, no market dominance brought about by barriers to entry which allows dominant firms to restrict output in order to raise the price above the MC thereby leading to welfare loss and inefficient allocation of resources.

Mark Scheme:

Knowledge, Application, Understanding, Analysis		
Level	**Descriptors**	**Mark**
L3	Clear explanation of how surpluses and shortages are cleared with clear reference to how resources are allocated efficiently	**7-8**
L2	Shortages or surpluses are explained with some attempt to address efficient allocation of resources.	**4-6**
L1	Answers do not show an understanding of how the price mechanism works to allocates resources efficiently. More of explaining the change in equilibrium price and/or quantity with errors in explanation	**1-3**

(b) A government imposes taxes on a variety of goods and services which include alcohol, fuel and some imported goods.

Discuss whether taxation would lead to a more efficient allocation of resources. [17]

Introduction:

- § Define taxes -
- § State taxation is usually a government measure to correct market failure – usually imposed on certain goods or services whose consumption or production tend to result in markets failure i.e failure to allocate resources at socially optimal level.
- § However, in some cases it may result in a more inefficient allocation of resources.

Thesis:

Explain alcohol as a demerit good which generates positive externalities of consumption while fuel generates negative externality in consumption or production.

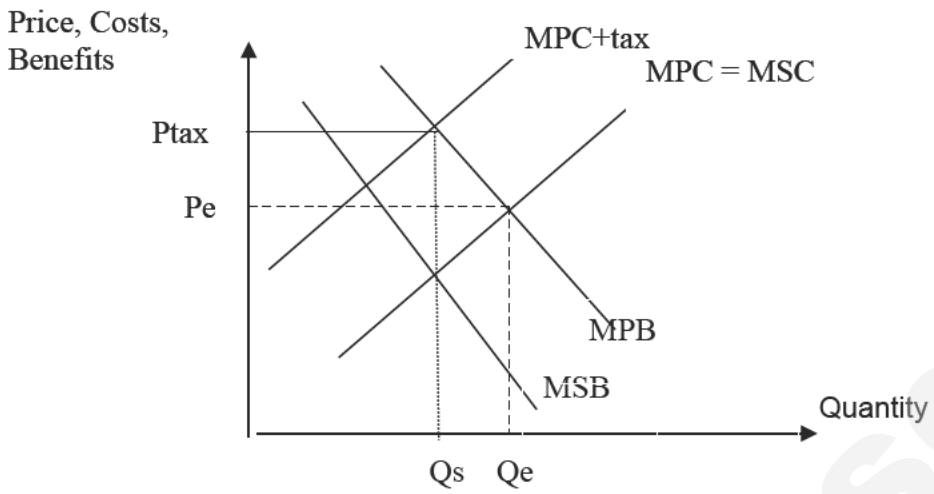
- Alcohol is considered to be a demerit good as the governments considers the consumption of alcohol to be socially undesirable and that left to market forces, alcohol would be over-consumed.

  Source of market failure in the case of the market for alcohol
  - o Alcohol tends to generate negative externality in consumption since there are significant external costs to third parties such as drunk-driving, loss of labour productivity and higher crime rates which cause a divergence between marginal private benefit (MPB) and marginal social benefit (MSB).
  - o Since private individuals are motivated by self-interest, they only equate their marginal private benefits (MPB) and marginal private costs (MPC) in their decisions and ignore the marginal external cost (MEC).
  - o As a result, they tend to consume alcohol beyond the socially optimal level where marginal social cost (MSC) equals marginal social benefit (MSB) à welfare loss to society.

- Consumption of fuel also tends to generate negative externality in production as there are significant external costs to third parties due to environmental degradation arising from carbon emission and its related costs such as disastrous climate change. Fuel too would be over-consumed under free market conditions resulting in welfare loss to society.

  (Note : Students could also explain the case for fuel as one where negative externalities of production may arise)

- § Explain with diagrams how taxes (students may refer to the tax as a Pigouvian Tax, a tax that is imposed to deal with negative externalities) reduce over-consumption of alcohol or fuel and hence achieve more efficient allocation of resources.



The government could levy a tax that increases private marginal cost (MPC) to MPC+tax.

For the tax to eliminate the welfare/deadweight loss, the level of tax should be equal to the level of marginal external cost (MEC) at the socially efficient level of consumption of alcohol or fuel, Qs, raising price from Pe to Ptax. This increase in price eliminates over-consumption (QsQe) and thus over-allocation of resources. As a result, the socially optimal amount of resources into the consumption of alcohol is achieved.

- Limitations of taxation
  - MEC at the socially efficient level of production of alcohol is not easy to determine thus the government may not impose the correct level of tax to completely eliminate the deadweight loss.
  - Furthermore, as alcohol consumption is addictive, it may mean the demand for alcohol is relatively price inelastic. This may limit the effectiveness of the policy in reducing the consumption as consumers will pay the tax to continue drinking alcohol.
    - ⇨ As such, though the imposition of the tax may bring about a more efficient allocation of resources by moving the free market output closer to the social optimum, , it may not eliminate the deadweight loss totally.
  - Explain the appropriateness of taxation in addressing the source of market failure such as imperfect information associated with alcohol and fuel. One of the main reasons for over-consumption of alcohol is that consumers lack accurate information of the actual benefits of alcohol consumption; hence they overestimate marginal private benefit. Their perceived marginal private benefit exceeds the actual marginal private benefit since consistent alcohol consumption results in higher healthcare and social costs while fuel consumption may lead to less favourable environment which could adversely affect quality of life.
    - ⇨ For this source of market failure, taxes may not be effective in bringing about a more efficient allocation of resources as they do not target the underlying root cause of imperfect information.

§ Explain how taxes on imports (tariffs) may lead to a more efficient allocation of resources

In cases where a foreign country sells its products at very low prices, in some case below MC, to drive out domestic producers from the market, the imposition of a tax on these goods is likely to increase the price of the good, bringing it closer to MC, resulting in a more efficient allocation of resources.

Limitations
If is often difficult to determine if a country is actually dumping or is able to sell at lower prices because of the lower unit costs enjoyed by the country due to comparative advantage in the production of the good. If the country imposes an import duty on another country that is actually the more efficient producer of the good, this is likely to worsen efficiency in the allocation of resources.

Anti-thesis:

§ Explain how in the case of tariffs on imported goods may lead to less efficient allocation of resources. (Diagram is optional)

Tariffs are imposed on certain imported goods which are usually close substitutes of locally produced goods. Since, the countries from which the goods are imported tend to enjoy comparative advantage in the production as they have a relatively lower opportunity cost due to more favourable and abundant factor endowment, this imposition of tariffs distort price signals and bring about less efficient allocation of resources as resources are diverted away from more efficient foreign producers to less efficient domestic producers.

Thus when tariffs are imposed, there is under-consumption of such goods as tariffs increase price of imported goods and reduce quantity demanded of such imports compared to free trade situation.

At the same time, there is also over-production of local substitutes as less efficient domestic producers are encouraged to increase production due to higher prices resulting from tariffs. This over-allocation of resources in less efficient local production and under-allocation of resources in more efficient foreign production results in deadweight loss, bringing about a less efficient allocation of resources.

Conclusion (Synthesis):

§ Taxes imposed on some goods such as fuel and alcohol or in the case of dumping may lead to more efficient allocation resources but the extent to which there is improvement in allocative efficiency depends on the effectiveness which is affected by the amount and accuracy of the information that the government has.
§ There is a need for governments to consider the root cause of the problem and implement appropriate policies that address the cause in order to improve on resource allocation that can lead to welfare gain.
§ While a tax on fuel may improve resource allocation, it may worsen equity as the tax would raise prices of fuel and reduce the ability of lower income groups to afford private transport or public transport at a lower price.

Mark Scheme

Knowledge, Application, Understanding, Analysis		
Level	**Descriptors**	**Mark**
L3	Balanced answers with clear and coherent explanation of how taxation may or may not lead to more efficient allocation of	**10-13**

	resources with good application to context.	
L2	Response presented consists of both thesis and anti-thesis but lack development with limited application to context. For responses that considers taxes to address negative externalities only with its limitations – Max mid L2	**5-9**
L1	Some valid points are present. More focus on the sources of market failure instead of how taxation leads to more efficient allocation of resources. One-sided answer than only considers thesis or anti-thesis No application to context.	**1-4**
	Evaluation	
E2	Explained judgment of how other measures may be more effective or appropriate in achieving more allocation of resources. OR other explained evaluative comments as highlighted in the answer scheme.	**3-4**
E1	Judgment of how other measures may be more effective or appropriate in achieving more allocation of resources. OR other evaluative comments as highlighted in the answer scheme.	**1-2**

Section B:

Essay Question 4

A government can employ a variety of macroeconomic policies to improve on the country's economic performance. These interventions may result in trade-offs between different macroeconomic policy objectives.

Discuss whether consideration of such trade-offs is relevant to a government in its macroeconomic policy decisions. [25]

Suggested Answer:

The economic performance of an economy depends on how well these 4 main macroeconomic objectives are achieved:

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

Arguments should be illustrated through the use of examples. Do not expect students to give accurate examples to exemplify their points. An attempt to do so would suffice.

Thesis:

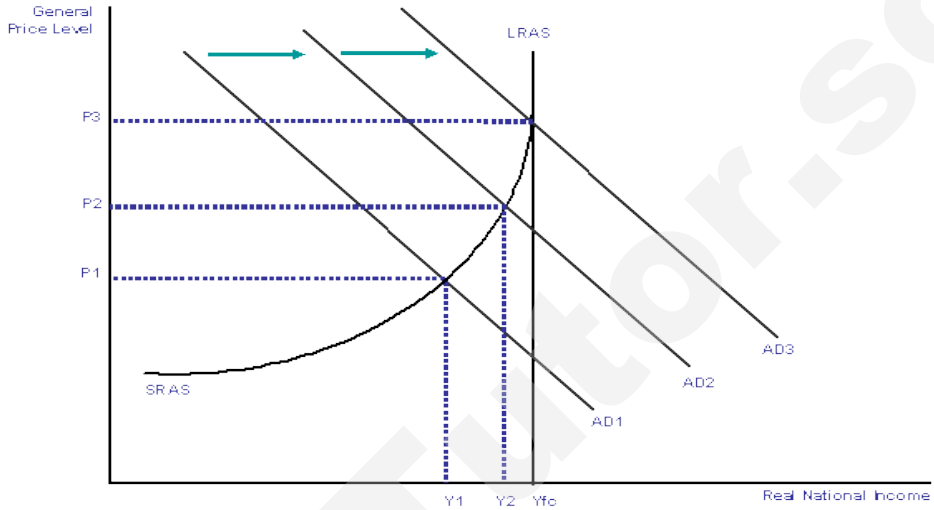
A government's macro policy decision inevitably leads to trade-offs in macro objectives/aims as it is impossible to simultaneously achieve all four macroeconomic objectives simultaneously.

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.

The macro policy decisions refer to whether they should use the policy to achieve the aim/priority, in view of the potential conflict of aims.

Thesis argument 1: Trade-off between Low unemployment/strong growth vs stable prices

Should the government attempt to achieve strong growth and/or low unemployment rate, stable prices will be compromised i.e. DD-pull inflation. Expansionary policies 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 (explain briefly).

Thesis argument 2: Trade-off between strong growth vs long term BOP eqm

For a country that experiences strong growth (as a result of successful demand-management policies), its citizens would have a bigger appetite towards imported goods and services (referring to normal goods like necessities and luxury goods) so as to satisfy their needs and wants (motive of maximising utility). Even for goods that can be obtained locally, consumers will still have preferences for variety (colour, size, etc). This collective behavior 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 will now find its position sliding into a deficit. If this persists, a long term BOP deficit will now pose a new set of problems (explain briefly).

**The thesis argument can be applied generally to most economies. Hence, students may choose which examples to exemplify their points.*

All in all, the government needs to weigh the potential benefits and costs carefully before deciding if it should pursue its initial goal/priority.

Anti-Thesis: Trade-offs of macro aims is not the only relevant factor in the government's macroeconomic policy decisions. The choice of a government's macro policy decision depends very much on the nature of its economy i.e. the size, degree of openness and the stage of economic development.

The macro policy decisions refer to which policies the government should use, in view of the nature of the economy and the likely problems that will emerge.

Anti-thesis argument 1: An economy's size is also relevant in the government's macroeconomic policy decisions.

Compare Switzerland and Canada (similar stages of development and high degree of openness but with different sizes):

Characteristic	E.g of country	Likely Macroeconomic priority	Likely types of macro policies used
Small ecy	Switzerland	Externally-driven growth	ER policy; SS-side policies centred on encouraging FDI
Large ecy	Canada	Domestically-driven growth	FP; MP

Given that the Swiss are likely to pursue externally-driven growth, this implies that the implementation of macro policies tend to encourage FDI or export-oriented growth. The inflow of FDI may also help the Swiss increase the productive capacity of their economy which causes the vertical part of the AS (LRAS) to increase in the long run, coupled with actual growth in the short run. This is in line with achieving externally-driven economic growth for Switzerland.

In contrast, a large economy like Canada can pursue domestically-driven growth due to the presence of a large consumer base and pool of local investors.

Hence the size of an economy is likely to be a relevant determinant behind a government's macro policy decisions.

Anti-thesis argument 2: An economy's degree of openness is also relevant in the government's macroeconomic policy decisions.

Define degree of openness as the number of times the total volume of trade is of its GDP.

Compare Singapore and Norway (both with population of 5 million and similar stages of development):

Characteristic	E.g of country	Likely Macroeconomic priority	Likely types of macro policies used
Very open ecy	Singapore	Long-term BOP eqm	MP centred on ER
Less open ecy	Norway	Economic growth	FP; MP

A small and open economy like Singapore may pursue the priority of a long term BOP equilibrium given her dependence on the quality of relationships with its trade and investment partners. A gradual and modest appreciation of the S$ affects the relative import and export prices and hence its BOP position.

A less open economy like Norway though will prefer to rely on its expansionary FP due to a small MPW and hence higher k value i.e the same amount of injection into Norway will bring about a larger increase in nominal NY compared to Singapore.

Anti-Thesis argument 3: An economy's stage of development is also relevant in the government's macroeconomic policy decisions.

Compare Australia and Ivory Coast (high degree of openness, similar size but different stages of economic development)

Characteristic	E.g of country	Likely Macroeconomic priority	Likely types of macro policies used
Developed ecy	Australia	Stable prices	FP; MP; SS-side policies for non-inflationary growth
Developing ecy	Ivory Coast	Economic growth and/or low Un	FP; ER policy; SS-side policies centred on encouraging FDI

For a country like the Ivory Coast, economic growth (Y to Y1) is a likely priority given that a rise in income can allow its citizens to enjoy a higher material SOL.

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.

Anti-thesis argument 4: Other than the nature of the economy,

- The choice of macroeconomic policy decisions may also depend on the prevailing circumstances being faced by the economy at that point in time and as such, there may be deviations in the country's long-term policy decisions to achieve some short-term goals. For instance, while a small and open economy such as Singapore typically makes use of MP centred on ER, if Singapore was facing a recession, their short-run policy decisions may deviate from their long-term policy choices in order to pull Singapore out of a recession.

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 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)	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)	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. However, answer tends to be light-weight in the use of real-life examples, or may be limited in scope.
L2 (12-14)	An underdeveloped discussion of a government's macroeconomic policy decisions, taking into account the relevance of the trade-offs. While answer establishes how other factors may also affect a government's policy choices, it tends to downplay the considerations of trade-offs to an economy in its policy choices.
L2 (10-11)	An underdeveloped argument that is largely one-sided in analysis and may contain some minor misconceptions and/or theoretical errors. The link of the candidate's points to the question may not be well-established.
L1 (6-9)	Some relevant points incidentally made but thrust of the question had not been grasped. 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. Includes ability to question assumptions.

Essay Question 5

Supported by strong employment creation, the unemployment rate declined to a 14-year low in 2011. This is due to strong hiring from the services sector, for example integrated resorts and construction sectors which are boosted by public projects and the economy recovering from the 2009 recession.

Source: Singapore Ministry of Manpower, 31 Jan 2012

(a) Explain possible reasons that led to the decline in unemployment rate in Singapore. [10]

(b) To what extent would standard of living in Singapore be improved as a result of the government's intervention to reduce unemployment? [15]

(a) From preamble, possible reasons for the decline in unemployment rate in Singapore are as follows:

1) Strong hiring from services sector
2) Strong hiring from construction sector
3) Economic recovery

Alternatively, any other possible reasons given by students are also accepted.
For example:

- rise in C & I due to economic recovery/positive economic outlook
- rise in G due to expansionary fiscal policy
- continued growth in S'pore's trading partners, like China & India, resulting in rise in net X.
- Govt's policies to raise spending on training, and productivity schemes to reduce structural unemployment.

When students bring in reasons taken from the preamble, they should clearly elaborate on what the factor is and how the factor brings about a decline in UN rate. They can link to cyclical and structural UN, but it is not a must to link to all 3 types of UN (cyclical, structural and frictional) to score an L3.

1) Strong hiring from services sector

   Could be due to economic recovery around the world, national income of foreign countries increased. Higher purchasing power and optimism about the future à increase in demand for imports and thus demand for Singapore's exports (services) increased à reduction in unemployment

2) Strong hiring from construction sector boosted by public projects

   Could be due to government measures to deal with cyclical unemployment using expansionary policies à for e.g., expansionary fiscal policy - increase government spending on building infrastructures, housing, etc. à reduction in unemployment

3) Economic recovery from 2009 recession

   National income increased à higher purchasing power and optimism about the future à increase in demand for goods and services (Consumption) and investments

   Economic analysis: increase in consumption, investments and net exports à increase in aggregate demand à increase in demand for labour to produce more output to meet increased demand à increase real national income & thus national output à reduction in unemployment.

Students could conclude by stating which could be the most significant cause for the decline in unemployment rate by linking to any possible reasons for a rise in AD or rise in AS.

Level	Marks	Descriptors
L1	**1-4**	Able to identify the factors leading to a decline in unemployment rate.
L2	**5-6**	Explanations of the factors are accurate but are inadequately developed with some use of examples. Not applicable to Singapore's context.
L3	**7-10**	A good knowledge of factors with relevant examples in relation to Singapore's context. These factors, which are well-grounded using economic analysis, provide evidence of in-depth analysis.

(b) This question focuses on the effect of government intervention on standard of living, as it strives to reduce unemployment.

Each point must relate to both material and non-material aspects of SOL for clarity and focus.

- Material SOL
  - quantity of goods and services individuals can consume (real GDP per capita)

- Non-material SOL
  - environment and quality of life of individuals (measured using indicators like literacy rates, Gini coefficient, amount of pollution, etc).

<u>Thesis</u>: Standard of living (both material & non-material SOL) in Singapore may improve as a result of the government's intervention to reduce unemployment.

- As the govt addresses cyclical unemployment via expansionary DD-management policies (↑AD), more jobs will be created and more income earned. This will be translated into higher level of real NY. Assuming population size remains constant, the real NY per capita rises, implying a <u>higher material SOL</u> (higher ability to buy more and better quality goods and services, especially luxury goods).

- Should the govt decide to improve the flow of information amongst job-seekers and employers, there will be less lag time for the unemployed to seek suitable employment. This will enable the average unemployed person to earn an income, allowing him to <u>improve his material SOL</u>. At the same time, the stress associated with job seeking can be alleviated (<u>improve non-material SOL</u>).

- For the individual who is structurally unemployed, retraining will enable him to be relevant to the demands of the economy, allowing him to earn an income now è collectively, they experience an <u>increase in material SOL</u>.

- With more people being employed, govt will collect more tax revenue (via direct or indirect tax revenue) è such additions to govt budget enables the govt to increase spending on reducing negative externalities in the country (e.g. cleaning up polluted air, providing more information via campaigns to educate public on negative externalities created by gambling) è <u>non-material SOL improves</u>.

<u>Anti-thesis</u>: Standard of living (both material & non-material SOL) in Singapore may not improve as a result of the government's intervention to reduce unemployment.

- If expansion of the economy is too excessive due to the govt's over-zealous attempts to address cyclical unemployment, DD-pull inflation will result è internal value of money falls è real income fall (assume unchanged nominal income) è lower ability to buy goods and services è material SOL falls.

- In addition, if government needs to divert resources or funds (e.g. subsidies) in the implementation of the policies to deal with the problem of unemployment è both material and non-material SOL fall è fewer resources or funds for provision of merit goods (opportunity costs).

- From the preamble, there is strong job creation in industries that may generate negative externalities (for e.g., casinos, construction projects) è non-material SOL falls as more are likely to suffer the ill-effects of problem gamblers or more likely to fall sick due to increased pollution level. Quality of life would fall.

- The structurally unemployed individuals are likely to face a higher level of stress in the short run, while undergoing their retraining. Given that the skills and competencies are new to them, they may struggle to pick up these skills and this may lower their non-material SOL. Also, they are likely to experience a fall in material SOL compared to if they were to find employment now (they will earn zero income when they are on course).

Evaluation:

- Come to a stand on the extent to which standard of living in Singapore would improve as a result of the government's intervention to reduce unemployment. Justify why.

- SOL is multi-faceted (material and non-material) and the government should consider how else it can be enhanced via other means e.g. laws pertaining to pollution, provision of healthcare services, etc.

Level	Knowledge, Understanding, Application, Analysis
L3 (9 – 11)	For an answer that presents a thorough knowledge of facts and theory with an excellent ability to describe and explain in a precise manner. Clear evidence of the ability to present a logical and reasoned analysis with respect to the question. Excellent explanation of the positive and negative implications of the Singapore govt's policies on SOL, with good applications to real-life context. High L3 – logical economic analysis with assumptions specified.
L2 (6 – 8)	For an accurate but undeveloped explanation of the issues. For an answer that has little reference to real-life context, award maximum of 7 marks. A generic discussion that lacks sufficient breadth. Ability to discriminate and form basic judgements. Clear presentation.
L1 (1 – 5)	For an answer that contains only a few valid points, made incidentally in an irrelevant context. Regurgitation of content without answering the question e.g. extensive

	explanation of how the respective policies work. Response consists little more than definitions and disjointed sentences which, when pieced together, make little sense. Thrust of the question has not been properly grasped. E.g. an extensive display of why non-material SOL will not change despite the policies.

Evaluation	
E2 (3 – 4)	For sound evaluation with insights; supported with a strong conclusion.
E1 (1 – 2)	Judgement is incidental; no/little substantiation is given and/or not insightful.

Essay Question 6

(a) Explain the factors that facilitate the move towards globalisation. [10]

(b) Discuss the extent to which the move towards globalisation might lower the general price level in an economy. [15]

Introduction:

1. Define globalisation and its forms

Globalisation refers to the integration of world economies in the areas of trade, labour and capital flows and technology. Globalisation takes the form of rising volume of world trade, rising volume of capital flows including short-term financial capital and FDI and rising international mobility of labour.

Body:

1. Explain the reasons for rising volume of world trade

(a) Trade Liberalisation

Key reason for trend towards globalisation à The benefits of trade push countries towards greater trade liberalisation so as to reap more benefits.
Decline in trade barriers such as tariffs and non-tariffs restrictions have enhanced trade and investments leading to freer movement of goods, services and capital between countries. Current wave of globalisation has been driven by policies undertaken by the governments around the world by opening up their domestic markets which vastly increase their productive potential creating new opportunities for international trade and investment. Governments have been negotiating for reduction in trade barriers in international agreements to promote trade in goods, services and investment. With each country producing according to their comparative advantages, it has brought about many benefits to both the exporting countries as well as the importing countries.

(b) Fall in transport cost, ability to enjoy cost savings etc

Improvements in technology of transport and communication and the resulting fall in transport cost have contributed significantly to the process of globalisation.
Explain why transport cost matters in trade à transport cost can narrow the CA different countries have.

Explain why transport cost fell over time à containerisation + improvement in engineering technologies

The usage of larger ships and planes with the development of containerisation has facilitated the movement of goods and services between countries lowering air and freight costs. Businesses can now ship products and raw materials all over the world more easily and at a lower cost. As a result, more countries around the world become closely integrated through greater trade and transfer of information and technology.

In addition, domestic producers desire to maximise profits will motivate them to venture abroad. They will gain from an enlarged export market, particularly for those residing in a small domestic market like Singapore (increase consumer base and hence total revenue). They are able to reap internal EOS due to a larger scale of production (earn cost savings). In addition, with greater opportunities to outsource in order to reduce costs due to cheaper labour costs overseas e.g. China and India, which also increases the profitability of firms. Sustained economic growth can thus be achieved through technology transfer from foreign investments as well as greater trade volume between countries.

(c) Rise in global real income

Rapid development in many countries à increase in consumer income à rising demand for imports à growth in volume and range of variety of goods and services

Consumers' desire to maximise utility have fuelled the surge in the exchange of goods and services across international boundaries. Consumers can obtain lower-priced goods because a country's trading partners can produce them more efficiently due to their comparative advantage in its production (can produce at lower opportunity cost). Globalisation enables a country's citizens to have access to products that it does not produce and thus enjoy greater varieties & choice of goods and services. Therefore, it will lead to an improvement in the material aspect of SOL of the citizens. In addition, advancement in in information and communication technology has transformed economic life as there is increasing ease with which consumers can find out about and buy products from other countries and producer can coordinate production throughout the world. Expansion of electronic data exchange with internet e-payment has led to increasing speed and efficiency of transactions between countries.

2. Explain the reasons for increase in volume of financial capital flows

(a) Deregulation of banking and financial activities & Removal of capital controls

Deregulation à development of new financial products à significant increase in the volume of trade in financial capital. International flows of capital/funds increased.

(b) Improvement of ICT

Improvement in ICT leads to a significant fall in communication costs à Financial capital can be transacted across countries at negligible costs and time à an increase in the volume of financial capital traded.

3. Explain the reasons for increased international labour mobility

(a) Reduction in barriers to labour mobility

Relaxation of legal barriers to labour mobility has increased labour flows between countries. For e.g. S'pore has relaxed its immigration policies to allow greater inflow of foreign labour to fill up shortages in various industries and keep wage cost competitive.

(b) Greater knowledge and accessibility

Growing integration of national markets into the global economy, and technological innovations have significantly reduced the costs of transportation and enhanced awareness of global employment opportunities allowing for greater international mobility.

Conclusion:

Recognise importance of other factors in facilitating the move towards globalisation

Level	Knowledge, Application/Understanding and Analysis	Marks
L3	For an answer that uses appropriate analysis to explain the reasons for the trend towards globalisation & provides some form of evaluation on the relative significance of the factors.	7-10
L2	For an answer that gives a descriptive explanation of the reasons for the trend towards globalisation	5-6
L1	For an answer that shows descriptive knowledge of globalisation or states rather than explain the reasons for the trend towards globalisation	1-4

(b) Discuss the extent to which the move towards globalisation might lower the general price level in an economy. [15]

Command Word: Discuss the extent
Content word: globalisation, general price level
Context word: An economy
Globalisation caused an increase in trade of goods, capital flows and international movement of labour through an improvement in level of technology and increasing openness of economies.
Increased in trade of goods, capital flows and international movement of labour might cause GPL to be lowered and also maintain price stability. Changes in GPL could be due to changes in AD or SRAS or LRAS. Students should use AD-AS diagram to aid their explanation.
How GPL will be affected (either an increase or decrease) depends on:

1. Degree of openness and Size of the economy
2. Government policies that were implemented
3. Stage of economic development of the economy
4. Global economic outlook

Thesis: Globalisation à ↓GPL

1) ↓AD

Economic Analysis
Increased in short term capital inflow might cause GPL to fall in an economy. When there is a sudden inflow of capital (e.g. short term capital) due to higher interest rates, there will be an increase in demand for the country's currency causing appreciation.

Appreciation of currency due to large capital inflow will affect the economy which is dependent on exports for growth, it might lead to a fall in demand for its' exports as they lose price competitiveness, assuming marshall-lerner condition holds true, caused net exports to fall, AD fall and leading to fall in GPL

Example
Countries like US faces trade deficit with China due to the cheaper imports from China. Furthermore some countries might lose comparative advantage as China opened up to allow firms to set up in its special economic zone to tap on their large labour force hence some

industries in the domestic country have lost comparative advantage in producing labour intensive goods, hence these countries might have a decrease in exports.

Furthermore, due to the lower unit COP in China due to cheaper labour and also such firms can tap on the EOS, hence can translate such cost savings into lower prices hence global consumers choose to import from China hence might worse their domestic net exports, causing AD and GPL to fall, ceteris paribus

Evaluation

- GPL might fall due to fall in net exports, hence government polices implemented such as some protectionistic measures might help to maintain price stability and also economic growth.

- Furthermore, if the domestic economy is able to establish other industries and gain comparative advantage, the change in GPL will not be drastic.

- The extent to which short term capital flows has on the changes in GPL is also dependent on the global and regional outlook in the globalised world. As seen in the recent global economic crisis in 2008, it has affected UK financial system when UK was caught in massive capital outflow hence affecting its GPL.

  If there is positive global economic outlook, economic recovery can also be equally fast and economies would face large increases in export and domestic demand increasing AD significantly hence causing DD-pull inflation

2) ↑SRAS

Economic Analysis

- With increased trade of goods, due to more free trade agreements signed, hence lowering tariffs leading to fall in imported goods prices which are used as raw materials, intermediate goods or final goods and services à ↓ unit cost of production à ↑SRAS à ↓GPL

- An increase in trade flow à diversification of sources of imports due to more FTA signed à therefore an economy has the ability to switch to other sources quickly to limit the fall in SRAS hence keeping prices stable and prevent from increasing too fast.

- Local firms within the economy could face higher competition as globalisation allows capital to flow freely hence there is growing presence of foreign competition within the economy. This increasing competition due to inflow of foreign direct investments which is a form of long term investments where firms set up headquarters or plants here. Local firms which used to have monopoly power within the economy will try to become more efficient and reduces X-inefficiency or become more active in R&D in process development to lower the unit C.O.P hence able to pass on such cost-savings to consumers hence SRAS rise and lowers GPL.

- In addition, the ability of firms to outsource their production processes to lower cost countries also translates into lower unit C.O.P and hence lowers GPL.

It might also lead to changing of market structure for that particular type of good or service from a monopoly to oligopolistic market structure, leading to price rigidity and hence helps to lower prices or maintain prices in an economy.

Example

Singapore being small is highly reliant on imports for food. It allows Singapore to diversify its food source and not overly reliant on a single country à stable and adequate SS of food

Food contributes to a high weightage in CPI hence an economy like Singapore is susceptible to imported cost-push inflation especially due to supply shocks. (eg avian flu, floods or other natural disasters destroying food crops)

For e.g. there is an increasing number of foreign firms competing with local companies in the banking, retail and hotel industries due to increase in capital flow where there is more FDI in Singapore.

Evaluation

However the extent at which ↑ in trade of goods can prevent prices from rising too fast during SS shocks is also dependent on

1. The number of FTAs signed and maintained good relationships with these countries. Where an increased in trade of goods due to signing of more FTAs will help to minimise the impact of supply shocks. Especially when a small economy chose to actively pursue more countries to join into signing the FTAs will be able to diversify source of imports. However it might still be hard to lower the GPL especially if it's a natural disaster due to climate change which hits a lot of countries that produces food stuff. As climate change is a world phenomenon hence it might be inevitable.

2. Size of the economy also matters as large economies (eg China and US) unlike smaller ones, have more resources in terms of land etc, hence they might not be as dependent on increased in trade of goods with other countries for goods such as food or raw materials to lower their GPL as they might already be self-sufficient hence an increased in trade of goods might not really help substantially to reduce GPL.
3. For a small and open economy like Singapore, the extent to which an increased in trade of goods can affect and maintain to lower GPL is also dependent on the govt policy adopted by the government. Eg: The ability to maintain price stability may be attributed more to the successful use of exchange rate policy by the Singapore à where the Singapore government maintains an appreciation stance to lower the price of imports in domestic currency to help counter the imported inflation or imported cost push inflation that comes with increased in trade of goods.

However the contribution of increased capital flow of FDI to lower GPL depends on the competitiveness that globalisation helped to create in the industry.

3) ↑LRAS

Economic Analysis

- More countries opening up à↑LT capital à↑ quantity and quality of resources For e.g., ↑quantity and quality of labour such as foreign talents & workers & capital resource in the form of long term investment such as FDI
  - è Productive capacity ↑ à ↑LRAS
  - è Hence, GPL ↓

Example

Small economy like SG faces land and labour constraints & has generally been operating at near full employment position for the past decade where any subsequent ↑AD will inevitably lead to dd-pull inflation

Hence ↑ international movement of labour into Singapore can ↑ LRAS enabling firms to ↑production of goods & services to accommodate rising AD

Evaluation

· Extent of ↓GPL depends on type of labour policies implemented by govt. For e.g. Increasing the no. of employment pass and work permits issued. However, increasing quantity of labour might be unsustainble as it will add a strain on transport & housing

market in Singapore hence might cause ↑GPL due to increase in C, I components of AD leading to demand pull-inflation.

Anti-Thesis: Globalisation à ↑GPL

1) ↑AD

Economic Analysis

Increase in investment when firms decided to set up plants and bring in capital stock and machineries into the economy à since investment is a component of AD will cause AD to increase hence GPL will rise.

Example

For a small and open economy like Singapore which operates at a position very near to full employment, where changes in AD will be felt more keenly on price levels.

Evaluation

- However, it depends on the extent of shift of the AD and LRAS as increase in long term capital inflow might lead to FDI that is otherwise unavailable to the domestic economy hence able to increase the knowledge and technical transfer taking place hence increasing the productive capacity of the economy and LRAS shift.

- Hence the extent of rise in GPL will also have to be determined by the extent of rise in AD vs LRAS.

- The impact of FDI on the LRAS shift hence lowering the GPL is dependent on the quality of resources and technological advancement in the countries of destinations and nature of industry. For e.g., in some developing countries they might not have the competencies to gain benefit but in Singapore, it did manage to attract firms to establish value-added services and production centres in the region and attracting Research and Development base to provide opportunities for technology and information transfer and aiding improvement in quality and quantity of resources in Sg hence LRAS can shift hence reducing demand-pull inflation.

2) ↓SRAS

Economic Analysis

Increased in trade of goods will lead to a rise in unit cost of production hence SRAS fall.

As increased in trade of goods due to increasing opening of large economies like India and China, which is rapidly industrializing, they require lots of raw materials and factors of production.

à Leading to increase in global demand for such raw materials, food stuff and fuel

à Leads to depletion of raw materials and competing demand for land for biofuel crops and food for human consumption.

à Leading to rising in import prices for small countries that has very little raw materials and depends on imports of such inputs of production, fuel, foodstuff and finished goods.

à Causing SRAS to shift upwards causing severe imported cost push inflation in small and open economy like Singapore.

Example

For eg. Rare earth metals and Crude Oil Prices have been increasing.

Evaluation

- It also depends on the type of labour policies that govt used and affecting the extent of fall in GPL

- When Singapore govt implemented the Dependency Ratio Ceiling (maximum number of foreign workers you can hire), in SR unit cost of production will rise due to shortage of labour

- Even if there is increase in international movement of labour, firms are unable to employ them due to the ratio of foreigners to Singaporeans is being fixed it may still lead to a rise in unit cost of production à a fall in SRAS leading to GPL ↑

3) ↓LRAS

Economic Analysis

Due to the improvement of technology which improves transport and telecommunication which leads to the ease of labour movement.

à might cause Brain Drain problem which leads to migration of such capable workers migrate to other countries hence leading to fall in quantity of talented workers & quality of workers may fall in the domestic economy

à Leading to a fall in LRAS hence GPL will increase

Example

Increasingly, more Singaporeans are staying on in countries like the United States

Evaluation

- It also depends on the govt policy implemented to prevent brain drain which leads to fall in labour quantity and quality.

But Singapore is making up for the brain drain by getting bright Chinese and Indians into Singapore where they are attracted by better prospects here à Therefore, LRAS might not fall but might also increase à ultimately ↓GPL instead

Conclusion

In the increasingly interconnected world where there is increased interdependence of national economies and greater integration of goods, capital and labour markets, general price level will no doubt tend to change more quickly in a small and open economy (for e.g. Singapore and Hong Kong) compared to those larger and relatively closed economies like US and China. As these small and open economies are mainly dependent on trade for economic growth and basic necessities or raw materials hence are more susceptible to changes in price levels due to changes in global economic activity compared to larger economies like US and Europe which are less susceptible but nevertheless will still be affected with people are attracted to growing opportunities in the emerging economies. Therefore, with increasingly globalised world, governments around the world will have to take on a more proactive role and be vigilant in using the policies to maintain price stability by analysing the global economic climate.

Level	Descriptors	Marks
3	For an answer that is also well-developed with detailed analysis and contained application to relevant situations with examples. For an answer that is well developed with detailed analysis of how an increase in trade of goods, capital flows and international movement of labour can increase and decrease the general price level in an economy and has a clear structure to answer the question. The answer also must contain clear statements to discuss the extent to which general price level are being affect and are supported by reasoned arguments.	9-11
2	For an answer that has more thorough relevance as to what extent and how an increased in trade flows, capital flows and mobility of labour can increase and decrease the general price level of the economy. For an answer that shows an ability to identify how an increase in trade, capital flows and mobility of labour can lead to general price level to increase OR decrease and explain some facts, have some ability at drawing graphs and fair ability to apply concepts to the context of the question. Most of the analysis is accurate but undeveloped with ideas not organized properly to answer to the question directly. Generic analysis – max 6m	6-8
1	For an answer that shows some knowledge but does not indicate that the meaning of the question has been properly grasped. This answer contains basic conceptual errors. For an answer that is mostly irrelevant and contains only a few valid points made incidentally.	1-5

Allow up to 4 additional marks for Evaluation		
E2	For a valid evaluation that is well justified.	3-4
E1	For an unexplained judgment or one that is not supported by analysis.	1-2

Suggested Answers and Mark Schemes

ST ANDREW'S JUNIOR COLLEGE
PRELIMINARY EXAMINATIONS – 2013
General Certificate of Education Advanced Level
Higher 2

ECONOMICS **9732/02**

Paper 2: Essay Questions **04 September 2013**

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.

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 the midst of fast pace technological advancement and economic recovery in 2010, the iPad, a revolutionary tablet computer, was launched. Featuring next generation multi-touch applications (apps), it was an instant hit with sales exceeding 20 million units.

Assess the impact of the above-mentioned recent events on relevant markets. [25]

2 Many fast food chains pride themselves in offering various menus by adopting various pricing strategies. For example, KFC offers discounts for students while McDonald's offers 6-piece nuggets at $4.40 and 9-piece nuggets at $5.70.

(a) Explain the factors that are necessary for price discrimination to occur. [10]

(b) Discuss whether price discrimination in the fast food industry is desirable. [15]

3 **(a)** Explain how the price mechanism allocates resources efficiently. [8]

(b) A government imposes taxes on a variety of goods and services which include alcohol, fuel and some imported goods.

Discuss whether taxation would lead to a more efficient allocation of resources. [17]

Section B

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

4 A government can employ a variety of macroeconomic policies to improve on the country's economic performance. These interventions may result in trade-offs between different macroeconomic policy objectives.

Discuss whether consideration of such trade-offs is relevant to a government in its macroeconomic policy decisions. [25]

5 Supported by strong employment creation, the unemployment rate declined to a 14-year low in 2011. This is due to strong hiring from the services sector, for example integrated resorts and construction sectors which are boosted by public projects and the economy recovering from the 2009 recession.

Source: Singapore Ministry of Manpower, 31 Jan 2012

(a) Explain possible reasons that led to the decline in unemployment rate in Singapore. [10]

(b) To what extent would standard of living in Singapore be improved as a result of the government's intervention to reduce unemployment? [15]

6 **(a)** Explain the factors that facilitate the move towards globalisation. [10]

(b) Discuss the extent to which globalisation might lower the general price level in an economy. [15]

Suggested Answers:

Section A:

Essay Question 1

In the midst of fast pace technological advancement and economic recovery in 2010, the iPad, a revolutionary tablet computer, was launched. Featuring next generation multi-touch applications (apps), it was an instant hit with sales exceeding 20 million units.

Assess the impact of the above-mentioned recent events on relevant markets. [25]

Introduction:

- When analysing changes in market conditions for any particular market, students need to bring in either: sales revenue or consumer expenditure (price x quantity)

- Identify the various product markets and the possible submarkets that will be assessed. 'Relevant' markets will be those mentioned in the question directly as well as inter-related markets. Some examples can include:

  1. iPad
  2. iPad's substitutes
     - other tablet computers
     - desktops
     - laptops
  3. iPad's substitutes in terms of functions
     - digital camera
     - MP 4 players
  4. iPad's complements
     - Internet providers
     - apps
     - accessories

Diagrams to illustrate the various effects on sales revenue / consumer expenditure arising from changes in DD and SS conditions should be included <u>and well-explained</u>

- Explain briefly how the recent events mentioned in the preamble may affect demand or supply in relevant markets.

  Fast pace technological advancement would reduce unit cost of production in many sectors and thus would probably cause supply to rise in many markets.

  Economic recovery implies rising income levels which can affect demand of different markets differently depending on income elasticity of demand.

  The launch of iPad would affect demand for its substitutes such as other tablet computers such as Samsung and demand for its complements such as applications.

Body:

Thesis: Markets involved are affected positively (i.e. sales revenue increase)

- **Explain the positive impact of the recent events on iPad market.**
- Technological advancements
  - Reduced costs of production of iPad components (advanced equipment, greater labour productivity)
  - Reduced costs of shipping iPad

These would see an increase in supply of iPad; SS curve shifts to the right

  - Ceteris paribus, holding demand constant and at the same time assuming demand for iPad is price elastic (luxury product, a relatively larger proportion of income spent, availability of many substitutes)
  - A fall in equilibrium price leads to a more than proportionate increase in quantity. This will cause the **fall in revenue from the fall in price to be less than the gain in revenue from the increase in quantity transacted**
  - Effect is a likely gain in total revenue for the iPad market

- Increase in demand for iPad due to consumers' strong desire to possess an iPad since it is a revolutionary product with unique features (change in tastes and preferences); Rising income levels could have led to a rise in demand for iPad as it is considered to be a luxury good (YED>1) especially in developing and emerging economies; DD curve shifts to the right
  - Holding supply constant and given that supply is price elastic (manufactured product, existing stock of unfinished or semi-finished products, short production period)
  - A rise in equilibrium price will lead to more than proportionate increase in quantity.
  - Effect is rise in total revenue for iPad market

- **Overall effect: sales revenue increase**
  Although both DD and SS rise, it is likely that **SS rises more than DD increases** (although the craze for new technology products among a large population of IT savy consumers would mean that demand rise significantly, the rise in SS is likely to outweigh since there is likely much more significant fall in cost of production as there had been very significant advancement in technology) A large rise in demand and even larger rise in supply given the fast technological advancement would result in a slight fall in equilibrium price and more significant rise in equilibrium quantity as given in the preamble as exceeding 20 million units. Therefore, total revenue would have risen greatly for the firm producing iPad.
  Well-explained diagram to illustrate the net effect after the relative shifts of DD and SS curves.

- **Explain the impact of the recent events on markets of iPad's complements.**

Internet Service Providers:

§ Technological advancements (cheaper information and communications technology)
  - Reduced costs of production for the internet providers (cheaper broadband / information and communications technology). Leads to increase in SS of internet services; SS curve shifts to the right
  - Ceteris paribus, holding DD constant and at the same time demand for internet services is price inelastic (necessity in increasingly technology reliant economies, lack of available close substitutes)
  - There will be a fall in equilibrium price and a less than proportionate increase in quantity for internet services
  - Total revenue for the internet providers fall since the **fall in revenue due to the fall in price is more than the gain in revenue from the increase in quantity transacted**.

OR

- o Assuming demand for paid internet services is price elastic (since there are many free Wi-Fi places iPad users can utilise)
- o Total revenue for the internet provider is expected to rise since the fall in revenue from the lowered price is lower than the gain in revenue from the increase in quantity.

§ Increase in demand is expected for internet services due to consumers wanting to have seamless and uninterrupted use of iPad (change in tastes and preferences)

§ Using cross-elasticity of demand: Internet services, as a complement to iPad, may see an increase in demand as consumers change their existing plans or purchase additional internet plans so that they are able to make better use of iPad , especially given the fall in price of iPad.

§ Using income elasticity of demand: Given the rise in income, there would be an increase in demand for internet services as it is considered as necessity (0<Yed<1) in developed countries and a luxury (Yed>1) in developing countries.

- o Holding supply constant and assuming supply is price elastic (once provided, it is easy to increase the amount of internet services to other subscribers)
- o Effect is a rise in total revenue for internet service providers

§ **Overall effect: sales revenue expected to increase in the internet services market (SS rise and DD rises)**

Apps Providers

§ Technological advancements

- o Reduced costs of production (faster and more efficient production processes, greater ease of producing apps). Leads to increase in SS of apps; SS curve shifts to the right
- o Assuming no change in demand conditions and demand for apps is price inelastic (necessity, a lower proportion of income spent)
- o There will be a fall in price of apps and a less than proportionate rise in quantity sold.
- o App producers will experience a fall in total revenue since **the fall in revenue from the fall in price is more than the gain in revenue from the increase in quantity sold**

§ Increase in demand may be experienced due to consumers wanting to consume more apps as they become more attached to iPad (change in tastes and preferences)

§ Using cross-elasticity of demand: iPad is popular partly due to wide array of applications that can be downloaded and enjoyed at a greater convenience. Apps are strong complements (Xed< 0) of iPad. Hence an increase in demand for iPad can also cause an increase in demand for apps.

§ Using income-elasticity of demand: Given the increase in income, there would be an increase in demand for apps as apps in general are considered to be necessity.

- o Holding supply constant and assuming supply to be price elastic (easier to increase the production of many apps)
- o Effect is a rise in total revenue for apps producers

§ **Overall effect: sales revenue increase (SS rises slower than DD increases)**

OR

iPad accessories

§ Technological advancement

- o Reduced costs of production (cheaper to produce covers and headphones specific to iPad dimensions). Leads to increase in SS of accessories, SS curve shifts to the right

- o Holding demand for accessories constant and assuming its demand is price elastic (many close substitutes)
- o There will be a fall in equilibrium price and a more than proportionate increase in quantity.
- o Total revenue is expected to increase as **the loss in revenue from the fall in price is less than the gain in revenue from the increase in quantity**

§ Increase in demand for accessories can be expected as there may be a rise in consumers wanting to embellish the look of their iPad (change in tastes and preferences).

§ Using cross-elasticity of demand: Accessories are weak *complements with* iPad, hence an increase in demand for iPad can also cause a less significant increase in demand for accessories.

§ Using income-elasticity of demand: Given the increase in income, there would be an increase in demand for accessories as accessories in general are considered to be necessity. DD rises; DD curve shifts to the right.

- o Holding supply constant and given a price elastic supply (short production period for manufacturing these accessories)
- o Effect is a rise in total revenue for producers of iPad accessories.

§ **Overall effect: sales revenue may or may not increase (depends on the rise in SS relative to the increase in DD)**

Anti-Thesis: Markets involved are affected negatively (i.e. sales revenue decrease)

- · **Explain the negative impact of the recent events on markets of iPad's substitutes.**

Tablet computers(other brands)

§ Technological advancements

- o Reduced costs of production (more efficient production processes)
- o Reduced shipping cost
- o These would see an increase in supply of tablet computers; SS curve shifts to the right
- o Ceteris paribus, holding demand constant and assuming demand for tablet computer is price elastic (greater availability of close substitutes)
- o Net effect is a gain in total revenue for tablet computer producers as the **fall in revenue from the fall in price to be less than the gain in revenue from the increase in quantity transacted**

§ Using cross-elasticity of demand: demand for other tablet computers (Xed highly positive) fall as consumers switch to relatively cheaper iPad with more unique features.

§ Using income-elasticity of demand: Given the rise in income, there should be an increase in demand for tablet computers such as Samsung Galaxy Tab as it is considered to be a luxury good in developing and a necessity in developed countries.
Overall however, the demand for other tablet computers likely to fall as the preamble suggested the dominance of iPad over other rivals.

- o Holding supply constant and supply is price elastic (short production period)

§ Net effect is fall in total revenue earned from other tablet computers

§ **Overall effect: sales revenue fall (SS rise and DD falls)**

- o Likely that **DD falls more than SS increases** (there is a more significant fall in taste and preference compared to fall in cost of production since research and development cost is the most significant component of cost for such technology

based firms and given such stiff competition, they are likely to face higher research and development costs in order to grab more market share from iPad's producers.

OR
Desktop Computers

§ Technological advancements in IT
  - o Reduced costs of production (more efficient production and assembly processes)
  - o Market for desktops would experience a large increase in supply (costs are significantly reduced)
  - o Hence, supply of desktop computers increases. Holding demand constant, the equilibrium price of desktop computers would fall

§ Using cross-elasticity of demand: desktop is a *substitute* with iPad
  - o Hence with a fall in price of iPad, demand for desktop will fall
  - o The extent of the fall in demand and hence impact on TR will depend on value of its XED.
  - o Analyze when they are close substitutes with each other (because they both serve the same functions) or not close substitutes.(For home desktop, there could be more significant fall in demand compared to business models which may be necessary and more convenient compared to iPad for production processes.)

§ Using income elasticity of demand: Given the rise in income, there should be an increase in demand for desktop computers as it is considered to be a necessity in developing and a fall in demand in developed countries as it is considered as inferior good.

§ **However**, demand for desktops as a whole probably decreases as the effect of Xed likely outweighs that of Yed.

§ **Overall effect:** Effect on sales revenue would be a fall as the fall in DD likely to outweigh the rise in SS as there would be more significant fall in taste and preference as consumers prefer iPad more compared to fall in cost of production which has already been experienced prior to 2010.

Substitutes in terms of functions:
Digital cameras

§ Technological advancements
  - o Lower cost of production due to more efficient production processes. SS rises
  - o Holding demand constant and demand is price elastic (availability of close substitutes, a greater proportion of income spent). There would a fall in price of digital cameras and more significant rise in quantity sold.

§ Using cross-elasticity of demand: digital camera is a *substitute to camera function of iPad*
  - o As a result, because iPad is much cheaper and more convenient, demand for digital cameras will fall.

§ Using income elasticity of demand: A rise in income would cause a rise in demand for digital camera as it is considered as a luxury good in developing countries and a necessity in developed countries.

§ Overall, demand for digital cameras are likely to fall in both developing and developed countries as the effect of the craze for iPad probably outweighs the effect of rising income on demand for digital cameras.

§ **Overall effect:** The fall in demand likely to outweigh the rise in supply as there is more significant fall in taste and preference compared to fall in cost of production as the technological advancement are probably in IT and computer field and not so significant

in digital camera production. Total revenue for digital camera producers most probably would fall.

Note: Other possibilities that can be considered by students: cam-corders, MP4 players, play stations.

Evaluation:

- Whether iPad continues its success in earning higher revenue depends on the speed at which it is updated and the extent it cannot be duplicated by other tablet computer producers. If competitors such as Samsung can innovate and come up with better quality models with unique or more user-friendly features, then other tablet computers can become a closer substitute, hence the sale revenue increase may slow down for iPad.
- Similarly, there is likely to be great competition in apps market, those more strongly favoured by consumers such as popular games or entertainment apps may net greater increase in total revenue compared to those apps less favoured such as more education-oriented.
- The fall in price of many different versions of iPad accessories other than those sold by Apple result in more than proportionate increase in quantity demanded of these accessories and hence much greater increase in total revenue of other accessories producers compared to Apple.

Conclusion:

- Producers of iPad's complements are more likely to gain a rise in total revenue while producers of iPad's substitutes are more likely to face a fall in total revenue.

Mark scheme		
Level	**Descriptors**	**Marks**
L3	A clear and coherent assessment of the impact on three markets with well-explained diagrams. A clear and thorough application of relevant concepts with consistent application to the given context.	18-21
	Impact on three markets is well-explained with diagrams. Some minor errors are present and there may not be a coherent presentation at times.	15-17
L2	Impact on two markets is well-explained with diagrams. Some minor errors are present and there may not be a coherent presentation at times. Or impact on three markets addressed but lack thorough development.	12-14
	Some attempt at assessment of impact on relevant markets but there are gaps in analysis. No diagrams or diagrams without explanations. Only impact on two markets is adequately explained.	10-11
L1	A weak application of demand and supply and elasticity concepts. Many errors are present. Relevant markets may not be identified and the answers are largely rehearsed with weak application to the context.	6-9
	Smattering of some valid points such as definitions but little attempt in application of demand and supply and elasticity concepts in assessing the impact on relevant markets.	1-5
Evaluation		
E2	Explained judgment of the extent of change in total revenue in different relevant markets.	3-4
E1	Judgment of the extent of change in total revenue in different relevant markets.	1-2

Essay Question 2

Many fast food chains pride themselves in offering various menus by adopting various pricing strategies. For example, KFC offers discounts for students while McDonald's offers 6-piece nuggets at $4.40 and 9-piece nuggets at $5.70.

(a) Explain the factors that are necessary for price discrimination to occur. [10]

(b) Discuss whether price discrimination in the fast food industry is desirable. [15]

Suggested Answers

(a) Explain the factors that are necessary for price discrimination to occur. [10]

Approach

Students should recognise that the factors are basically the conditions of price discrimination.

To score level 2, students are required to explain how the conditions would enable a firm to engage in different types of price discrimination.

To score level 3, students are required to support the above explanation with some real-life examples relating to the fast food industry.

Introduction

- **Define price discrimination and state its purpose.**

Price discrimination is the practice of selling a given product at different prices to different consumers and these price differences *are not caused by cost differences*.

Firms that engage in price discrimination would enable them to earn higher revenue from any given level of sales to increase profits.

Body

In order for firms to engage in price discrimination, the firms would need to ensure that the following factors/conditions are met:

1) ***The firm must possess market power to set its price.***

2) ***The markets must be separate. Consumers in the low priced market must not be able to resell the product in the high-priced market.***

3) ***Elasticity of demand must differ in each market. The firm will charge the higher price in the market where demand is less elastic and thus less sensitive to a price rise.***

Factor #1: Market Power to set prices

Explain how market power could lead to one firm's ability to engage in price discrimination

- **Explain why firms could enjoy market power**.

In the context fast food industry, McDonald's, KFC and Burger King, which are oligopolistic firms, could engage in price discrimination. This is because these large fast food joints hold large market share due to the presence of strong barriers to entry.

- Types of possible BTE in fast food industry are:
    - Strong branding established
    - Secret recipe

These BTEs enable these few large firms to dominate the fast food industry and enjoy strong market power.

· **Explain how market power could enable firms to set prices**.

Due to strong market power, the demand curve of each fast food restaurant is less price elastic. This is because the fast food restaurants provide set meals that are differentiated i.e. the set meals sold by each restaurant are not perfect substitutes.

As a result, each restaurant could control the price by manipulating the supply. For example, each restaurant could increase the price of its set meals by restricting the supply. These fast food restaurants could hike up the price as the quantity demanded would only fall less than proportionately.

· **Explain how the price setting ability would cause firms to engage in price discrimination**.

Hence, with such price setting ability, the restaurant could decide to price discriminate by setting high price for some customers while setting low price for other customers for the same set meal.

Factor #2: Market must be separate so that no reselling is possible
Explain how market separation which leads to non-resale of products could enable price discrimination to take place.

· **Explain why and how firms could separate their markets**.

Separation of markets

- § Sub-Market 1 à Set meals are sold at a lower price to students
- § Sub-Market 2 à Set meals are sold at a higher price to adults (i.e. non-students)

In the context fast food industry, McDonald's, KFC and Burger King, could separate their markets in such a way that the adults in sub-market 2 could not buy a set meal at a discount that is given to the students in sub-market 1. This separation could be done by enforcing the students to show their student identity cards as they purchase their set meals.

Furthermore, these students who bought their set meals at a lower price could not resell the same set meal to the adults who have to pay a higher price.

The reasons for why the set meals could not be resold are as follows:

1) It is due to the nature of the good sold by the fast food restaurants. The fast food such as burgers are perishable goods (i.e. turn cold and stale easily). Hence there is no great incentive for many adults who want to buy a set meal, that turns stale, from students.

or

2) There is also no incentive for anyone to sell the set meals as the opportunity costs of queuing up to get the set meals and finding a buyer might not outweigh the benefit of selling the burger (maybe one or two dollar profits more)

As a result, there is no resale market for fast food set meals

· **Explain how this ability to separate the market could allow the firms to price discriminate**.

If the market could not be separated easily and resale could not be prevented, customers would no longer willing to buy from the price discriminating firms anymore as these customers could get the same good at a lower price at the resale market. When this happens, price discrimination fails and the firms would lose revenue from one of the sub-markets.

Hence, the ability to separate the market that prevents resale enables the firms to price discriminate.

Factor #3: *Elasticity of demand must differ in each market.*
Explain how differing demand elasticities could enable a firm to set a higher price for market where demand is price inelastic and a lower price for a market where demand is price elastic.

§ **Explain why and how elasticity of demand could differ.**

In the context of fast food industry, the demand for fast food by working adults is price inelastic while the demand for fast food by students is price elastic.

This is because the adults spend a smaller proportion of their incomes on fast food meals while the students spend a larger proportion of their meagre allowances from their parents on the same set meals.

As a result, students would be more sensitive to price changes. When there is an increase in price, the quantity demanded for fast food by students will fall more than proportionately, whereas, the quantity demanded by working adults will fall less than proportionately.

§ **Explain how the different demand elasticities would result in different prices for the same kind of product.**

Due to the firm's incentive to make more profits, fast food restaurants would charge a higher price for working adults whereas a lower price for students.

This is because by engaging in third-degree price discrimination, fast food restaurants could earn greater revenue in both markets than by charging a single price across the two markets.

By setting a higher price for working adults, since total revenue (TR) = Price (P) x Quantity (Q), the less than proportionate fall in quantity as compared to the price increase would cause an increase in TR. On the other hand, by setting a lower price for students, there would be an increase in TR as well.

Assuming total cost does not increase more than the increase in TR, price discrimination would enable the firm to earn more profits

- **Explain how the ability to distinguish consumers according to differing elasticities enables price discrimination to take place.**

Therefore, if the nature of the industry or profile of the consumers allows the firms to differentiate their consumers according to their demand elasticities, the firms are able to engage in third-degree price discrimination in order to earn greater profits.

Mark Scheme

Level	Knowledge, Understanding, Application, Analysis
L3 (7 – 10)	Able to present a thorough explanation of factors that are well developed. Able to relate the factors to the fast food industry.
L2 (5 – 6)	Able to explain the factors. However, the development of the answers. Some application of examples to illuminate the points. Answers lack breadth and depth. Strong theoretical explanation of all factors without application of examples (i.e. Strong explanation of 3 factors without examples or examples not relating to fast food industry - max 6 m)
L1 (1 – 4)	For an answer that is mostly irrelevant and a few valid points that are not supported by economic analysis.

(b) Discuss whether price discrimination in the fast food industry is desirable. [15]

Introduction

Briefly state that price discrimination (PD) could bring about benefits and costs to the producers, consumers as well as the society of the fast food industry.

State that the benefits and costs to the producers, consumers and society could be measured by:

1) Producers' profits
2) Consumer welfare
3) Society's DWL

Body

Thesis

- **With the aid of a diagram, explain how fast food restaurants could earn more profits as a result of 2nd degree OR 3rd degree PD.**

- **With the same diagram, explain how consumer surplus will increase as a result of 2nd degree OR 3rd degree PD**

Example of 2nd degree PD

Referring to the preamble: ***McDonald's offers 6-piece nuggets at $4.40 and 9-piece nuggets at $5.70***

With the aid of a diagram, explain what second-degree PD is

According to the Diagram 1 below, McDonald's will charge a higher price, P_1 for a box of 6-piece nuggets whereas, a lower price P_2 for a box of 9-piece nuggets.

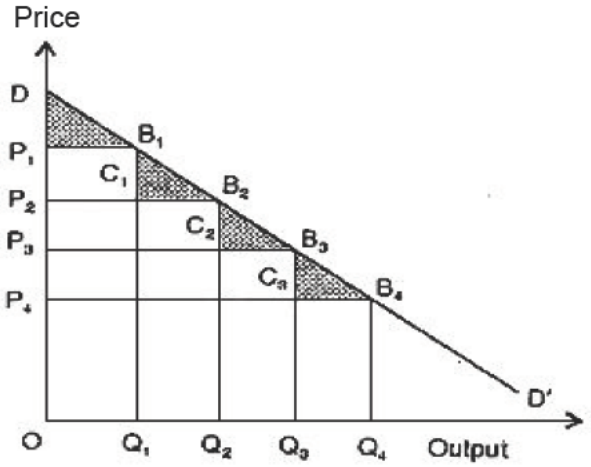


Diagram 1:
Second Degree Price Discrimination

Such pricing strategy is known as second-degree PD or block pricing. This second-degree PD takes place when the fast food restaurant identifies two or more different groups with different demand elasticities <u>based on the quantities purchased</u>.

One group, for example, would prefer and willing to consume any quantity below 6 nuggets, would have to buy the box of 6-piece nuggets. Most importantly, it NEVER buys more than 6 nuggets. Another group who only prefers and willing to consume any quantity between 6 to 9 nuggets, would have to buy the box of 9-piece nuggets and NEVER buy more than 9 nuggets. As a result, this group of consumers would have to buy the box of 20-piece nuggets. In other words, should a given buyer purchase 10 nuggets, the seller knows exactly to which group it belongs.

Hence, based on the differences in the preferences to consume varying quantities of nuggets, fast food restaurants would charge consumers a higher price for consuming a limited/smaller quantity as their price elasticity of demand is lower. For consumers who are willing to consume larger quantity, the restaurants would charge a lower price as their price elasticity of demand is higher

Learning point
This second-degree PD occurs because price is based on the quantity sold, NOT the characteristics of the group.

With the aid of a diagram, explain what second-degree PD could increase profits and increase consumer welfare

<u>2nd Degree PD: Benefits to Firms →Profits increases</u>
If fast food restaurants engage in second degree PD, they could earn higher profits as compared to the situation when they charge a single price for the nuggets.

With reference to the Diagram 1, second degree price discrimination allows the McDonald's to earn a sum of total revenue equivalent to ($0P_1B_1Q_1 + Q_1C_1B_2Q_2$)

However, if the McDonald's were to just sell a fixed-quantity of nuggets i.e. only 9 piece nuggets at one single price (i.e. P_2) at the profit-maximising output, McDonald's could only earn a sum of total revenue equivalent to $0P_2B_2Q_2$.

In comparison, by engaging in second-degree PD would enable a firm to earn more revenue by the amount $P_1B_1C_1P_2$.

Hence, assuming total cost does not increase more than the total revenue, price discrimination would benefit firms in terms of profits.

2nd Degree PD: Benefits to Consumers à Consumer welfare increases

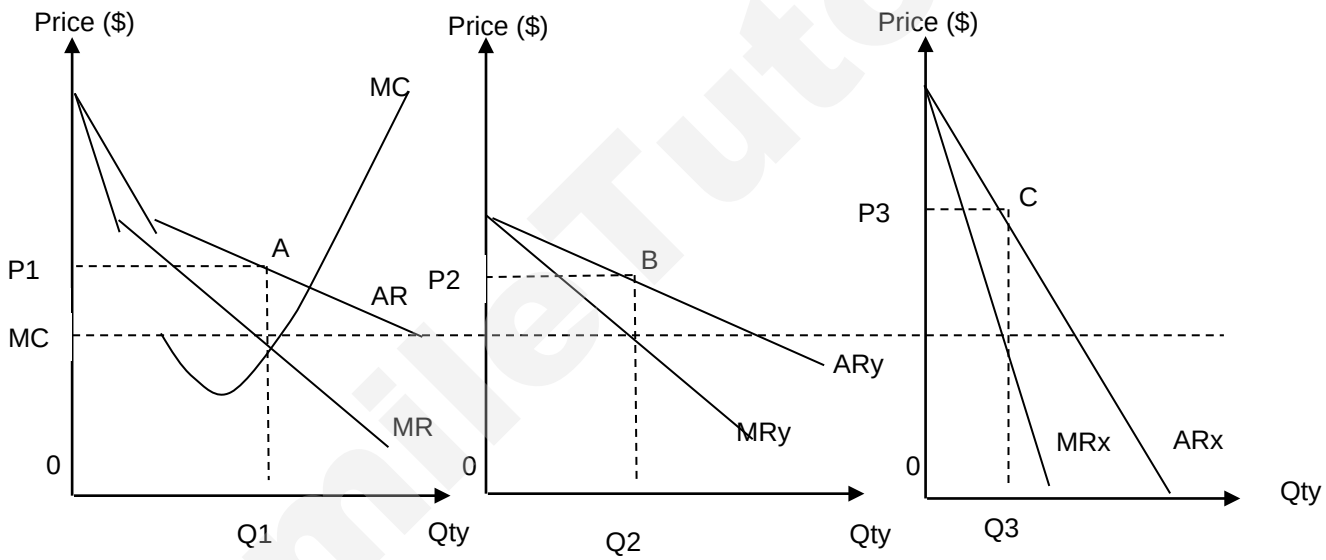
Furthermore, second-degree PD could benefit some consumers.

This is because consumers who prefer to consume larger quantity (i.e 20-piece nuggets) or lower quantity (6-piece nuggets) could now be able to do so. Due to greater choices that enable more consumer wants to be satisfied, consumer welfare increases.

OR

Example of 3rd degree PD
Referring to the preamble: ***KFC offers discounts for students while charge regular price for working adults***

With the aid of a diagram, explain what third-degree PD is



(a) KFC Market as a whole (b) Students market (c) Working Adults

Diagram 2: Third Degree Price Discrimination

According to the Diagram 2, KFC will charge a higher price, P3, for working adults while a lower price P2 for students for their set meal.

This is because the demand for the KFC's set meal by working adults is price inelastic while the demand for the same set meal by students is price elastic.

This is because working adults will only spend a smaller proportion of their incomes on fast food meals as compared to students who will be spending a larger proportion of their meagre allowances from their parents.

As a result, students would be more sensitive to price changes. When there is an increase in price, the quantity demanded for the set meal from KFC by students will fall more than proportionately, whereas, the quantity demanded by working adults will fall less than proportionately.

Due to the firm's incentive to make more profits, KFC would charge a higher price for working adults whereas a lower price for students.

With the aid of a diagram, explain what third-degree PD could increase profits and increase consumer surplus

3rd Degree PD: Benefits to Firms à Profits increases

This is because by engaging in third-degree price discrimination, KFC could earn greater revenue in both markets than by charging a single price (i.e. P1) across the two markets.

By setting a higher price for working adults, since Total revenue (TR) = Price (P) x Quantity (Q), the less than proportionate fall in quantity as compared to price increase would cause an increase in TR. On the other hand, by setting a lower price for students, since TR=P x Q, the more than proportionate increase in quantity as compared to price decrease would cause an increase in TR.

With reference to Diagram 2, the KFC, which engage in third degree PD, would earn greater total revenue of (P2BQ20 + P3CQ30) as compared to a firm which charge single price of P1 (Total revenue is only P1AQ10)

Hence, as total cost does not increase as the total output sold in the 2 markets is the same as the output in the combined market and the total revenue increases, price discrimination would benefit firms in terms of profits.

3rd Degree PD: Benefits to Consumers à Consumer welfare increases

Furthermore, third-degree PD could benefit some consumers.

This is because lower-income consumers who previously could not afford to buy the set meal from KFC could now satisfy their wants. As a result, these lower-income enjoy an increase in their welfare

Anti-Thesis

POSSIBLE POINT #1 à Overconsumption of Fast Food (i.e. a demerit good) – assuming 2nd degree PD is practiced

- As fast food restaurants are able to cater to more consumers wants and needs, there might be over-consumption of fast food due to imperfect information of the amount of calories intake that they need as well as the amount of calories that the fast food meals provide.
- With 2nd degree PD, consumers may over-consume fast food in order to enjoy lower prices.
  - With the aid of MSB-MSC diagram, explain how the over-consumption of fast food would lead to DWL (i.e**. disadvantage to society**)

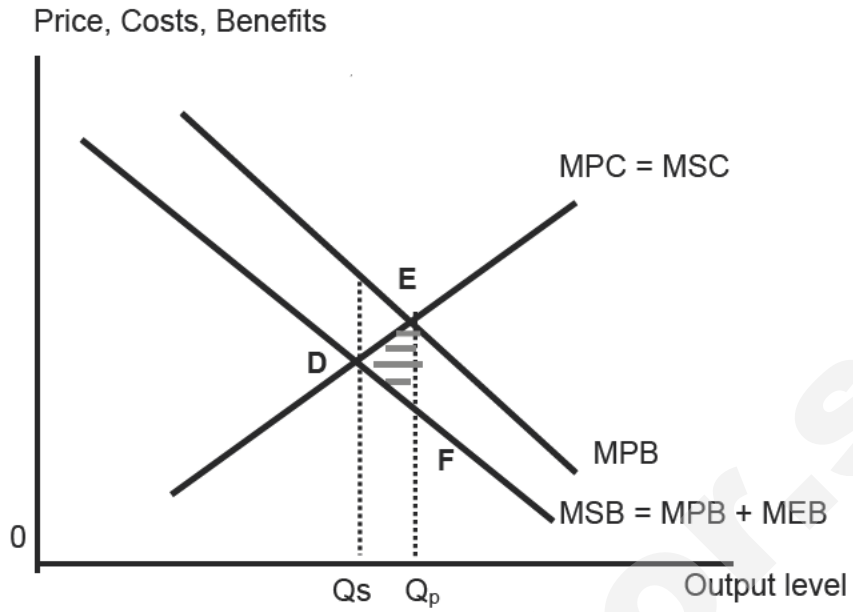


Diagram 3: Overconsumption of Fast Food – Demerit Good

As the consumers might be ignorant about the harmful effects (i.e. obesity, high cholesterol) of over-consuming fast food, they might over-value the benefits of consuming fast food.

As a result, MPB>MSB. As consumers aim to maximise their own satisfaction, they would decide to consume at 0Qp level of output where MPB=MPC. However, the society deems that the consumers should consume at the socially optimum level of output 0Qs where MSB=MSC. Since 0Qp>0Qs, there is overconsumption and hence over-allocation of resources to consume fast food. Due to inefficient allocation of resources, DWL of area DEF arises. The resources could have been allocated some other industry to improve the society welfare.

Hence, price discrimination is not necessary desirable if it leads to overconsumption of fast-food which is a demerit good.

POSSIBLE POINT #2 → Price War and Wastage of Resources

Fast food restaurants are oligopolistic firms and hence they are mutually interdependent. When one fast food restaurant were to compete in terms of price or non-pricing strategies, other fast food restaurants would follow suit. This is because they fear that by staying status quo could cause them to lose their market share.

Take for example, if McDonald's were to compete in terms of price by giving discounts to students or during lunch hours, other fast-food restaurants would also do likewise. This might lead to price wars which might hurt smaller firms' profits. In the long run, if the revenue earned does not cover the variable cost of engaging in price competition, the small firms might end up leaving the fast food industry.

If these small firms were to leave the industry, the consumers would no longer enjoy greater variety of fast food → consumer surplus decreases.

Furthermore, fast food restaurants might also compete in terms of non-price competition. Very often, restaurants that engage in price discrimination might give out discount coupons

or pamphlets that advertise their promotions. However, such aggressive market strategies might resulting in wastage of resources à over-allocation of resources à DWL

Hence, price discrimination is not necessary desirable if there is excessive/unhealthy competition in the industry as it might lead to wastage of resources as well as market dominance of bigger firms, depriving consumer welfare.

POSSIBLE POINT #3 à Reduction of consumer surplus for some Consumers

Under third-degree price discrimination, some consumers (i.e. the working adults) who used to consume fast food at a lower price might end up paying a higher price. For such consumers, they might lose out in terms of consumer surplus.

POSSIBLE POINT #4 à Increase in inequity

Under second-degree price discrimination, the fast food joints earn greater revenue and hence profits by charging a higher price for consumers who choose to consume a lower quantity of nuggets (i.e. 6 nuggets). By doing so, the producers gain at the expense of some consumers. As these fast food joints are large firms which could earn supernormal profits even if there is no price discrimination, the practice of price discrimination could worsen income inequity if they set higher price for lower-income consumers who just want to consumer lower quantity of nuggets.

Conclusion

Whether PD is desirable depends

1) on the development of the country,
2) the level of competition in the industry.

If the development of country is high-developed nations like USA where due to busy lifestyles à prefer convenience food like fast food à most likely obesity problem will surface à over consumption of fast food leading to over-allocation of resources à DWL à PD might not be desirable lin these country in terms of society welfare.

If the level of competition in the industry is very high especially in a saturated market, it might be possible that PD is not desirable as it is highly possible that there might be excessive/unhealthy competition in the fast food industry. This might lead lead to wastage of resources as well as market dominance of bigger firms, depriving consumer welfare.

Level	Knowledge, Understanding, Application, Analysis
L3 (9 – 11)	For an answer that presents a thorough knowledge of facts and theory with an excellent ability to describe and explain in a precise manner. Clear evidence of the ability to present a logical and reasoned analysis with respect to the question. Excellent explanation and links to the positive (i.e. thesis) and negative impacts (anti-thesis) on consumer surplus, firms' profits and DWL with attempt to apply to the context of fast food industry
L2 (6 – 8)	For an accurate but undeveloped explanation of the answers. A generic and theoretical discussion without application to the context of fast food industry (thesis and anti-thesis present). Undeveloped explanation and undeveloped links to consumer surplus, DWL and profits

L1 (1 – 5)	For an answer that is mostly irrelevant and contains only a few valid points, made incidentally in an irrelevant context. Regurgitation of content without reference to any context. Response consists little more than definitions and disjointed sentences which, when pieced together, makes little sense. Thrust of the question has not been been properly grasped. No economic analysis applied at all (no link to consumer surplus, profits, DWL at all!) One-sided (i.e. thesis only) à award max 5

Evaluation	
E2 (3 – 4)	For sound evaluation with insights; supported with a strong conclusion.
E1 (1 – 2)	Judgement is incidental, no/little substantiation is given and/or not insightful.

Essay Question 3

(a) Explain how the price mechanism allocates resources efficiently [8]

Introduction:
Definition of price mechanism
- means by which consumers and firms interact to determine the allocation of scarce resources between competing uses.
- serves as a signal to firms on relative scarcities, to ration goods that are relatively scarce to those who are willing and able to pay for it
- State that in a free market i.e without government intervention, price is determined by the demand for and the supply of a good.
- Show price determination in a market using demand and supply framework => No shortages and no surpluses at equilibrium level of price and quantity
- State Assumptions
  - perfect competition (perfect factor mobility, perfect knowledge)
  - no externalities

Explain the meaning of efficient allocation of resources:
- no one can be made better off without someone being made worse off => society's welfare is maximized => any re-allocation of resources will result in welfare loss.
- Show and explain maximization of sum of consumer and producer surplus in the diagram
- Explain condition for attainment of efficient allocation of resources: P=MC where consumer valuation of the good is exactly equal to the cost of producing the last unit =>No welfare loss to society

Explain adjustment to new equilibrium price and quantity when there is a shortage caused by an increase in demand or fall in supply (state one possible factor that can cause this) i.e
- Explain how a shortage at the original price (identified in the diagram and noted in the answer) is cleared to bring about a new equilibrium – some consumers are willing to pay a higher price to acquire the good à upward pressure on price à as the price rises, quantity demanded falls. At the same time, the higher price induces producers to increase the quantity supplied. This process continues until the shortage is eliminated and a new equilibrium is established.

- Relate the above change to change in allocation of resources by comparing the new and original equilibrium quantity => efficient allocation of resources.
- Show and explain welfare loss to society at any output level below the new equilibrium quantity => inefficient allocation of resources. As such, through the working of the price mechanism to establish a new equilibrium price and quantity, the welfare loss is eliminated and the sum of producer and consumer surplus are maximized.

Explain adjustment to new equilibrium price and quantity when there is a surplus caused by an increase in demand or fall in supply and state one possible factor that can cause this.

(Note: on explaining this 2nd scenario, it is good to show breadth of knowledge by shifting the supply curve if a shift in demand is already shown in scenario 1 above. Whether shortage / surplus is scenario 1 or 2 doesn't really matter. What matters is that the explanation for the adjustment in the 1st scenario must be more detailed than the 2nd)

- Explain how the surplus (identified in the answer) is cleared as resources are diverted away from the production of the good:
  - When demand for a good falls or supply increases, a surplus occurs at the original price à suppliers reduce price to clear the excess stocks à downward pressure on price.
  - As price falls, consumers are willing and able to buy more à quantity demanded rises. At the same time, producers are willing and able to supply less at a lower prices. This process continues until the surplus is eliminated => new equilibrium is established.
  - Compare new and original equilibrium to show re-allocation of resources à welfare maximization
- Reiterate that at any output level above the new equilibrium quantity, there is inefficient allocation of resources and welfare loss to society. => the price mechanism ensures that the welfare loss is eliminated => sum of producer and consumer surplus are maximized.

Conclusion:
Emphasize that the price mechanism in a free market (no government intervention) is only able to achieve efficient allocation of resources when there are no externalities in the production or consumption of a good and there is perfect knowledge as market imperfections can cause market failure, perfect mobility of resources which eases the reallocation of resources from one market to another dictated by the price mechanism, no market dominance brought about by barriers to entry which allows dominant firms to restrict output in order to raise the price above the MC thereby leading to welfare loss and inefficient allocation of resources.

Mark Scheme:

Knowledge, Application, Understanding, Analysis		
Level	**Descriptors**	**Mark**
L3	Clear explanation of how surpluses and shortages are cleared with clear reference to how resources are allocated efficiently	**7-8**
L2	Shortages or surpluses are explained with some attempt to address efficient allocation of resources.	**4-6**
L1	Answers do not show an understanding of how the price mechanism works to allocates resources efficiently. More of explaining the change in equilibrium price and/or quantity with errors in explanation	**1-3**

(b) A government imposes taxes on a variety of goods and services which include alcohol, fuel and some imported goods.

Discuss whether taxation would lead to a more efficient allocation of resources. [17]

Introduction:

- Define taxes -
- State taxation is usually a government measure to correct market failure – usually imposed on certain goods or services whose consumption or production tend to result in markets failure i.e failure to allocate resources at socially optimal level.
- However, in some cases it may result in a more inefficient allocation of resources.

Thesis:

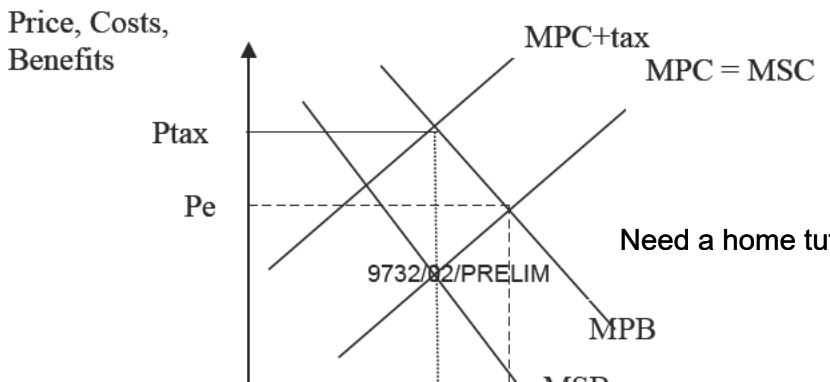
Explain alcohol as a demerit good which generates negative externalities of consumption while fuel generates negative externality in consumption or production.

- Alcohol is considered to be a demerit good as the governments considers the consumption of alcohol to be socially undesirable and that left to market forces, alcohol would be over-consumed.

  Source of market failure in the case of the market for alcohol
  - Alcohol tends to generate negative externality in consumption since there are significant external costs to third parties such as drunk-driving, loss of labour productivity and higher crime rates which cause a divergence between marginal private benefit (MPB) and marginal social benefit (MSB).
  - Since private individuals are motivated by self-interest, they only equate their marginal private benefits (MPB) and marginal private costs (MPC) in their decisions and ignore the marginal external cost (MEC).
  - As a result, they tend to consume alcohol beyond the socially optimal level where marginal social cost (MSC) equals marginal social benefit (MSB) → welfare loss to society.

- Consumption of fuel also tends to generate negative externality in production as there are significant external costs to third parties due to environmental degradation arising from carbon emission and its related costs such as disastrous climate change. Fuel too would be over-consumed under free market conditions resulting in welfare loss to society.

- Explain with diagrams how taxes (students may refer to the tax as a Pigouvian Tax, a tax that is imposed to deal with negative externalities) reduce over-consumption of alcohol or fuel and hence achieve more efficient allocation of resources.



The government could levy a tax that increases private marginal cost (MPC) to MPC+tax.

For the tax to eliminate the welfare/deadweight loss, the level of tax should be equal to the level of marginal external cost (MEC) at the socially efficient level of consumption of alcohol or fuel, Qs, raising price from Pe to Ptax. This increase in price eliminates over-consumption (QsQe) and thus over-allocation of resources. As a result, the socially optimal amount of resources into the consumption of alcohol is achieved.

§ Limitations of taxation
  - o MEC at the socially efficient level of production of alcohol is not easy to determine thus the government may not impose the correct level of tax to completely eliminate the deadweight loss.
  - o Furthermore, as alcohol consumption is addictive, it may mean the demand for alcohol is relatively price inelastic. This may limit the effectiveness of the policy in reducing the consumption as consumers will pay the tax to continue drinking alcohol.
    - ð As such, though the imposition of the tax may bring about a more efficient allocation of resources by moving the free market output closer to the social optimum, , it may not eliminate the deadweight loss totally.
  - o Explain the appropriateness of taxation in addressing the source of market failure such as imperfect information associated with alcohol and fuel. One of the main reasons for over-consumption of alcohol is that consumers lack accurate information of the actual benefits of alcohol consumption; hence they overestimate marginal private benefit. Their perceived marginal private benefit exceeds the actual marginal private benefit since consistent alcohol consumption results in higher healthcare and social costs while fuel consumption may lead to less favourable environment which could adversely affect quality of life.
    - ð For this source of market failure, taxes may not be effective in bringing about a more efficient allocation of resources as they do not target the underlying root cause of imperfect information.

§ Explain how taxes on imports (tariffs) may lead to a more efficient allocation of resources

In cases where a foreign country sells its products at very low prices, in some case below MC, to drive out domestic producers from the market, the imposition of a tax on these goods is likely to increase the price of the good, bringing it closer to MC, resulting in a more efficient allocation of resources.

Limitations
If is often difficult to determine if a country is actually dumping or is able to sell at lower prices because of the lower unit costs enjoyed by the country due to comparative advantage in the production of the good. If the country imposes an import duty on another country that is actually the more efficient producer of the good, this is likely to worsen efficiency in the allocation of resources.

Anti-thesis:

§ Explain how in the case of tariffs on imported goods may lead to less efficient allocation of resources. (Diagram is optional)

Tariffs are imposed on certain imported goods which are usually close substitutes of locally produced goods. Since, the countries from which the goods are imported tend to enjoy comparative advantage in the production as they have a relatively lower opportunity cost due to more favourable and abundant factor endowment, this imposition of tariffs distort price signals and bring about less efficient allocation of resources as resources are diverted away from more efficient foreign producers to less efficient domestic producers.

Thus when tariffs are imposed, there is under-consumption of such goods as tariffs increase price of imported goods and reduce quantity demanded of such imports compared to free trade situation.

At the same time, there is also over-production of local substitutes as less efficient domestic producers are encouraged to increase production due to higher prices resulting from tariffs. This over-allocation of resources in less efficient local production and under-allocation of resources in more efficient foreign production results in deadweight loss, bringing about a less efficient allocation of resources.

Conclusion (Synthesis):

§ Taxes imposed on some goods such as fuel and alcohol or in the case of dumping may lead to more efficient allocation resources but the extent to which there is improvement in allocative efficiency depends on the effectiveness which is affected by the amount and accuracy of the information that the government has.
§ There is a need for governments to consider the root cause of the problem and implement appropriate policies that address the cause in order to improve on resource allocation that can lead to welfare gain.
§ While a tax on fuel may improve resource allocation, it may worsen equity as the tax would raise prices of fuel and reduce the ability of lower income groups to afford private transport or public transport at a lower price.

Mark Scheme

Knowledge, Application, Understanding, Analysis		
Level	**Descriptors**	**Mark**
L3	Balanced answers with clear and coherent explanation of how taxation may or may not lead to more efficient allocation of resources with good application to context.	**10-13**

L2	Response presented consists of both thesis and anti-thesis but lack development with limited application to context. For responses that considers taxes to address negative externalities only with its limitations – Max mid L2	**5-9**
L1	Some valid points are present. More focus on the sources of market failure instead of how taxation leads to more efficient allocation of resources. One-sided answer than only considers thesis or anti-thesis No application to context.	**1-4**
	Evaluation	
E2	Explained judgment of how other measures may be more effective or appropriate in achieving more allocation of resources. OR other explained evaluative comments as highlighted in the answer scheme.	**3-4**
E1	Judgment of how other measures may be more effective or appropriate in achieving more allocation of resources. OR other evaluative comments as highlighted in the answer scheme.	**1-2**

Section B:

Essay Question 4

A government can employ a variety of macroeconomic policies to improve on the country's economic performance. These interventions may result in trade-offs between different macroeconomic policy objectives.

Discuss whether consideration of such trade-offs is relevant to a government in its macroeconomic policy decisions. [25]

Suggested Answer:

The economic performance of an economy depends on how well these 4 main macroeconomic objectives are achieved:

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

Arguments should be illustrated through the use of examples. Do not expect students to give accurate examples to exemplify their points. An attempt to do so would suffice.

Thesis:

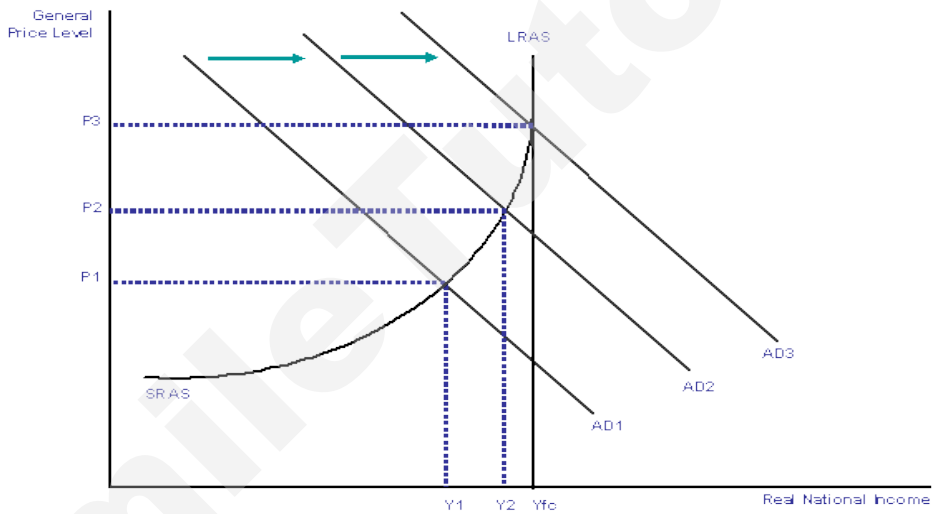
A government's macro policy decision inevitably leads to trade-offs in macro objectives/aims as it is impossible to simultaneously achieve all four macroeconomic objectives simultaneously.

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.

The macro policy decisions refer to whether they should use the policy to achieve the aim/priority, in view of the potential conflict of aims.

Thesis argument 1: Trade-off between Low unemployment/strong growth vs stable prices

Should the government attempt to achieve strong growth and/or low unemployment rate, stable prices will be compromised i.e. DD-pull inflation. Expansionary policies 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 (explain briefly).

Thesis argument 2: Trade-off between strong growth vs long term BOP eqm

For a country that experiences strong growth (as a result of successful demand-management policies), its citizens would have a bigger appetite towards imported goods and services (referring to normal goods like necessities and luxury goods) so as to satisfy their needs and wants (motive of maximising utility). Even for goods that can be obtained locally, consumers will still have preferences for variety (colour, size, etc). This collective behavior 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 will now find its position sliding into a deficit. If this persists, a long term BOP deficit will now pose a new set of problems (explain briefly).

**The thesis argument can be applied generally to most economies. Hence, students may choose which examples to exemplify their points.*

All in all, the government needs to weigh the potential benefits and costs carefully before deciding if it should pursue its initial goal/priority.

Anti-Thesis: Trade-offs of macro aims is not the only relevant factor in the government's macroeconomic policy decisions. The choice of a government's macro policy decision depends very much on the nature of its economy i.e. the size, degree of openness and the stage of economic development.

The macro policy decisions refer to which policies the government should use, in view of the nature of the economy and the likely problems that will emerge.

Anti-thesis argument 1: An economy's size is also relevant in the government's macroeconomic policy decisions.

Compare Switzerland and Canada (similar stages of development and high degree of openness but with different sizes):

Characteristic	E.g of country	Likely Macroeconomic priority	Likely types of macro policies used
Small ecy	Switzerland	Externally-driven growth	ER policy; SS-side policies centred on encouraging FDI
Large ecy	Canada	Domestically-driven growth	FP; MP

Given that the Swiss are likely to pursue externally-driven growth, this implies that the implementation of macro policies tend to encourage FDI or export-oriented growth. The inflow of FDI may also help the Swiss increase the productive capacity of their economy which causes the vertical part of the AS (LRAS) to increase in the long run, coupled with actual growth in the short run. This is in line with achieving externally-driven economic growth for Switzerland.

In contrast, a large economy like Canada can pursue domestically-driven growth due to the presence of a large consumer base and pool of local investors.

Hence the size of an economy is likely to be a relevant determinant behind a government's macro policy decisions.

Anti-thesis argument 2: An economy's degree of openness is also relevant in the government's macroeconomic policy decisions.

Define degree of openness as the number of times the total volume of trade is of its GDP.

Compare Singapore and Norway (both with population of 5 million and similar stages of development):

Characteristic	E.g of country	Likely Macroeconomic priority	Likely types of macro policies used
Very open ecy	Singapore	Long-term BOP eqm	MP centred on ER
Less open ecy	Norway	Economic growth	FP; MP

A small and open economy like Singapore may pursue the priority of a long term BOP equilibrium given her dependence on the quality of relationships with its trade and investment partners. A gradual and modest appreciation of the S$ affects the relative import and export prices and hence its BOP position.

A less open economy like Norway though will prefer to rely on its expansionary FP due to a small MPW and hence higher k value i.e the same amount of injection into Norway will bring about a larger increase in nominal NY compared to Singapore.

Anti-Thesis argument 3: An economy's stage of development is also relevant in the government's macroeconomic policy decisions.

Compare Australia and Ivory Coast (high degree of openness, similar size but different stages of economic development)

Characteristic	E.g of country	Likely Macroeconomic priority	Likely types of macro policies used
Developed ecy	Australia	Stable prices	FP; MP; SS-side policies for non-inflationary growth
Developing ecy	Ivory Coast	Economic growth and/or low Un	FP; ER policy; SS-side policies centred on encouraging FDI

For a country like the Ivory Coast, economic growth (Y to Y1) is a likely priority given that a rise in income can allow its citizens to enjoy a higher material SOL.

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.

Anti-thesis argument 4: Other than the nature of the economy,

- The choice of macroeconomic policy decisions may also depend on the prevailing circumstances being faced by the economy at that point in time and as such, there

may be deviations in the country's long-term policy decisions to achieve some short-term goals. For instance, while a small and open economy such as Singapore typically makes use of MP centred on ER, if Singapore was facing a recession, their short-run policy decisions may deviate from their long-term policy choices in order to pull Singapore out of a recession.

(Any other points that may show that trade-offs are not the only consideration e.g. SR trade-offs to achieve LR objectives, policies complementing the achievement of goals, etc.)

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 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)	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)	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. However, answer tends to be light-weight in the use of real-life examples, or may be limited in scope.
L2 (12-14)	An underdeveloped discussion of a government's macroeconomic policy decisions, taking into account the relevance of the trade-offs. While answer establishes how other factors may also affect a government's policy choices, it tends to downplay the considerations of trade-offs to an economy in its policy choices.
L2 (10-11)	An underdeveloped argument that is largely one-sided in analysis and may contain some minor misconceptions and/or theoretical errors. The link of the candidate's points to the question may not be well-established.

L1 (6-9)	Some relevant points incidentally made but thrust of the question had not been grasped. 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. Includes ability to question assumptions.

Essay Question 5

Supported by strong employment creation, the unemployment rate declined to a 14-year low in 2011. This is due to strong hiring from the services sector, for example integrated resorts and construction sectors which are boosted by public projects and the economy recovering from the 2009 recession.

Source: Singapore Ministry of Manpower, 31 Jan 2012

(a) Explain possible reasons that led to the decline in unemployment rate in Singapore. [10]

(b) To what extent would standard of living in Singapore be improved as a result of the government's intervention to reduce unemployment? [15]

(a) From preamble, possible reasons for the decline in unemployment rate in Singapore are as follows:

1) Strong hiring from services sector
2) Strong hiring from construction sector
3) Economic recovery

Alternatively, any other possible reasons given by students are also accepted.
For example:

- rise in C & I due to economic recovery/positive economic outlook
- rise in G due to expansionary fiscal policy

- continued growth in S'pore's trading partners, like China & India, resulting in rise in net X.
- Govt's policies to raise spending on training, and productivity schemes to reduce structural unemployment.

When students bring in reasons taken from the preamble, they should clearly elaborate on what the factor is and how the factor brings about a decline in UN rate. They can link to cyclical and structural UN, but it is not a must to link to all 3 types of UN (cyclical, structural and frictional) to score an L3.

1) Strong hiring from services sector

   Could be due to economic recovery around the world, national income of foreign countries increased. Higher purchasing power and optimism about the future à increase in demand for imports and thus demand for Singapore's exports (services) increased à reduction in unemployment

2) Strong hiring from construction sector boosted by public projects

   Could be due to government measures to deal with cyclical unemployment using expansionary policies à for e.g., expansionary fiscal policy - increase government spending on building infrastructures, housing, etc. à reduction in unemployment

3) Economic recovery from 2009 recession

   National income increased à higher purchasing power and optimism about the future à increase in demand for goods and services (Consumption) and investments

   Economic analysis: increase in consumption, investments and net exports à increase in aggregate demand à increase in demand for labour to produce more output to meet increased demand à increase real national income & thus national output à reduction in unemployment.

Students could conclude by stating which could be the most significant cause for the decline in unemployment rate by linking to any possible reasons for a rise in AD or rise in AS.

Level	Marks	Descriptors
L1	**1-4**	Able to identify the factors leading to a decline in unemployment rate.
L2	**5-6**	Explanations of the factors are accurate but are inadequately developed with some use of examples. Not applicable to Singapore's context.
L3	**7-10**	A good knowledge of factors with relevant examples in relation to Singapore's context. These factors, which are well-grounded using economic analysis, provide evidence of in-depth analysis.

(b) This question focuses on the effect of government intervention on standard of living, as it strives to reduce unemployment.

Each point must relate to both material and non-material aspects of SOL for clarity and focus.

- Material SOL

- quantity of goods and services individuals can consume (real GDP per capita)

- Non-material SOL
  - environment and quality of life of individuals (measured using indicators like literacy rates, Gini coefficient, amount of pollution, etc).

Thesis: Standard of living (both material & non-material SOL) in Singapore may improve as a result of the government's intervention to reduce unemployment.

- As the govt addresses cyclical unemployment via expansionary DD-management policies (↑AD), more jobs will be created and more income earned. This will be translated into higher level of real NY. Assuming population size remains constant, the real NY per capita rises, implying a higher material SOL (higher ability to buy more and better quality goods and services, especially luxury goods).

- Should the govt decide to improve the flow of information amongst job-seekers and employers, there will be less lag time for the unemployed to seek suitable employment. This will enable the average unemployed person to earn an income, allowing him to improve his material SOL. At the same time, the stress associated with job seeking can be alleviated (improve non-material SOL).

- For the individual who is structurally unemployed, retraining will enable him to be relevant to the demands of the economy, allowing him to earn an income now è collectively, they experience an increase in material SOL.

- With more people being employed, govt will collect more tax revenue (via direct or indirect tax revenue) è such additions to govt budget enables the govt to increase spending on reducing negative externalities in the country (e.g. cleaning up polluted air, providing more information via campaigns to educate public on negative externalities created by gambling) è non-material SOL improves.

Anti-thesis: Standard of living (both material & non-material SOL) in Singapore may not improve as a result of the government's intervention to reduce unemployment.

- If expansion of the economy is too excessive due to the govt's over-zealous attempts to address cyclical unemployment, DD-pull inflation will result è internal value of money falls è real income fall (assume unchanged nominal income) è lower ability to buy goods and services è material SOL falls.

- In addition, if government needs to divert resources or funds (e.g. subsidies) in the implementation of the policies to deal with the problem of unemployment è both material and non-material SOL fall è fewer resources or funds for provision of merit goods (opportunity costs).

- From the preamble, there is strong job creation in industries that may generate negative externalities (for e.g., casinos, construction projects) è non-material SOL falls as more are likely to suffer the ill-effects of problem gamblers or more likely to fall sick due to increased pollution level. Quality of life would fall.

- The structurally unemployed individuals are likely to face a higher level of stress in the short run, while undergoing their retraining. Given that the skills and competencies are new to them, they may struggle to pick up these skills and this may lower their non-material SOL. Also, they are likely to experience a fall in material SOL

compared to if they were to find employment now (they will earn zero income when they are on course).

Evaluation:

- Come to a stand on the extent to which standard of living in Singapore would improve as a result of the government's intervention to reduce unemployment. Justify why.

- SOL is multi-faceted (material and non-material) and the government should consider how else it can be enhanced via other means e.g. laws pertaining to pollution, provision of healthcare services, etc.

Level	Knowledge, Understanding, Application, Analysis
L3 (9 – 11)	For an answer that presents a thorough knowledge of facts and theory with an excellent ability to describe and explain in a precise manner. Clear evidence of the ability to present a logical and reasoned analysis with respect to the question. Excellent explanation of the positive and negative implications of the Singapore govt's policies on SOL, with good applications to real-life context. High L3 – logical economic analysis with assumptions specified.
L2 (6 – 8)	For an accurate but undeveloped explanation of the issues. For an answer that has little reference to real-life context, award maximum of 7 marks. A generic discussion that lacks sufficient breadth. Ability to discriminate and form basic judgements. Clear presentation.
L1 (1 – 5)	For an answer that contains only a few valid points, made incidentally in an irrelevant context. Regurgitation of content without answering the question e.g. extensive explanation of how the respective policies work. Response consists little more than definitions and disjointed sentences which, when pieced together, make little sense. Thrust of the question has not been properly grasped. E.g. an extensive display of why non-material SOL will not change despite the policies.

Evaluation	
E2 (3 – 4)	For sound evaluation with insights; supported with a strong conclusion.
E1 (1 – 2)	Judgement is incidental; no/little substantiation is given and/or not insightful.

Essay Question 6

(a) Explain the factors that facilitate the move towards globalisation. [10]

(b) Discuss the extent to which the move towards globalisation might lower the general price level in an economy. [15]

Introduction:

1. Define globalisation and its forms

Globalisation refers to the integration of world economies in the areas of trade, labour and capital flows and technology. Globalisation takes the form of rising volume of world trade, rising volume of capital flows including short-term financial capital and FDI and rising international mobility of labour.

Body:

1. Explain the reasons for rising volume of world trade

(a) Trade Liberalisation

Key reason for trend towards globalisation à The benefits of trade push countries towards greater trade liberalisation so as to reap more benefits.
Decline in trade barriers such as tariffs and non-tariffs restrictions have enhanced trade and investments leading to freer movement of goods, services and capital between countries. Current wave of globalisation has been driven by policies undertaken by the governments around the world by opening up their domestic markets which vastly increase their productive potential creating new opportunities for international trade and investment. Governments have been negotiating for reduction in trade barriers in international agreements to promote trade in goods, services and investment. With each country producing according to their comparative advantages, it has brought about many benefits to both the exporting countries as well as the importing countries.

(b) Fall in transport cost, ability to enjoy cost savings etc

Improvements in technology of transport and communication and the resulting fall in transport cost have contributed significantly to the process of globalisation.
Explain why transport cost matters in trade à transport cost can narrow the CA different countries have.
Explain why transport cost fell over time à containerisation + improvement in engineering technologies
The usage of larger ships and planes with the development of containerisation has facilitated the movement of goods and services between countries lowering air and freight costs. Businesses can now ship products and raw materials all over the world more easily and at a lower cost. As a result, more countries around the world become closely integrated through greater trade and transfer of information and technology.
In addition, domestic producers desire to maximise profits will motivate them to venture abroad. They will gain from an enlarged export market, particularly for those residing in a small domestic market like Singapore (increase consumer base and hence total revenue). They are able to reap internal EOS due to a larger scale of production (earn cost savings). In addition, with greater opportunities to outsource in order to reduce costs due to cheaper labour costs overseas e.g. China and India, which also increases the profitability of firms.

Sustained economic growth can thus be achieved through technology transfer from foreign investments as well as greater trade volume between countries.

(c) Rise in global real income

Rapid development in many countries à increase in consumer income à rising demand for imports à growth in volume and range of variety of goods and services
Consumers' desire to maximise utility have fuelled the surge in the exchange of goods and services across international boundaries. Consumers can obtain lower-priced goods because a country's trading partners can produce them more efficiently due to their comparative advantage in its production (can produce at lower opportunity cost). Globalisation enables a country's citizens to have access to products that it does not produce and thus enjoy greater varieties & choice of goods and services. Therefore, it will lead to an improvement in the material aspect of SOL of the citizens. In addition, advancement in in information and communication technology has transformed economic life as there is increasing ease with which consumers can find out about and buy products from other countries and producer can coordinate production throughout the world. Expansion of electronic data exchange with internet e-payment has led to increasing speed and efficiency of transactions between countries.

2. Explain the reasons for increase in volume of financial capital flows

(a) Deregulation of banking and financial activities & Removal of capital controls

Deregulation à development of new financial products à significant increase in the volume of trade in financial capital. International flows of capital/funds increased.

(b) Improvement of ICT

Improvement in ICT leads to a significant fall in communication costs à Financial capital can be transacted across countries at negligible costs and time à an increase in the volume of financial capital traded.

3. Explain the reasons for increased international labour mobility

(a) Reduction in barriers to labour mobility

Relaxation of legal barriers to labour mobility has increased labour flows between countries. For e.g. S'pore has relaxed its immigration policies to allow greater inflow of foreign labour to fill up shortages in various industries and keep wage cost competitive.

(b) Greater knowledge and accessibility

Growing integration of national markets into the global economy, and technological innovations have significantly reduced the costs of transportation and enhanced awareness of global employment opportunities allowing for greater international mobility.

<u>Conclusion:</u>

Recognise importance of other factors in facilitating the move towards globalisation

Level	Knowledge, Application/Understanding and Analysis	Marks
L3	For an answer that uses appropriate analysis to explain the reasons for the trend towards globalisation & provides some form of evaluation on the relative significance of the factors.	7-10
L2	For an answer that gives a descriptive explanation of the reasons for the trend towards globalisation	5-6
L1	For an answer that shows descriptive knowledge of globalisation or states rather than explain the reasons for the trend towards globalisation	1-4

(b) Discuss the extent to which the move towards globalisation might lower the general price level in an economy. [15]

Command Word: Discuss the extent
Content word: globalisation, general price level
Context word: An economy
Globalisation caused an increase in trade of goods, capital flows and international movement of labour through an improvement in level of technology and increasing openness of economies.
Increased in trade of goods, capital flows and international movement of labour might cause GPL to be lowered and also maintain price stability. Changes in GPL could be due to changes in AD or SRAS or LRAS. Students should use AD-AS diagram to aid their explanation.
How GPL will be affected (either an increase or decrease) depends on:

1. Degree of openness and Size of the economy
2. Government policies that were implemented
3. Stage of economic development of the economy
4. Global economic outlook

<u>Thesis: Globalisation à ↓GPL</u>

1) ↓AD

<u>Economic Analysis</u>
Increased in short term capital inflow might cause GPL to fall in an economy. When there is a sudden inflow of capital (e.g. short term capital) due to higher interest rates, there will be an increase in demand for the country's currency causing appreciation.

Appreciation of currency due to large capital inflow will affect the economy which is dependent on exports for growth, it might lead to a fall in demand for its' exports as they lose price competitiveness, assuming marshall-lerner condition holds true, caused net exports to fall, AD fall and leading to fall in GPL

<u>Example</u>
Countries like US faces trade deficit with China due to the cheaper imports from China. Furthermore some countries might lose comparative advantage as China opened up to allow firms to set up in its special economic zone to tap on their large labour force hence some industries in the domestic country have lost comparative advantage in producing labour intensive goods, hence these countries might have a decrease in exports.

Furthermore, due to the lower unit COP in China due to cheaper labour and also such firms can tap on the EOS, hence can translate such cost savings into lower prices hence global consumers choose to import from China hence might worse their domestic net exports, causing AD and GPL to fall, ceteris paribus

Evaluation

- GPL might fall due to fall in net exports, hence government polices implemented such as some protectionistic measures might help to maintain price stability and also economic growth.

- Furthermore, if the domestic economy is able to establish other industries and gain comparative advantage, the change in GPL will not be drastic.

- The extent to which short term capital flows has on the changes in GPL is also dependent on the global and regional outlook in the globalised world. As seen in the recent global economic crisis in 2008, it has affected UK financial system when UK was caught in massive capital outflow hence affecting its GPL.

  If there is positive global economic outlook, economic recovery can also be equally fast and economies would face large increases in export and domestic demand increasing AD significantly hence causing DD-pull inflation

2) ↑SRAS

Economic Analysis

- With increased trade of goods, due to more free trade agreements signed, hence lowering tariffs leading to fall in imported goods prices which are used as raw materials, intermediate goods or final goods and services à ↓ unit cost of production à ↑SRAS à ↓GPL

- An increase in trade flow à diversification of sources of imports due to more FTA signed à therefore an economy has the ability to switch to other sources quickly to limit the fall in SRAS hence keeping prices stable and prevent from increasing too fast.

- Local firms within the economy could face higher competition as globalisation allows capital to flow freely hence there is growing presence of foreign competition within the economy. This increasing competition due to inflow of foreign direct investments which is a form of long term investments where firms set up headquarters or plants here. Local firms which used to have monopoly power within the economy will try to become more efficient and reduces X-inefficiency or become more active in R&D in process development to lower the unit C.O.P hence able to pass on such cost-savings to consumers hence SRAS rise and lowers GPL.

- In addition, the ability of firms to outsource their production processes to lower cost countries also translates into lower unit C.O.P and hence lowers GPL.

It might also lead to changing of market structure for that particular type of good or service from a monopoly to oligopolistic market structure, leading to price rigidity and hence helps to lower prices or maintain prices in an economy.

Example

Singapore being small is highly reliant on imports for food. It allows Singapore to diversify its food source and not overly reliant on a single country à stable and adequate SS of food

Food contributes to a high weightage in CPI hence an economy like Singapore is susceptible to imported cost-push inflation especially due to supply shocks. (eg avian flu, floods or other natural disasters destroying food crops)
For e.g. there is an increasing number of foreign firms competing with local companies in the banking, retail and hotel industries due to increase in capital flow where there is more FDI in Singapore.

Evaluation
However the extent at which ↑ in trade of goods can prevent prices from rising too fast during SS shocks is also dependent on

1. The number of FTAs signed and maintained good relationships with these countries. Where an increased in trade of goods due to signing of more FTAs will help to minimise the impact of supply shocks. Especially when a small economy chose to actively pursue more countries to join into signing the FTAs will be able to diversify source of imports. However it might still be hard to lower the GPL especially if it's a natural disaster due to climate change which hits a lot of countries that produces food stuff. As climate change is a world phenomenon hence it might be inevitable.

2. Size of the economy also matters as large economies (eg China and US) unlike smaller ones, have more resources in terms of land etc, hence they might not be as dependent on increased in trade of goods with other countries for goods such as food or raw materials to lower their GPL as they might already be self-sufficient hence an increased in trade of goods might not really help substantially to reduce GPL.
3. For a small and open economy like Singapore, the extent to which an increased in trade of goods can affect and maintain to lower GPL is also dependent on the govt policy adopted by the government. Eg: The ability to maintain price stability may be attributed more to the successful use of exchange rate policy by the Singapore à where the Singapore government maintains an appreciation stance to lower the price of imports in domestic currency to help counter the imported inflation or imported cost push inflation that comes with increased in trade of goods.

However the contribution of increased capital flow of FDI to lower GPL depends on the competitiveness that globalisation helped to create in the industry.

3) ↑LRAS

Economic Analysis
- More countries opening up à↑LT capital à↑ quantity and quality of resources For e.g., ↑quantity and quality of labour such as foreign talents & workers & capital resource in the form of long term investment such as FDI
  - è Productive capacity ↑ à ↑LRAS
  - è Hence, GPL ↓

Example
Small economy like SG faces land and labour constraints & has generally been operating at near full employment position for the past decade where any subsequent ↑AD will inevitably lead to dd-pull inflation
Hence ↑ international movement of labour into Singapore can ↑ LRAS enabling firms to ↑production of goods & services to accommodate rising AD

Evaluation

- Extent of ↓GPL depends on type of labour policies implemented by govt. For e.g. Increasing the no. of employment pass and work permits issued. However, increasing quantity of labour might be unsustainble as it will add a strain on transport & housing market in Singapore hence might cause ↑GPL due to increase in C, I components of AD leading to demand pull-inflation.

Anti-Thesis: Globalisation à ↑GPL

1) ↑AD

Economic Analysis

Increase in investment when firms decided to set up plants and bring in capital stock and machineries into the economy à since investment is a component of AD will cause AD to increase hence GPL will rise.

Example

For a small and open economy like Singapore which operates at a position very near to full employment, where changes in AD will be felt more keenly on price levels.

Evaluation

- However, it depends on the extent of shift of the AD and LRAS as increase in long term capital inflow might lead to FDI that is otherwise unavailable to the domestic economy hence able to increase the knowledge and technical transfer taking place hence increasing the productive capacity of the economy and LRAS shift.

- Hence the extent of rise in GPL will also have to be determined by the extent of rise in AD vs LRAS.

- The impact of FDI on the LRAS shift hence lowering the GPL is dependent on the quality of resources and technological advancement in the countries of destinations and nature of industry. For e.g., in some developing countries they might not have the competencies to gain benefit but in Singapore, it did manage to attract firms to establish value-added services and production centres in the region and attracting Research and Development base to provide opportunities for technology and information transfer and aiding improvement in quality and quantity of resources in Sg hence LRAS can shift hence reducing demand-pull inflation.

2) ↓SRAS

Economic Analysis

Increased in trade of goods will lead to a rise in unit cost of production hence SRAS fall.
As increased in trade of goods due to increasing opening of large economies like India and China, which is rapidly industrializing, they require lots of raw materials and factors of production.

à Leading to increase in global demand for such raw materials, food stuff and fuel

à Leads to depletion of raw materials and competing demand for land for biofuel crops and food for human consumption.

à Leading to rising in import prices for small countries that has very little raw materials and depends on imports of such inputs of production, fuel, foodstuff and finished goods.

à Causing SRAS to shift upwards causing severe imported cost push inflation in small and open economy like Singapore.

Example
For eg. Rare earth metals and Crude Oil Prices have been increasing.

Evaluation
- It also depends on the type of labour policies that govt used and affecting the extent of fall in GPL
- When Singapore govt implemented the Dependency Ratio Ceiling (maximum number of foreign workers you can hire), in SR unit cost of production will rise due to shortage of labour
- Even if there is increase in international movement of labour, firms are unable to employ them due to the ratio of foreigners to Singaporeans is being fixed it may still lead to a rise in unit cost of production à a fall in SRAS leading to GPL ↑

3) ↓LRAS

Economic Analysis
Due to the improvement of technology which improves transport and telecommunication which leads to the ease of labour movement.
à might cause Brain Drain problem which leads to migration of such capable workers migrate to other countries hence leading to fall in quantity of talented workers & quality of workers may fall in the domestic economy
à Leading to a fall in LRAS hence GPL will increase

Example
Increasingly, more Singaporeans are staying on in countries like the United States

Evaluation
- It also depends on the govt policy implemented to prevent brain drain which leads to fall in labour quantity and quality.

But Singapore is making up for the brain drain by getting bright Chinese and Indians into Singapore where they are attracted by better prospects here à Therefore, LRAS might not fall but might also increase à ultimately ↓GPL instead

Conclusion
In the increasingly interconnected world where there is increased interdependence of national economies and greater integration of goods, capital and labour markets, general price level will no doubt tend to change more quickly in a small and open economy (for e.g. Singapore and Hong Kong) compared to those larger and relatively closed economies like US and China. As these small and open economies are mainly dependent on trade for economic growth and basic necessities or raw materials hence are more susceptible to changes in price levels due to changes in global economic activity compared to larger economies like US and Europe which are less susceptible but nevertheless will still be affected with people are attracted to growing opportunities in the emerging economies. Therefore, with increasingly globalised world, governments around the world will have to take on a more proactive role and be vigilant in using the policies to maintain price stability by analysing the global economic climate.

Level	Descriptors	Marks
3	For an answer that is also well-developed with detailed analysis and contained application to relevant situations with examples. For an answer that is well developed with detailed analysis of how an increase in trade of goods, capital flows and international movement of labour can increase and decrease the general price level in an economy and has a clear structure to answer the question. The answer also must contain clear statements to discuss the extent to which general price level are being affect and are supported by reasoned arguments.	9-11
2	For an answer that has more thorough relevance as to what extent and how an increased in trade flows, capital flows and mobility of labour can increase and decrease the general price level of the economy. For an answer that shows an ability to identify how an increase in trade, capital flows and mobility of labour can lead to general price level to increase OR decrease and explain some facts, have some ability at drawing graphs and fair ability to apply concepts to the context of the question. Most of the analysis is accurate but undeveloped with ideas not organized properly to answer to the question directly. Generic analysis – max 6m	6-8
1	For an answer that shows some knowledge but does not indicate that the meaning of the question has been properly grasped. This answer contains basic conceptual errors. For an answer that is mostly irrelevant and contains only a few valid points made incidentally.	1-5

Allow up to 4 additional marks for Evaluation		
E2	For a valid evaluation that is well justified.	3-4
E1	For an unexplained judgment or one that is not supported by analysis.	1-2

SERANGOON JUNIOR COLLEGE
JC 2 Preliminary Examination

ECONOMICS **8819/01**
Higher 1

PAPER 1 2013

3 hours

Additional Materials: Writing paper

READ THESE INSTRUCTIONS FIRST

Write down your name and civics group 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 (2 hr 15 minutes)
Answer **all** questions.

Section B (45 minutes)
Answer **one** question.

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.

Section A

Answer **all** questions in this section.

Question 1 Too hard to swallow

Extract 1: World food prices jump to record high

World food prices rose to a record in December on higher sugar, grain and oilseed costs, the United Nations (UN) said, exceeding levels reached in 2008 that sparked deadly riots from Haiti to Egypt.

Sugar prices climbed for a third year in a row in 2010, and corn prices jumped the most in four years in Chicago. Food prices may rise more unless the world grain crop increases “significantly” in 2011, the Food and Agriculture Organisation said. At least 13 people died last year in Mozambique in protests against plans to lift bread prices.

Last month’s year-on-year rise was higher than the 43 percent jump in food prices in June 2008. Record costs, crop problems, increasing demand, and the push for biofuel all contributed to the crisis that year.

Global grain output will have to rise at least 2 percent this year to meet demand in 2011 and avoid further depletion of stocks, the UN agency has said.

Source: www.bloomberg.com, 5 January 2011

Extract 2: Scrap biofuel support to curb food prices

Governments should scrap policies to support biofuels because they are forcing up global food prices, according to a report by 10 international agencies including the World Bank and World Trade Organisation.

The report adds to growing opposition to biofuels targets and subsidies such as those in Europe, Canada, India and the United States. "If oil prices are high and a crop's value in the energy market exceeds that in the food market, crops will be diverted to the production of biofuels, which will increase the price of food," said the report.

Biofuels have sparked a fierce "food versus fuel" debate since a spike in food prices from 2007 to 2008 that triggered riots in some developing countries. Biofuels have also come under increasing scrutiny for encouraging deforestation, a side-effect that can sometimes make their carbon footprint bigger than that of fossil fuels. Biofuels absorbed around 20 percent of sugar cane from 2007 to 2009, 9 percent of oilseeds and coarse grains and 4 percent of sugar beet, the report said.

Source: www.reuters.com, 10 June 2011

Extract 3: Carbon taxes, emissions trading and regulation

There are three key approaches governments around the world are taking in a bid to lower carbon emissions: carbon taxes, emissions-trading schemes (ETS), and regulation.

Carbon tax is a measure where the government sets the price of carbon.

- The resulting market forces determine how much the quantity of emissions is reduced.
- Businesses have certainty about the price of carbon emissions.
- The resulting level of emissions would vary.

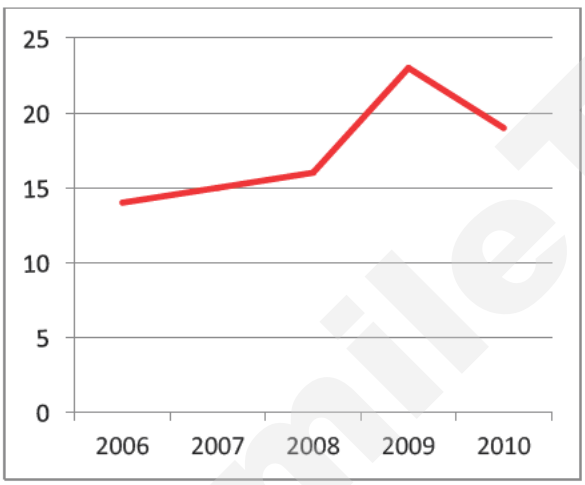
Standard ETS is a measure that the government caps total emissions and issues permits to emit up to that amount.

- Businesses can trade the permits, so the market determines the price of carbon.
- The price of emissions fluctuates, can be volatile.
- There is a set limit on the final level of emissions.

Regulation enables the government to direct businesses and households to lower emissions. Examples include closing high-emissions factories or power plants and restricting new investment in high-emissions sectors.

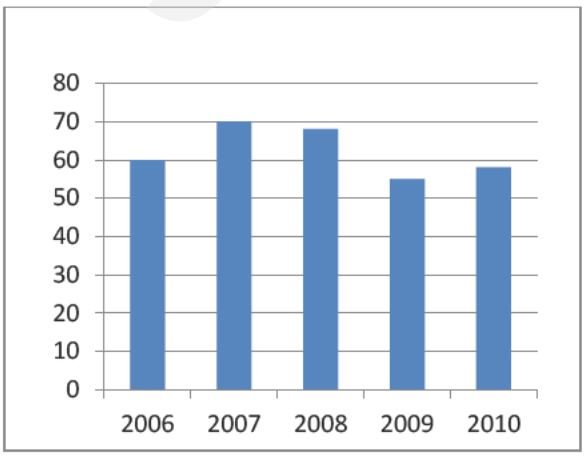
Source: www.abc.net.au

Figure 1: World price of sugar (US cents/pound)



Source: http://www.thebioenergysite.com

Figure 2: Closing stocks of sugar (millions of tonnes)



Source: http://www.thebioenergysite.com

Questions

(a) **(i)** Describe the trend of sugar prices from 2006 to 2010. **[2]**

(ii) Explain whether there is a stable relationship between stock level and the price of sugar. **[3]**

(b) With the aid of a diagram, explain the possible factors leading to a rise in food prices. **[5]**

(c) Explain how a removal of biofuel subsidy affects the total revenue of biofuel producers. **[4]**

(d) **(i)** With reference to the data, explain how the existence of a negative externality can lead to market failure. **[5]**

(ii) Using demand and supply analysis, explain how emissions-trading scheme (ETS) works to reduce carbon emissions. **[3]**

(iii) Discuss whether the carbon tax or regulation is a better policy to address the market failure. **[8]**

[Total: 30 marks]

Suggested Mark Scheme

(a) (i) Describe the trend of sugar prices from 2006 to 2010. [2]

- Overall it rose.
- There is a sharp rise from 2008 to 2009.

(ii) Explain whether there is a stable relationship between stock level and the price of sugar. [3]

- *Mainly inverse relationship as seen in 2008, 2009 and 2010. Explain reason for inverse r/s:*
  - E.g.2008-2009, there is a fall in the stock level could be due to rise in DD (determinant: growing world population) greater than the rise in SS à shortage à upward pressure on prices à when P á, some producers find it more profitable to sell their sugar stock thus â stock.
  - OR e.g. 2009-2010 where stock level and prices of sugar both fell because of a recent bumper harvest (SS determinant) à surplus à downward pressure on price à as P â, producers who are not willing to sell at a lower price will á stock in anticipation of a correction to future prices.
- *Identify and explain direct r/s:*
  - However in 2006-2007 both the stock level and price á demonstrating a direct relationship. This is an anomaly and could be due to P á à producers á stock in anticipation of further á prices (SS determinant). A possible cause of future price á could be news of a looming bad harvest that will cause a shortage.

(b) With the aid of a diagram, explain the possible factors leading to a rise in food prices. [5]

The rise in food prices is due to rise in demand and fall in supply.

Rise in demand can be due to rising world population. As food is necessary for survival, the growth in world population means more mouths to feed and thus the rise in demand.

Fall in SS due to 'record costs' and crop problems. E.g. of costs could be rising price of fertilisers and seedlings. When profits fall, farmers will reduce supply ceteris paribus. On the other hand, crop problems could be due to pests and unfavourable weather such as drought or flooding thus destroying many crops.

OR

Fall in supply due to 'biofuel push' as food and biofuels are in competitive supply. Both are produced from the same input - grains. When governments grant biofuel subsidies, producing biofuel becomes profitable à á DD of grains à á price of grains à á cost of production of food à â supply of food.

Draw and explain simultaneous shifts diagram

- Rise in demand of D0 to D1 and fall in supply from S0 to S1 à a huge shortage à a upward pressure on price as unsuccessful consumers bid a higher price. As price rises, quantity demanded falls while quantity supplied rises till the new equilibrium at a higher price P1.

(c) Explain how a removal of biofuel subsidy affects the total revenue of biofuel producers. [4]

Removal of such subsidy will lead to a rise in cost of production by the same amount. This will result in a fall in supply of biofuels thus price will increase.

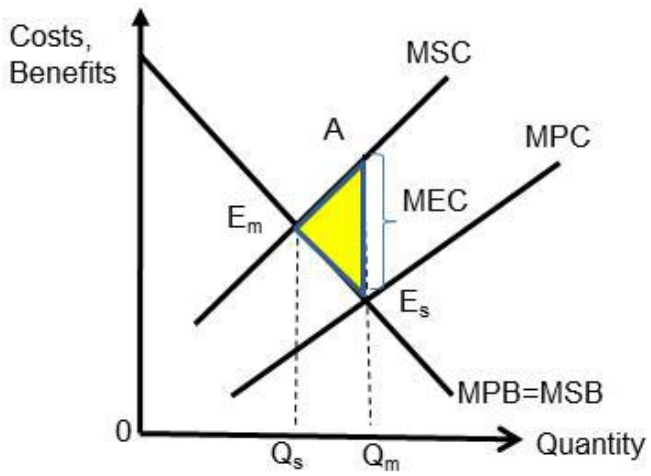
Extract 2 para 3 suggests rising food prices are due to biofuel subsidy. This implies that the biofuel subsidy is high thus removing the subsidy means biofuel becomes an expensive energy source (similar to PED determinant of a large proportion of income) thus demand is price elastic. A price rise à more than proportionate â Qty demanded thus TR of biofuels producers falls.

(d) (i) With reference to the data, explain how the existence of a negative externality can lead to market failure. [5]

Intro

- Carbon emission (Extract 3 last para) is considered a form of negative externality. Negative externalities are costs imposed on third parties who are not directly involved in the production or consumption of a good and they are not compensated for.

- High emissions can be caused by industrial production activities and such lead to rising global temperatures. This causes environmental problems such as droughts and floods which lead to loss of property in low lying areas and crops.
- The market equilibrium is determined by equating MPB with MPC, as firms only consider their private benefits in the form of sales revenue and their private costs comprising wages and raw materials. Thus, market output is Q_m.
- In contrast, the socially optimal output Qs is attained when the benefit derived from that last unit (MSB) equals to the next best alternative forgone (MSC).
- With the existence of external costs, the MSC of industrial production is greater than the MPC by MEC for each unit of output.
- At Qm, there is an overproduction because Qm>Qs.
- For every additional goods produced beyond Qs, the costs incurred by society is greater than its benefit. Hence, there is a net loss to society. Total welfare loss to society, known as deadweight loss is denoted by shaded area E_mE_sA and derived by summing up the excess of MSC over MSB for QsQm.



(ii) Using demand and supply analysis, explain how emissions-trading scheme (ETS) works to reduce carbon emissions. [3]

- Governments sets a quantitative limit on level of carbon emissions and give carbon permits for each country and then for each firm/industry.
- Firms which are better equipped to reduce carbon emissions than its allocated amount can supply the credits gained to the less efficient firms so that the less efficient firms can emit over their allocated limit.
- The gradual reduction of total quantitative limit (note: this is the first attempt of reducing carbon emissions) is to create a shortage and firms will react according to their profits motive.
- Thus the workings of ETS results in the internalisation of external cost by the less efficient firms as they would need to pay a price for additional emissions above their allocation. Adding to their cost à lowering their profits à incentive to cut emissions through innovation technologies (note: this is the 2nd reduction of carbon emissions) so as to avoid incurring higher cost.
- Collectively (together with government's gradual reduction of total quantitative limit), target optimal emission level where MSB=MSC is achieved.

(iii) Discuss whether the carbon tax or regulation is a better policy to address the market failure. [8]

Carbon tax is a market-based solution favoured by economists.

- How it works. The government imposes a carbon tax on production that is equal to MEC so as to force the firm to internalize the external cost. This will raise the firm's production cost or MPC by the full tax amount thus reduces its output level to the socially optimal level where MSC=MSB. Welfare loss arising from overproduction is thus eliminated.

Regulation can be used to prohibit or regulate production behaviours that lead to negative externalities.

- How it works. In its most extreme case, government will order the closure of high emissions factories (e.g. steel manufacturing, coal plants) which is similar to a complete ban on production so as to lead to a significant fall in carbon emissions to socially optimal level.

- Alternatively the government can impose a heavy fine on factories which release carbon beyond the regulated amount, as decided by the state. Laws can also be used to impose legal limits on the emission level that producers must meet.

Carbon tax is a better policy compared to regulation as it allows the market to continue to operate.

- On one hand, setting carbon tax at MEC forces polluting firms to internalise the full social costs (private cost of production plus external cost) of their actions as the amount of tax is based on the level of carbon emissions. On the other hand, consumer sovereignty is protected as consumers who are willing and able to pay a higher price for the goods (e.g. electricity) can continue to get it. This is unlike regulation which leaves no room for continued production (and enjoyment of the goods produced) if government orders closure altogether.

Carbon tax is also a better policy as it may incentivise firms to find cleaner ways of production in the long run.

- In the long run, tax acts as an incentive to reduce emissions as the more a firm cuts down emissions, the less taxes it pays. Thus firms will seek out greener form of production and energy which as a more sustainable way. Regulation on the other hand, is a blunt policy as firms have to shut down, pay a fine for failing the legal emission level without any costs savings for emitting less. Thus there is no incentive that firms will seek low emission technology under regulation.

Despite its strengths over regulation as seen from above, carbon tax has its limitations thus regulation could be a better policy. (at least 1 point)

- High emitters include power plants which are less sensitive to taxes. These energy giants enjoy a price inelastic demand where they can pass a high proportion of tax to consumers without suffering a more than proportionately fall in quantity demanded and the rise in TR can be used to offset the carbon tax. Thus the 'resulting level of emissions vary' and such firms continue to emit beyond the socially desired level Qs. While regulation of a closure of 'rich' firms will drastically reduce carbon emissions to Qs.

- The damage from drought and floods from carbon emission and subsequent reconstruction costs are difficult to assess accurately and put a value on it. Government may fail to tax the right amount due to such imperfect knowledge (condition). An over or underestimation of the size of external cost would mean either a less or more than social optimal output level respectively. Regulation of high carbon emitters is simpler as the emission of black smoke is visible.

- Implementing taxation on firms will raise their cost of production which hurt their international competitiveness and conflict with healthy balance of payment, economic growth and high employment. High unemployment will lead to market failure in terms of wastage of resources. On this note, regulations such as fines are independent of output level. Fines reduce the firm's profits but do not add to the cost of production.

Question 2 Responses to changes in global economic outlook

Extract 4: Macroeconomic developments in Singapore

In 2011, the Singapore economy grew at a more moderate pace, following a record expansion the year before. Since Q2 2011, domestic economic activity slowed discernibly against a volatile backdrop marked by concerns over the Eurozone sovereign debt crisis, faltering external demand and regional supply-side shocks.

Notwithstanding the slowdown in domestic economic growth, overall employment rose by 122,600 in 2011, exceeding the 115,900 gain in 2010. Reflecting the tight labour market, the unemployment rate reached a 14-year low of 2% in 2011. Consequently, wage growth accelerated to 6%, up from 5.6% in 2010. Meanwhile, inflation rose, partially due to global inflation which picked up over the first three quarters of 2011, as oil prices spiked during the MENA (Middle East and North Africa) crisis, where anti-government protests continue to halt production. To make things worse, food prices climbed due to adverse weather conditions.

Source: Monetary Authority of Singapore, *Annual Report* 2011/2012

Table 1: Consumer price index of Singapore (2009 = 100)

	Weights	2010	2011
All items	10000	102.8	108.2
Food	2,205	101.3	104.4
Housing	2,548	102.0	110.5
Transport	1,553	110.3	123.5
Education & Stationery	735	102.7	105.7
Health Care	586	101.9	104.3
Recreation & Others	1,557	101.1	102.5

Source: Singstat

Extract 5: Backlash from Beijing raises fears that China's economy is slowing down

While Europe's leaders were wrestling with the problem of who will bail out whom last week, the world's other two major trading blocs, the US and China, were gearing up for a potentially damaging trade war.

As China slapped punitive import taxes on gas-guzzling American cars, and complained about what it said were US subsidies, some Beijing-watchers read it as a sign that the government is so alarmed about a looming economic slowdown that it is casting around for

someone to blame. The tariffs, ranging from 2% to 21.5%, will be levied on imports of larger capacity cars.

It's not hard to see why China is lashing out. Evidence is mounting that just a few months after Beijing was fretting about its economy overheating and taking action to tame rampant food prices, the most pressing concern now is a so-called hard landing.

Foreign investment in China was almost 10% down in November on a year earlier – the first such decline since 2009. A year ago, all the talk was of China overheating as cheap US capital poured in. Beijing unleashed several measures, including raising reserve requirements[1] for its banks to prevent a credit boom from running out of control. But it failed to anticipate the coming Eurozone slump. The People's Bank of China has already signalled it is switching from reining in the economy to boosting growth.

Source: The Observer, 18 Dec 2011

Extract 6: The global economic outlook for 2012 isn't pretty

The outlook for the global economy in 2012 is clear, but it isn't pretty: recession in Europe, anaemic growth in the US, and a sharp slowdown in China. The US – growing at a snail's pace since 2010 – faces considerable downside risks from the Eurozone crisis. It must also contend with significant fiscal debts and political gridlock. Meanwhile, flaws in China's growth model are becoming obvious. Falling property prices are starting a chain reaction that will have a negative effect on developers, investment, and government revenue. The construction boom is starting to stall, just as net exports have become a drag on growth, owing to weakening US and especially Eurozone demand. Having sought to cool the property market by reining in runaway prices, Chinese leaders will be hard put to restart growth.

They are not alone. On the policy side, the US and Europe, too, have been postponing the serious economic, fiscal, and financial reforms that are needed to restore sustainable and balanced growth.

At the same time, key current account imbalances – between the US, China and within the Eurozone remain large. Orderly adjustment requires lower domestic demand in over-spending countries with large current-account deficits and lower trade surpluses in over-saving countries via nominal and real currency appreciation.

Finally, policymakers are running out of options. Currency devaluation is a zero-sum game, because not all countries can depreciate and improve net exports at the same time. Meanwhile, fiscal policy is constrained by the rise of deficits and debts in countries like the US and Europe. But that is the challenge that a fragile and unbalanced global economy faces in 2012. To paraphrase Bette Davis in All About Eve, "Fasten your seatbelts, it's going to be a bumpy year!"

Source: The Guardian, 15 Dec 2011

[1] The minimum amount of cash or cash-equivalents that banks are required by law to keep on hand, which may not be used for lending or investing.

Table 2: Selected Economic Indicators of China, the US and Singapore in 2011

	China	US	Singapore
Current account balance (U.S. Dollars, billions)	360.5	- 467.6	52.8
Current account balance (% of GDP)	5.2	- 3.1	19.8

Source: IMF, World Economic Outlook Database, September 2011

Questions

(a) With reference to Table 1:

(i) Describe the trend of Singapore's general price level from 2009 to 2011. **[1]**

(ii) Identify the item which contributed most to the change in the general price level in Singapore in 2011. Explain your answer. **[3]**

(b) 'The People's Bank of China has already signalled it is switching from reining in the economy to boosting growth.'

With reference to the data, discuss whether there are sufficient grounds to support its change in economic focus. **[6]**

(c) **(i)** Using Table 2, compare the current account balance of the 3 economies. **[2]**

(ii) Assess the relative effectiveness of fiscal policy and the abilities of any 2 economies in Table 2 to use this policy to address the slowing economic growth brought about by the Eurozone crisis. **[8]**

(d) Consider whether there are more winners or losers from the imposition of China's import taxes on American cars. **[10]**

[Total: 30 marks]

(a) With reference to Table 1:

(i) Describe the trend of Singapore's general price level from 2009 to 2011. [1]

There is an increase in the general price level.

(ii) Identify the item which contributed most to the change in the general price level in Singapore in 2011. Explain your answer. [3]

- Housing costs contributed the most to the change in the general price level.
- In order to calculate which item contributed most to the change in general price level, we need to consider the increase in the prices of the item itself as well as its relative weightage or contribution of the item to the overall price level.
- Though there was a **12%** increase in transport costs from 2010 to 2011, but given the **weight assigned to the item of 1553**, the increase in transport prices only contributed **1.9%** to the overall increase in general price levels. In contrast, the weight assigned to housing is much higher at 2548, so despite housing prices only increased by 8.5%. Thus, the contribution of housing prices to the final increase in general price level was 2%. Hence rise in housing costs contributed the most to the change in the general price level.

(b) 'The People's Bank of China has already signalled it is switching from reining in the economy to boosting growth.'

With reference to the data, discuss whether there are sufficient grounds to support its change in economic focus. [6]

Introduction

The People's Bank of China believes that Chinese economic growth is slowing down and that the government needs to put in place policies to boost economic growth.

Body

There are some grounds to support the Chinese government's decision to change its economic focus as seen from Extract 5, foreign investment in China was almost 10% down in November on a year earlier. In addition, due to the Eurozone crisis, consumers in the Eurozone would have earn less income and demand for exports from China into the Eurozone would fall. Assuming import expenditure and domestic investment remains constant, net exports and investment would fall, this would lead to a fall in aggregate demand and national income. Chinese citizens would experience a decrease their income, reducing their purchasing power and material standard of living.

In addition, the decrease in national income would cause the tax revenue collected by the government to fall, assuming that the tax rate remains constant. With less tax revenue collected, assuming government expenditure remains the same, the government would be at the risk of a budget deficit. This would cause China to incur foreign debt which may hinder potential growth in future as the government would have to pay back the debt rather than increase government expenditure on infrastructure.

<u>However</u>, China is still at risk of inflation due to an inflow of hot money or "cheap capital" flowing into China. US is suffering from "anaemic growth" and is employing expansionary monetary policy. The increase in money supply in the US has lead to lower interest rates in the US. Thus, US investors seeking higher returns on short-term capital would shift their funds out of US banks and into Chinese banks. This would cause an increase in money supply in Chinese banks, which would lower the cost of borrowing and increase investment and consumption in China. This would cause a rise in aggregate demand and may cause inflationary pressures.

Such inflationary pressures can erode China's export price competitiveness leading to a fall in export revenue. In addition, imports will be relatively cheaper compared to domestically produced import-substitutes and this also leads to a rise in demand for imports and import expenditure. Overall, this can lead to worsening of China's current account balance.

Conclusion

The data provided in the extract is also not sufficient. Without information on the capital account, we cannot ascertain whether the capital account is in deficit or surplus. Thus, aggregate demand may be increasing or decreasing.

(c) (i) Using Table 2, compare the current account balance of the 3 economies. [2]

- Singapore and China both have a current account surplus in 2011 while the US is running a current account deficit.

- While China's current account surplus in absolute terms is greater than Singapore, when expressed as a percentage of GDP, Singapore's current account surplus is proportionately higher than that of China.

(ii) Assess the relative effectiveness of fiscal policy and the abilities of any 2 economies in Table 2 to use this policy to address the slowing economic growth brought about by the Eurozone crisis. [8]

Introduction

The Eurozone crisis brings about problems of worsening balance of payments especially for its major trading partners which in turn translates into slowing economic growth. The ***relative effectiveness*** of fiscal policies depends on the **root cause** of the problem as well as the **conditions** within the 2 economies like Singapore and US. In addition, the ***abilities*** of these 2 economies to use expansionary fiscal policy to address the slowing economic growth brought about depends on the finances of the government as well as if the economy is faced with other prevailing domestic economic problems.

Brief explanation of problems brought about by Eurozone crisis

With concerns over the Eurozone sovereign debt crisis deepening, there is a fall in national income in this region of the world and business activity slowing down or even falling. This leads to a fall in purchasing power by the Eurozone countries that results in a fall in demand for exports from countries like Singapore and US. In addition, the pessimism within the region also leads to a fall in FDI by Eurozone investors into other countries as they may face a fall in funds.

Hence, there is likely to be falls in both export revenue and investment for countries like Singapore and US.

Analysis of expansionary fiscal policy

Expansionary fiscal policy can be used in these 2 countries which include the rise in government expenditure in areas like infrastructure and education. Alternatively, the government can also reduce taxes to boost economic growth. By reducing taxes such as the personal income tax, disposable incomes will increase so that **consumption** will rise. The government can also reduce corporate tax. This will result in a rise in post-tax profits which will induce more **investments**. A rise in government expenditure as well as consumption and investment expenditures will lead to a rise in AE.

At original level of national income, there is a shortage of goods and services. 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 amount of rise in induced consumption is determined by the value of MPC. 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.

Evaluation of extent of:

(I) Effectiveness

- Since expansionary fiscal policy aims to raise domestic demand through increasing government, consumption and investment expenditure, it does not clearly address root cause of problem and

may be limited in its effectiveness to address falling economic growth. In particular, for a country like Singapore whereby its key engines of growth are external demand and it has a smaller reliance on domestic demand, expansionary fiscal policy are likely to be relatively more ineffective in raising AD for Singapore compared to US which is more reliant on its domestic demand like consumption expenditure.

- The effectiveness of fiscal policy to boost economic growth depends on size of the multiplier. The value of Singapore's multiplier is small due to Singapore's high marginal propensity to save (MPS) and marginal propensity to import (MPM) [Provide reasons].

- Hence, using expansionary fiscal policy to boost economic growth is not very effective in Singapore due to the large withdrawals from the circular flow of income. Therefore, the Singapore government may have to spend relatively more or reduce tax further in order to achieve the desired outcome compared to US which has a larger multiplier size due to its smaller amount of withdrawals.

(II) Ability

- *As seen in Extract 6, US must also contend with significant fiscal debts and political gridlock.* With significant fiscal debts, it means that the US government is already currently facing large budget deficit. This limits the ability of the US government to finance an expansionary fiscal policy as the further government expenditure and reduction in taxes can cause a greater burden on the US government and its citizens to finance the interest payments of these fiscal debts. In addition, the ability to employ fiscal policy may also be further hindered by the political problems of the US government whereby different groups in the governments hold different views which can greatly slow down the policy-making process.
- Singapore, compared to the US, has greater ability to finance an expansionary fiscal policy as it can draw on its budget reserves to

Conclusion

On the whole, though expansionary fiscal policy may not tackle the root cause of the Eurozone crisis, it can help to cushion the extent of the fall in AD in the short term for countries like Singapore and the US. However, the effectiveness of the implementation of fiscal policy differs for different economies based on their characteristics of the country. Hence other policies may need to be further considered like depreciation of its currency for countries like Singapore which is more dependent on external demand. In addition, the ability of the government depends on both the current fiscal position as well as considerations of other economic problems for the country.

(d) Consider whether there are more winners or losers from the imposition of China's import taxes on American cars. [10]

Introduction

As seen in Extract 5, China is imposing punitive import taxes on gas-guzzling American cars, in response to likely US subsidies to protect the US domestic car industry. However, whether there are more winners or losers from the imposition of these taxes on American cars depends on factors like *the* Response from US government as well as the importance of car industry as a proportion of GDP for China and the US

The first group of gainers would be the Chinese economy in terms of an improvement in its current account as well as enjoying actual economic growth in the short run.

With the imposition of China's import taxes on American cars, the price of American imports will rise. Assuming demand for American car imports is price elastic due to the presence of many other substitutes like domestically produced cars as well as imports from other countries, this will lead to a more than proportionate fall in quantity demanded of imports and in turn a fall in import expenditure for China. Assuming export revenue for China is constant in the short run, net exports will rise leading to <u>an improvement in current account</u>.

In addition, the rise in net exports, ceteris paribus, will lead to a rise in AD for China leading to a multiple rise in its national income and hence <u>actual economic growth</u> in China. With the rise in production activities, there is also a rise in derived demand for labour leading to a rise in employment in China as well.

However, the extent of gains to China depends on whether the US government retaliates with its own protectionist measures since such import taxes has a beggar-thy-neighbour effect on the US. The US will suffer a fall in their export earnings due to the import taxes imposed by China. This leads to a fall in their national income and purchasing power, hence they will import less. This will cause a reduction in the employment in the export sector of China that initially imposes the trade barrier. Overall employment in China may not improve with protectionist measures. This may be made worse if the US government decides to retaliate with protectionist measures of import taxes on China which is highly likely as seen in Extract 5 whereby both countries are already gearing up for a potentially damaging trade war.

However, there are also losers with the imposition of these import taxes, in particular, the American economy and car producers will be most directly hit in the short run.

American car producers will suffer a rise in export prices with the imposition of import taxes on them by China. Assuming demand is price elastic, quantity demanded will fall more than proportionately, hence leading to a fall in export revenue for the American car industry. With total cost remaining constant, this will lead to a fall in profits for the American car producers which can lead to a fall in production levels. With this, there can be a fall in derived demand for labour leading to massive unemployment in its car industry.

In the long run, overall US economy may suffer. With the fall in total export revenue for car producers especially if car industry contributes to a large percentage of the US GDP, this can lead to a fall in net exports, ceteris paribus, AD, national income and employment will fall.

The extent of losses for US depends on the price elasticity of demand for American made SUVs. If Chinese consumers perceived American cars to be of better quality or it seems more prestigious to own a foreign car, the demand for American car exports may be price inelastic, leading to a less than proportionate fall in quantity demanded, which may lead to a rise in total revenue. However, this may only be in the short run as Chinese consumers may turn to cheaper substitutes from other developed countries like the Eurozone.

Another group of gainers like to benefit indirectly would be the Chinese government as well as other domestic car producers and related suppliers within the Chinese economy.

Government may gain through tax revenue collected through tariffs – can be used to develop infrastructure or subsidise investment in R&D in the domestic car industry to develop new areas of CA.

Overall, the Chinese economy may gain in terms of economic growth and employment. With import taxes imposed on American cars, Chinese consumers will increase demand for domestically produced vehicles, leading to a rise in production levels and business activity within China. This results in greater optimism within the economy and in turn higher expected profits can be gained. With this, investment expenditure is likely to increase, ceteris paribus, AD increase leading to an immediate rise in national income. Consequently, this rise in incomes will lead to a rise in induced consumption and a rise in withdrawals. The rise in induced consumption can also benefit other suppliers and retailers. The amount of rise in induced consumption is determined by the value of MPC. 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.

Extent of benefit for winners depends on the importance of car industry for the Chinese economy in terms of its contribution to the percentage of GDP. The extent of benefit will be greater the larger the contribution of the car industry to the economy in terms of GDP. This is because the spillover effects on related suppliers like domestic suppliers of car spare parts, car maintenance services will benefit more.

On the whole, protectionism is at best a short-term measure which will only benefit a few agents in the economy at the expense of long-term negative impact for consumers and the economy in general – wastage of scarce resources.

Levels	Descriptors
3	§ Thorough analysis of gains or losses with clear links to macroeconomic or microeconomic goals. § Good balance: - Explained gains **and** losses - Explained impact on China **and** US § Well-explained, consistent attempts at evaluation of extent of gains / losses § Justified and insightful conclusion with an overall stand of whether there are more gains or losses with the imposition of import taxes.
2	§ Adequate analysis of gains or losses with some links to macroeconomic or microeconomic goals. § Lack of good balance: - **Only** explained gains **or** losses - **Only** explained impact on China **or** US § Some attempts at evaluation of extent of gains / losses § Unsupported conclusion
1	§ Superficial analysis of gains or losses with no clear links to macroeconomic or microeconomic goals. § Lack of scope: only explained 1 gain or 1 loss to a particular group or economy. § No / superficial attempts at evaluation of extent of gains / losses

Section B

Answer **one** question from this section.

3 **(a)** Explain how public goods and merit goods lead to market failure. **[10]**

(b) Assess whether the use of subsidies is the most appropriate policy to correct the above sources of market failure. **[15]**

4 There is a general economic consensus that globalisation is good for growth. But there is also uneasiness about the unequal distribution of the benefits of globalisation, the fact that it can create losers as well as winners.

(a) Explain how globalisation affects the components of the circular flow of income in Singapore. **[10]**

(b) Discuss the extent to which the economic impact of globalisation would differ among countries. **[15]**

3 **(a)** Explain how public goods and merit goods lead to market failure. **[10]**

(b) Assess whether the use of subsidies is the most appropriate policy to correct the above sources of market failure. **[15]**

PART A

Introduction:

Public goods will lead to total market failure whereby there is no output produced when left to free market mechanism whereas merit goods will lead to partial market failure whereby there is some output produced when left to free market mechanism.

Body:

1. Explain how characteristics of public goods (non-rivalry in consumption and non-excludability) lead to inefficiency in resource allocation.

Public goods have the characteristic of non-rivalry in consumption which results in supply of the goods to be zero.

Public goods exhibit the characteristic of non-rivalry in consumption. In the context of Singapore, traffic lights are seen everywhere in the neighbourhood. The consumption of a traffic light by one person does not diminish the quantity or quality available for the next person. The cost of supplying traffic light to an additional consumer is zero. MC of providing the good to next user is zero. To achieve AE, P = MC = 0 and it is not possible for private sector to supply the good if P = 0 since private firms are assumed to be profit-motivated.

Public goods also exhibit the characteristic of non-excludability which results in hidden demand for the goods.

Public goods like traffic lights also exhibit the characteristic of non-excludability in consumption. No single person has to pay to enjoy the traffic light. i.e. It is technically impossible / prohibitively expensive to exclude non-payers from enjoying the good. There is free-rider problem. Hence, demand for consumers is concealed.

Firms are unable to charge a market price for the good without information with regards to demand for the good. As there is no price signal at all, it is unprofitable for private firms to supply the good.

For the case of public goods, there is non-rivalry in consumption and non-excludability characteristics will lead to total market failure.

Due to the characteristics of non-rivalry and non-excludability, no resources will be allocated to the production of public goods when left to the private sector. As public goods yield high positive externalities, society welfare can be increased when resources are allocated to produce public goods.

2. Explain how merit goods (positive externality and imperfect information) lead to inefficiency in resource allocation.

Merit goods such as education will lead to partial market failure due to positive externality and imperfect information.

Merit goods are goods that the government deems to be socially desirable and intrinsically good. Thus, their consumption should be encouraged. An example of merit goods would be education. The marginal private benefit of consuming one more year of education is better career prospects and earnings for the person consuming it. The marginal private cost of consuming one more year of education is the tuition fee loan and costs of textbooks. Education generates positive externality in the form of third party benefits (MEB) as the people form a pool of educated and highly-skilled labour force and those not directly involved in the production or consumption of education like school leavers benefitted in terms of higher standard of living when the educated workforce attracts investments which in turn, propel economic growth for the country, which the third party did not pay for the benefits.

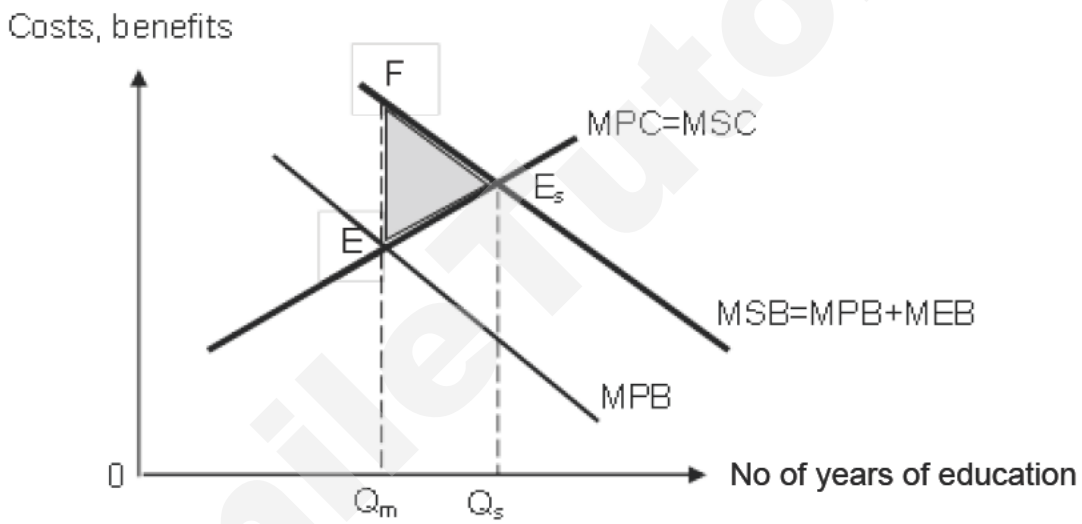


Fig. 1: Positive externality of merit good

Due to positive externality arising from education, there is a divergence between MSB and MPB, where MSB is the sum of MPB and MEB (Fig 1). Since private individuals, driven by aim of maximising profits (for producers) or maximising satisfaction (for consumers), consider only private costs and benefits, thus they will produce/consume up to Qm where MPB=MPC. Worth noting that this decision is made in the context of imperfect information of underestimating the true value of benefits which education can generate. However, socially optimal output is at MSB=MSC where output should be at Qs. This implies that the true benefits equal to the true cost of producing/consuming the good. Since Qm<Qs, the equilibrium output in a free market is less than the socially efficient level of production/consumption, there is underproduction/underconsumption by Q_mQ_s amount For every additional unit of QmQs produced/consumed would add more to society's benefits (MSB) than cost (MSC) ie. MSB>MSC. However, society is not consuming beyond Qm, welfare loss to society is the loss of potential gain if society were to consume beyond Qm . The total welfare loss to society of area FE_sE when QmQs is underproduced/underconsumed.

Level	Descriptor
L3	· Clear explanation of the characteristics of public and merit goods as well as the implications of such characteristics linking to the zero production of public goods and under production/consumption of merit goods under the market mechanism. · Use of relevant examples to integrate into analysis of the goods.
L2	· Clear explanation of the characteristics of public and/or merit goods. · May / may not use relevant examples to support analysis or gaps in the explanation of implications.
L1	· Smattering of ideas. · Listing rather than explanation of public and merit goods. · Generally weak answer. Limited application of economic analysis.

PART B

Introduction:

This essay aims to explain whether subsidy is the most effective and desirable measure to correct under consumption of merit goods and zero production of public goods problems by taking into consideration whether it tackles cause of the problem, the extent to which it is effective, and consider any conflicts with other goals.

Body:

Subsidies can be used to correct under consumption of merit good problem to achieve socially desirable output level.

Subsidy which **is equal to the marginal external benefit** will shift the supply curve vertically downwards by the full amount of the subsidy, to MPC + subsidy. (Fig 2) This will lower the cost of producing education, assuming revenue constant, profit would be higher. Profit maximizing education providers more willing and more able to increase supply of education. Surplus of education will exert downward pressure on price of education.

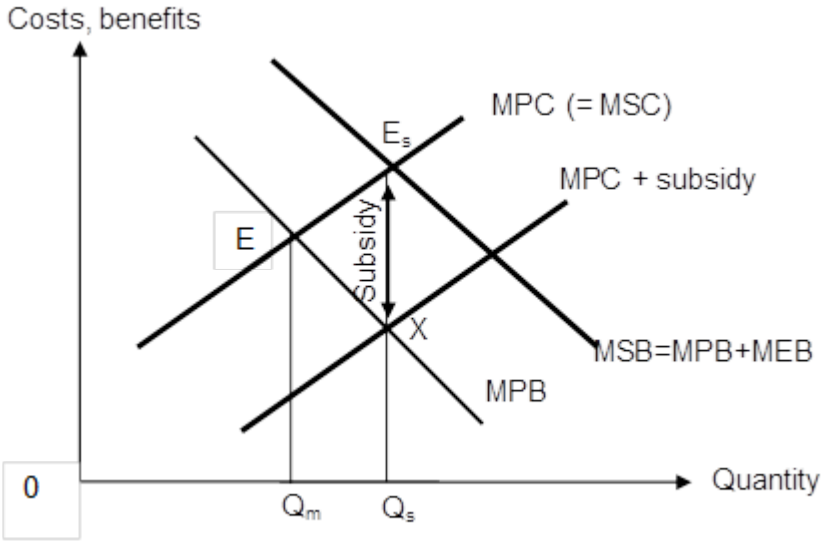


Fig. 2: Correcting Positive Externality

Evaluation:

- The use of subsidies is most appropriate to tackle under consumption of education when the countries have sufficient budget reserves and the demand for education is highly price elastic such that a given fall in price of education will result in more than proportionate rise in quantity demanded for education, ceteris paribus. Thus, subsidies are a highly effective policy for such countries.
- Although subsidy tackles root cause of under consumption problem due to positive externality by capturing the MEB, it may be a strain on government's budget especially for countries facing budget deficit constraints. This may trigger other problems as the governments would have less funds for economic development purpose of funding the low income group to narrow income gap problem in the short run. It is thus, not sustainable and it will conflict with other goals such as equity in income distribution goal.

Legislation could be a more appropriate policy than subsidies to correct under consumption of merit good problem to achieve socially desirable output level for countries with price inelastic demand for education or budget deficit problem.

The government can pass legislation such as mandatory education during the first few years of elementary education. For example, even though Singapore does not have budget deficit problem, the government does not want to put a strain on its budget reserves. Therefore, in Singapore, under the Compulsory Education Act, it is mandatory for every child in Singapore to complete the first six years of their primary school education or there is a penalty imposed on any parent who is guilty of the offence. Thus, the government will be able to increase demand for education from MPB to MSB as the consumers would consume education to avoid penalty for not abiding by the rules. As such, that the consumption of education will increase from Qm to Qs.

Evaluation:

- Legislation are straightforward and can be understood easily. Thus, it is relatively more effective than subsidies in encouraging consumption of education. However, for parents in the low-income group, they may be illiterate as they did not receive much education. Hence, they may not be aware of the legislation such as Compulsory Education Act and its implications. This means that they may inevitably run afoul of the law.
- However, as legislation is a blunt weapon, it does not encourage the consumers to consume education beyond the stated number of years as it does not address the imperfect information problem which resulted in the consumers underestimating the true value of benefits of education. Thus, to ensure sustainability of this policy, it needs to be complemented with campaigning to raise the awareness of producers or consumers of education.

The use of subsidies is less appropriate than education and campaigns in tackling the root cause of under consumption problem of education due to imperfect information.

When under consumption of education problem is due to imperfect information, subsidies will not be able to tackle the root cause of the problem. In this context, education and campaigns would be a more appropriate policy. The government carries out campaigns which emphasize the importance of education such as 'Lifelong Learning Campaigns' to raise the awareness of producers and consumers on the large society benefits generated by education. By reducing the degree of imperfect information, consumers will not underestimate the true value of education. Thus, they will raise demand for education and the quantity of education consumed would increase from Qm to Qs.

Evaluation:

Education and campaign takes a relatively longer time than subsidies to achieve its effectiveness as there is a time lag involved to change people's mindset. Thus, the under consumption of education problem may only be corrected in the long run. There is a need for policies to address the problem more immediately. Hence, education and campaign need to be complemented with subsidies.

The use of subsidies is not appropriate in correcting zero production of public good problem.

As public goods have hidden demand and no private producers who would be willing to produce the good since public goods should only be provided free of charge, it is not possible for the government to subsidize the producers. This is because with subsidy, there will still be some cost of production which the producers incur and some price has to be charged which is not possible for public goods. Hence, for the case of public goods, a more appropriate policy would be direct provision whereby the government enters the market and directly make the good available to the consumers at zero price. The government can fund the public goods provision via tax revenue collected from tax payers.

Conclusion

Subsidies are a relatively more appropriate measure to tackle merit good problems than public goods to a large extent. However, in dealing with under consumption of merit good

problems, subsidies are not without its limitations which call for the need for other policies to complement it. It is worth noting that in the real world context, public goods, for example, infrastructural facilities such as railway tracks are directly provided by the government but merit service such as the operation of train services, SMRT and SBS Transit in Singapore, is subsidized by the government.

Level	Descriptor
L4	· Thoroughly explained 4 policies and discussed why subsidies may or may not be appropriate in correcting the two sources of market failure by consistently comparing it with other policies. · Discussion pertaining to Singapore with clear examples, properly drawn diagram and informed conclusion included.
L3	· Policies are explained and evaluated but answers are not consistently detailed. · Consistent attempt in comparing subsidies with other policies in correcting the two sources of market failure. · Some discussion pertaining to Singapore with examples
L2	· Some attempts at explaining the policies are evident. · Some attempt to compare subsidies with other policies in correcting the two sources of market failure. · Answers are generic with weak attempts to apply policies implemented by the Singapore government evident. · For an answer that discusses at least 3 policies thoroughly but no comparison with subsidies · For an answer that makes no reference to Singapore at all.
L1	· Smattering answers with scant elaboration · Only explained one policy without any attempt to evaluate whether subsidies is appropriate in correcting the two sources of market failure.

4 There is a general economic consensus that globalisation is good for growth. But there is also uneasiness about the unequal distribution of the benefits of globalisation, the fact that it can create losers as well as winners.

(a) Explain how globalisation affects the components of the circular flow of income in Singapore. **[10]**

(b) Discuss the extent to which the economic impact of globalisation would differ among countries. **[15]**

Answer outline
Part (a)

Introduction

Globalisation" refers to the growing interdependence of countries resulting from the increasing integration of trade, finance, people, and ideas in one global marketplace. International trade and cross-border investment flows are the main elements of this integration. 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. Globalisation affects the components of the circular flow of income in Singapore mainly on net exports and investments.

Body

The circular flow of income consists of 2 flows between firms and households which are the income flow and the output flow.

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.

The first component through which globalisation affects the different components of the circular flow of income in Singapore is through exports.

Being a small economy, Singapore is very much dependent on international trade. With globalisation, other countries have increasingly opened up their markets by lowering trade barriers. This made it possible for Singapore to gain greater access to foreign markets. On average, Singapore's direct exports to an FTA partner increased by 18 per cent two years after the entry into force of that FTA, and a further 16 per cent in the third year. There are also other indirect benefits like increase in export competitiveness due to the greater competition in the larger market.

Besides exports, the other component that is affected by globalisation is foreign direct investments (FDI).

Inward FDI has been increasing steadily in the past decade, though there has been some decline in FDI in 2002-2003 and 2008 because of unfavourable global conditions. In view of the increasing competition due to globalisation, Singapore has given more emphasis on promoting innovation-driven and knowledge-based investments.

Being small, Singapore also lacks natural resources and thus depends on imports of food and other basic necessities and raw materials. With globalisation, cheaper imports are available from lower-cost producers. This also contributed to the rise in Singapore's import expenditure on foreign goods which represents a withdrawal from the circular income flow.

Conclusion

Globalisation has increased the significance of trade-related components of the circular flow of national income, namely exports and imports and investments. These changes would have an impact on the level of national income in the country both in the short run and in the long run.

<u>Levels Marking Scheme</u>

Levels	Descriptors
L3	· Thorough explanation of the circular income flow with all key components described with relevant examples. · Clear explanation of how globalisation has affected the different components of circular income flow with reference to the Singapore economy
L2	· Adequate explanation of the circular income flow · Some explanation of the impact of globalisation on any 2 components with some reference to Singapore economy
L1	· Broad overview of the circular income flow · Limited explanation of the impact of globalisation on any of the components of circular flow of national income

Part (b)

Introduction

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 countries can benefit from globalisation depends on a few key factors which are both economic and non-economic in nature, which we will discuss in this essay.

Body

One of the benefits of globalisation is that of increased efficiency.

- In a world of scarcity, efficiency is important because it can increase the welfare of the people.
- Globalisation intensifies competition. In the domestic markets, competition from imports can stimulate greater efficiency in production in the c'try as local producers must keep their costs low in order to remain competitive è **> efficient production and better utilisation of a country's resources.**
- In addition, with globalisation, there are reduced trade barriers. This encourages greater specialisation according to the country's comparative advantage. Comparative advantage is defined when a country can produce a good at a lower opportunity cost than other country. In this case, with its advanced technology and skilled labour, Singapore has comparative advantage in high-end manufactured goods such as electronic valves and petroleum refined, which are our two top exports. **Rise in efficiency** due to specialisation and economies of scale. Consumer welfare therefore improves because if firms pass the cost savings to consumers in terms of lower prices.

Globalisation has a direct impact on a country's balance of payments. Some countries benefit from an improvement while others suffer a loss.

- Globalisation è Reduced trade barriers, e.g. fall in tariffs imposed on S'pore's exports è fall in price of S'pore's exports è Assume DD for exports is price elastic, more than proportionate rise in Qdd for exports, c.p. è Rise in TR of exports è c.p. - (X-M) è c.p. **current a/c improves**.
- Globalisation è low-cost producers e.g. developing c'tries such as Vietnam and China are able to attract inward FDIs. Other countries like S'pore continue to attract FDI into higher value added manufacturing e.g. pharmaceutical industries & petrochemicals & also financial services sector due to competitive corporate tax rate, good infrastructure and pool of skilled labour è If Inward investment > outward investment è **capital a/c improves.**
- Depending on the net impact on current and capital balances, the impact of BOP is indeterminate. For Singapore, it has enjoyed a favourable balance of payments which is largely a result of a healthy current balance. China also enjoys a rising trade surplus. Other countries like the developed countries of the US, suffer from trade deficits.

Globalisation also impact on a country's economic growth.

- Globalisation è - DD for exports è - TR of exports.

- Globalisation è emergence of low-cost producers è fall in price of S'pore's imports è DD for imports is price inelastic because S'pore imports a lot of raw materials which it is very dependent on since it lacks natural resources è less than proportionate rise in Qdd for imports, c.p. è ¯TE imports
- C.p. - (X-M) è c.p. AD rises (**diagram**)
  - o at initial eqm level of real national output, excess demand results è upward pressure on prices è higher profits è firms increase production in the next time period è rise in real national ouput è rise in induced C and rise in W; rise in induced C depends on marginal propensity to consume (MPC) è greater the MPC, greater the rise in induced C è greater the rise in NY. Thus, multiple rise in NY, assuming country is not at full employment.

- The extent of the gains depends on the rise of exports and imports. For Singapore, it gains largely because without globalisation and increase in free trade, its economic growth is very much constrained by its small domestic mkt. By embracing globalisation, Singapore is able to grow at an average annual rate of more than 8 per cent since its independence in 1965. Hence S'pore has > to gain than c'tries for which the DD for imports is price elastic, e.g. USA and China that produce gds that compete with imports. When DD for imports is price elastic, fall in price of imports è rise in TE on imports for USA and China è change in (X-M) depends on extent of rise in TRx and TEm for USA and China.

But, Globalisation can lead to a rise in structural unemployment.

- Globalisation è emergence of new economies è changing CA
- S'pore: loss of CA in low-end manufactured gds è outward investment and outsourcing of jobs è loss of jobs mainly for low-skilled workers and older workers, thus - structural unemployment
- But CA in sunrise industries, i.e. high-end manufactured gds, e.g. DRAM chips and pharmaceutical products è create jobs for skilled workers
- Net effect depends on loss of jobs and no. of jobs created. To the extent that industries that shut down are labour-intensive in nature and those sunrise industries are less labour-intensive, then overall unN+ rises
- But in S'pore, govt emphasises on continuous upgrading of skills è increases labour mobility è workers can switch and find jobs è thus possible for N+ to rise

Another consequence of globalisation is rising income inequality.

- Globalisation has led to greater financial flows across national border. Total foreign direct investment (FDI) flows in the world increased. With the latter, it has resulted in exposure to new ideas, technology and products.
- New technology creates greater demands for those with higher skills. In S'pore, the use of technology is widespread in both manufacturing and services, raising the skills premium in a substantial portion of the economy.
- To the extent that technological change favours those with higher skills, DD for high-skilled labour rises è rise in wage rate
- At the same time, fall in DD for low-skilled workers è fall in wage rate. Hence, widening income gap between the rich and the poor. This is evident from the fact that our **Gini coefficient has been increasing in the last 3 years**.

- This is despite measures taken by the government to distribute growth dividends to its people whereby the poor gets more than the rich. In fact, S'pore has one of the highest Gini coefficient amongst the developed countries (USA 0.45, UK 0.34) (Source: CIA).

The extent of impact of globalisation would certainly differ among countries.

- Small and highly open economies like Singapore are already exposed to a high level of competition in the global market as well as in the domestic market (due to its free trade policy). Thus, globalisation and trade liberalisations will only benefit these countries more because of the enlarged market size. However, countries that have been practising protectionism on a large scale, would find their domestic industries suffer from competition with cheap imports. The negative impact of globalisation thus would be more pronounced.
- The extent of impact also depends on the current economic policies in place which determines the rate at which a country can make the necessary structural adjustments that are needed to raise its competitiveness both in terms of exports and in attracting investments. Government supply-side policies such as retraining or upgrading its workers are critical to finding new comparative advantage. Like in Singapore, large investments on education and infrastructure have enabled the country to remain competitiveness despite the rise of new emerging economies.

Conclusion

Globalisation is beneficial because it brings about increased efficiency in production and resource allocation, thereby raising the standard of living of the people. However, in the short run, countries may face some problems like trade deficits, unemployment and rising income inequality that are largely due to the structural impediments and immobility of factors of production.

Levels	Descriptors
L4	§ Sound analysis of the impact of globalisation. § Good evaluation of the differing impact based on clear framework for comparison. § Conclusion is reasonably supported.
L3	§ Good understanding of the impact (both positive & negative) of globalisation with some analysis & evaluation of the differing impact.
L2	§ Adequate understanding of the impact of globalisation on an economy with some recognition of the differing impact on different countries.
L1	§ Very weak response to question, with vague understanding of the impact of globalisation on an economy.

SERANGOON JUNIOR COLLEGE
JC 2 Preliminary Examination

ECONOMICS **9732/01**
Higher 2

Paper 1 **Case Study Questions** 2013

2 hours 15 minutes

Additional Materials: Writing paper

READ THESE INSTRUCTIONS FIRST

Write down your name and civics group 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.

Answer **all** questions.

Question 1 Globalisation and inequity

Extract 1: Car industry running harder

Battered by the European sovereign debt crisis and recession in countries from Italy to Britain, car sales within the EU are on track for a fifth consecutive year of decline. The car industry was also affected by the rising cost of several important inputs such as steel and metals that have further narrowed the profit margins on car production.

Excess capacity problems are rampant in Europe. According to AlixPartners, a business consulting firm, about 30 of the 98 assembly plants in Europe are operating below 70 per cent of capacity. Excess capacities force manufacturers to engage in price-cutting to protect their market shares, resulting in a vicious circle leading to even lower profits. The worst affected markets were France, Spain and Italy where almost 85% of the cars sold are small- and medium-sized cars which already have lower (profit) margins.

The risk of excess capacity, and thus of fierce price competition, is emerging at a time when carmakers are having to invest heavily in new technology. Fortunately they still have plenty of scope to cut costs by standardising both their "platforms" -- the underpinnings onto which the rest of the car is assembled -- and other components under the bonnet that drivers do not see. One reason why Volkswagen has done so well in recent years is that it has taken such standardisation further than most. This has allowed it to offer a broader range of vehicles across its many brands.

AlixPartners predicts that most of the growth in car sales in the coming years will come from such "megaplatforms", each of which will underpin more than one million cars of all sorts every year. Flexible production lines will be able to turn out cars to fit every niche in the market, enabling makers to offer buyers "mass customisation" of vehicles. Cars are becoming more like smartphones: expensive to develop and market, and with some pricey parts, but cheap to assemble in their millions, with endless variations.

Source: The Economist, 13 April 2013

Extract 2: A new era accelerating toward 2020

A recalibration of the automotive industry value chain is in motion. The marked decline in car sales led to excess capacity in plants around the world and reduced profitability, triggering reduced capacity, resourcing to stronger suppliers, a rash of bankruptcies, and in some cases, the need for government bailouts.

Of course, the crisis will not last forever and short-term sales projections foresee over 70 million units sold worldwide by 2015. While opinions differ about the timing of the turnaround, there is no doubt that the structure of the automotive industry will be deeply transformed. For example, most cars manufactured in 2007 had their primary development in Asia and Europe and this trend is expected to continue into 2015. The move to lower cost regions will be driven partly by lower labour cost in emerging markets. The new pockets of low cost areas within the region will become hubs for car equipment manufacturers at the expense of higher cost exporters such as Spain and Germany, the US and Canada.

Source: www.deloitte.com, 4 August 2009

Extract 3: Mind the gap

The problem of a widening income gap is one that many other countries, including America, Britain, Canada, China, India, have to contend with. And it may be that such a split is inevitable in a globalised world. The experience of rising inequality in these countries over the last two or three decades suggests that it is driven by forces that are at least partly global in nature – namely globalisation and technological change.

Global competition both depresses wages at the bottom and boosts wages at the top. At the low end, salaries of unskilled workers would be kept low because of competition from cheaper alternatives in places like China and India. Meanwhile, at the higher end, workers being deployed to oversee foreign operations will naturally attract higher pay and perks like expatriate allowances. An example of this sort of competition can also be seen in the United States, where a lot of lower-end jobs have been outsourced to cheaper nations.

Many economists now worry that widening income disparities may have damaging side-effects. In theory, inequality has an ambiguous relationship with prosperity. It can boost growth, because richer folk save and invest more and because people work harder in response to incentives. But big income gaps can also be inefficient, because they can bar talented poor people from access to education or feed resentment that result in growth-destroying policies.

Income inequality in Singapore has risen significantly in the last decade. After accounting for government benefits and taxes, its Gini coefficient rose from 0.430 in 2000 to 0.452 in 2010. The Gini coefficient measures the income distribution across a country and is often used as a gauge of the income gap.

The Singapore government has responded to concerns over the widening income gap. It promised more social spending while hiking taxes on luxury cars and investment properties. And in the past few years, it has curbed the inflow of foreign labour, cajoled companies to invest in enhancing productivity, and expanded its skills training programme to "upgrade" workers.

It is also redistributing significantly straight from government coffers to low-income and older workers' pay cheques, through schemes such as the Workfare Income Supplement, the Special Employment Credit and the Wage Credit.

"The Government deserves a lot of credit for really pushing the restructuring this time. There is a lot of resources being put in here," says Institute of Policy Studies research fellow Tan Meng Wah. But economists and experts point to blind spots, and say it remains to be seen if the government's new zeal can keep up with inequality's own momentum.

Adapted The Straits Times, 8 April 2013

Table 1: Changes in wages and salary and value added in the car industry, 2000 – 2007

	Wages and Salary (US$)		Value added per employee (US$)	
	2000	**2007**	**2000**	**2007**
France	28 621	55 461	71 918	104 092
UK	39 253	68 947	51 243	147 442
Japan	66 423	60 558	241 975	290 149

Source: http://www.jetro.go.jp, 2012

Table 2: Top 4 Car sales in the UK, June 2012

Car manufacturer	% of total sales volume
Volkswagen Group	20.0
Ford	12.5
General Motors	11.9
BMW-Mini	11.3
Others	44.3

Source: Automakers & Society of Motor Manufacturers & Traders, 2012

Questions

(a) **(i)** With reference to Table 1, compare the changes in wages and salary and value added per employee in the UK. **[2]**

(ii) To what extent can the information in Table 1 be used to draw conclusions about the relative competitiveness of the car industry in UK and Japan between 2000 and 2007? **[5]**

(b) Explain why there is excess capacity in the EU car industry. **[2]**

(c) **(i)** Suggest one possible reason for the level of concentration of the UK car industry shown in Table 2. **[2]**

(ii) Discuss how an understanding of market structure as evident in the car industry can be applied to explain the EU car firms' competitive behaviour. **[6]**

(d) **(i)** Explain why governments should be concerned with increasing income inequality. **[3]**

(ii) Discuss the view that increasing income inequality is inevitable in a globalised world. **[10]**

[Total: 30 marks]

Questions

(a) (i) With reference to Table 1, compare the changes in wages and salary and value added per employee in the UK. [2]

Both wages and value added per employee in the UK increased.

Refinement:

- However the wages increased at a slower rate (75.6%) as compared to the value added per employee (188%). or
- Increase in wages is 3x that of increase in VA.

(ii) To what extent can the information in Table 1 be used to draw conclusions about the relative competitiveness of the car industry in UK and Japan between 2000 and 2007? [5]

One of the measures of competitiveness is in terms of unit labour costs of production. Unit labour costs refer to the labour costs per unit of output.

Between 2000 and 2007, unit labour costs in the car industry in both UK and Japan have fallen.

However, the unit cost in the **UK car industry has fallen at a faster rate** than that of Japan's.

OR

Unit labour cost in UK car industry was 2.8 times that of Japan's in 2000. However in 2007, it has fallen to only 2.2 times that of Japan's.

Hence, the UK car industry has become more competitive **relative** to that of Japan's between 2000 and 2007.

However, the above data is not sufficient to make an accurate conclusion about the relative competitiveness of the industry in UK and Japan. This is because competitiveness of the industry is not just based on labour cost. There are other costs to consider as well such as rental and costs of machinery and equipment. Also competitiveness can also be in terms of the quality of the cars produced. Therefore we will certainly need more data to make a more accurate conclusion about the relative competitiveness of the car industry in the 3 different countries.

(b) Explain why there is excess capacity in the EU car industry. [2]

The excess capacity is a result of falling demand. The "European sovereign debt crisis and recession" in many countries resulted in a fall in incomes. Since cars is a normal good whose demand is income elastic, a fall in incomes leads to a more than proportionate fall in its demand. This leads to excess stocks or surplus of cars which drives down prices. As a result, firms will reduce production and so they will end up with excess capacity, which means a lower rate of utilisation of the plant capacity.

(c) (i) Suggest one possible reason for the level of concentration of the UK car industry shown in Table 2. [2]

The level of concentration of the UK car industry is relatively high. This could be due to the strong barriers to entry that are present in such industries.

Examples of barriers to entry are the high costs of investment in new technology, R&D and capital investment such as the mega platforms to produce car parts.

Since the amount of investment required for car manufacturing is high, huge economies of scale can be enjoyed over a large range of output level. This means that the firm's minimum efficient scale (MES) of production occurs at a very high output level. Only a few large car producers can achieve lower average cost and operate under decreasing cost conditions. As a result, these firms can charge competitive prices that can deter new competitors into the industry. As a result, the car industry remains highly concentrated in a few large firms.

(ii) Discuss how an understanding of market structure as evident in the car industry can be applied to explain the EU car firms' competitive behaviour. [6]

The car industry is an oligopoly as there are few large firms dominating the industry (4-firm concentration ratio 57.7%).

There is mutual interdependence among the car firms. When one firm lowers its price, rivals will follow. As a result, there only a less than proportionate rise in quantity demanded, leading to a fall in the firm's revenue. However, when a firm increases its price, others will not follow. Hence, the firm will suffer a fall in its total revenue due to a larger than proportionate fall in its quantity demanded. . Therefore, in such a market structure, firms are <u>reluctant to use price cutting strategy</u> to compete with other firms because this strategy is not a sustainable solution.

This mutual interdependence among firms is evident when car manufacturers "engage in price-cutting to protect their market shares, resulting in a vicious circle leading to even lower profits" (Extract 1).

The price cutting strategy is really an attempt to maintain market shares even if it results in lower profits for the firms. Although the theory explained price rigidity in such a market, the price competition can be explained because of <u>the fall in demand for cars leading to excess stocks. Car firms are forced to lower their prices to clear the market.</u> This triggers the price war observed in the EU car industry.

In such a market structure, firms also engage in non-price competition in order to increase their profits. For example, Volkswagen offers a broader range of vehicles across its many brands. This increased variety and choices – "cars to fit every niche in the market, enabling makers to offer buyers "mass customisation" of vehicles" will increase the demand of Volkswagen car and thus revenue. Assuming cost constant, profits thus increases.

An understanding of market structure (kinked demand curve theory) is useful to explain the firm's competitive behaviour as long as <u>demand and cost conditions stay the same or do not change significantly</u>. Since there is a fall in demand, firms are forced to lower prices as well as engage in non-price competition. This however, does not suggest that the theory is

no longer valid. In fact, it is still relevant in explaining the strategies adopted by the car producers.

(d) (i) Explain why governments should be concerned with increasing income inequality. [3]

With increased income inequality, it could "feed resentment" (Extract 3) and result in an increased unhappiness amongst the people. As a result, there may be social and political unrest which may affect the consumers' and investors' confidence in the country. Consumer spending may be kept low while investor might choose to invest in other countries. The cuts in levels of autonomous consumption and investment would result in a fall in aggregate expenditure that would induce a fall in consumption leading to a multiple fall in national income.

(ii) Discuss the view that increasing income inequality is inevitable in a globalised world. [10]

Introduction

Income inequality refers to the differences in income of the lowest and highest income group of people. A globalised world is one whereby which national markets become increasingly interlinked through international trade and increased mobility of labour and capital.

Body

Globalisation is one of the reasons for the rising inequality in developed countries.

Specialisation in high-skilled exports leads to a rising gap between the skilled and unskilled wages. Moreover, cheap low-skill imports and outsourcing also reduce wages or increase unemployment among the low- or moderately skilled workers—further exacerbating inequality. This was highlighted in Extract 2 where car equipment manufacturers in Europe move to lower cost regions partly driven by lower labour costs.

Globalisation and the development of information technology bring about rapid advances in technology. New technology, in both advanced and developing economies, creates greater demands for those with higher skills. At the same time the demand for lower skilled workers will fall, further causing inequality.

However increasing income inequality can be avoided because of the measures that can be taken to help workers increase their productivity and gain employment.

For example, in Singapore, the government has "curbed the inflow of foreign labour", especially that of low-skilled labour in order to help those in the low-income jobs retain their employment and to encourage firms to employ local workers. In addition, firms are encouraged to invest in skills training programme to upgrade workers. The intent is to increase labour productivity so that firms are willing to hire these workers at higher wage rates. This will also help to raise incomes at the lower end.

Other measures also include redistributive policies such as to redistribute the income through progressive taxes and welfare benefits. With a more progressive tax system those who earn more will have to pay higher taxes and these tax earnings could be redistributed to the poor through welfare benefits (e.g. unemployment benefits). This would thus reduce the inequality through reducing the income of the higher income group and increasing the income of the lower income group.

Furthermore, increasing government expenditure on infrastructure, education and health can also help to narrow the income gap.

For example, increasing income inequality may not be so evident in countries where level of education is high (e.g. Norway and Denmark). Certain countries have provided their citizens with equal access and opportunities to education through subsidies. This helps level the playing field between the rich and the poor. Through education the poor are now able to escape the cycle of poverty as long as they work hard. With education the poor will also be able to compete for highly skilled jobs and command a higher wage rate. This will thus bring down the income gap between the rich and the poor.

Evaluation:

However even with subsidies there might not be equal opportunities to education. This is because the rich are likely to be able to afford to send their kids for tuition unlike the poor. This gives them an edge over those who are poor. In addition, they could also send their kids for enrichment lessons (e.g. computer classes) which would add further to their advantage and increase the skill gap between the rich and the poor.

Levels	Descriptors
L3	Good analysis of how the problem arises with links to globalization. Measures were well-analysed with good use of examples & evaluated. Insightful, clear and well-reasoned conclusion.
L2	· Reasonable analysis of how the problem arises with some links to globalization. · Measures to address the problem were also adequately explained. · Limited evaluation of the measures. · Response has some balance, considering both sides but with no clear stand. Synthesis is not evident.
L1	Limited analysis of how the problem of inequality arises with/without measures to cope with problem. Conclusion is not evident.

Question 2 Responses to changes in global economic outlook

Extract 4: Macroeconomic developments in Singapore

In 2011, the Singapore economy grew at a more moderate pace, following a record expansion the year before. Since Q2 2011, domestic economic activity slowed discernibly against a volatile backdrop marked by concerns over the Eurozone sovereign debt crisis, faltering external demand and regional supply-side shocks.

Notwithstanding the slowdown in domestic economic growth, overall employment rose by 122,600 in 2011, exceeding the 115,900 gain in 2010. Reflecting the tight labour market, the unemployment rate reached a 14-year low of 2% in 2011. Consequently, wage growth accelerated to 6%, up from 5.6% in 2010. Meanwhile, inflation rose, partially due to global inflation which picked up over the first three quarters of 2011, as oil prices spiked during the MENA (Middle East and North Africa) crisis, where anti-government protests continue to halt production. To make things worse, food prices climbed due to adverse weather conditions.

Source: Monetary Authority of Singapore, *Annual Report* 2011/2012

Table 3: Consumer price index of Singapore (2009 = 100)

	Weights	2010	2011
All items	10000	102.8	108.2
Food	2,205	101.3	104.4
Housing	2,548	102.0	110.5
Transport	1,553	110.3	123.5
Education & Stationery	735	102.7	105.7
Health Care	586	101.9	104.3
Recreation & Others	1,557	101.1	102.5

Source: Singstat

Extract 5: Backlash from Beijing raises fears that China's economy is slowing down

While Europe's leaders were wrestling with the problem of who will bail out whom last week, the world's other two major trading blocs, the US and China, were gearing up for a potentially damaging trade war.

As China slapped punitive import taxes on gas-guzzling American cars, and complained about what it said were US subsidies, some Beijing-watchers read it as a sign that the government is so alarmed about a looming economic slowdown that it is casting around for someone to blame. The tariffs, ranging from 2% to 21.5%, will be levied on imports of larger capacity cars.

It's not hard to see why China is lashing out. Evidence is mounting that just a few months after Beijing was fretting about its economy overheating and taking action to tame rampant food prices, the most pressing concern now is a so-called hard landing.

Foreign investment in China was almost 10% down in November on a year earlier – the first such decline since 2009. A year ago, all the talk was of China overheating as cheap US capital poured in. Beijing unleashed several measures, including raising reserve requirements[1] for its banks to prevent a credit boom from running out of control. But it failed to anticipate the coming Eurozone slump. The People's Bank of China has already signalled it is switching from reining in the economy to boosting growth.

Source: The Observer, 18 Dec 2011

Extract 6: The global economic outlook for 2012 isn't pretty

The outlook for the global economy in 2012 is clear, but it isn't pretty: recession in Europe, anaemic growth in the US, and a sharp slowdown in China. The US – growing at a snail's pace since 2010 – faces considerable downside risks from the Eurozone crisis. It must also contend with significant fiscal debts and political gridlock. Meanwhile, flaws in China's growth model are becoming obvious. Falling property prices are starting a chain reaction that will have a negative effect on developers, investment, and government revenue. The construction boom is starting to stall, just as net exports have become a drag on growth, owing to weakening US and especially Eurozone demand. Having sought to cool the property market by reining in runaway prices, Chinese leaders will be hard put to restart growth.

They are not alone. On the policy side, the US and Europe, too, have been postponing the serious economic, fiscal, and financial reforms that are needed to restore sustainable and balanced growth.

At the same time, key current account imbalances – between the US, China and within the Eurozone remain large. Orderly adjustment requires lower domestic demand in over-spending countries with large current-account deficits and lower trade surpluses in over-saving countries via nominal and real currency appreciation.

Finally, policymakers are running out of options. Currency devaluation is a zero-sum game, because not all countries can depreciate and improve net exports at the same time. Meanwhile, fiscal policy is constrained by the rise of deficits and debts in countries like US and Europe. But that is the challenge that a fragile and unbalanced global economy faces in 2012. To paraphrase Bette Davis in All About Eve, "Fasten your seatbelts, it's going to be a bumpy year!"

Source: The Guardian, 15 Dec 2011

Table 4: Selected economic Indicators of China, the US and Singapore in 2011

	China	US	Singapore
Current account balance (U.S. Dollars, billions)	360.5	- 467.6	52.8
Current account balance (% of GDP)	5.2	- 3.1	19.8

Source: IMF, World Economic Outlook Database, September 2011

[1] The minimum amount of cash or cash-equivalents that banks are required by law to keep on hand, which may not be used for lending or investing.

Questions

(a) With reference to Table 3:

(i) Describe the trend of Singapore's general price level from 2009 to 2011. **[1]**

(ii) Identify the item which contributed most to the change in the general price level in Singapore in 2011. Explain your answer. **[3]**

(b) 'The People's Bank of China has already signalled it is switching from reining in the economy to boosting growth.'

With reference to the data, discuss whether there are sufficient grounds to support its change in economic focus. **[6]**

(c) **(i)** Using Table 4, compare the current account balance of the 3 economies. **[2]**

(ii) Assess the relative effectiveness of fiscal policy and the abilities of any 2 economies in Table 4 to use this policy to address the slowing economic growth brought about by the Eurozone crisis. **[8]**

(d) Consider whether there are more winners or losers from the imposition of China's import taxes on American cars. **[10]**

[Total: 30 marks]

End of Paper

(a) With reference to Table 3:

(i) Describe the trend of Singapore's general price level from 2009 to 2011. [1]

There is an increase in the general price level.

(ii) Identify the item which contributed most to the change in the general price level in Singapore in 2011. Explain your answer. [3]

- Housing costs contributed the most to the change in the general price level.
- In order to calculate which item contributed most to the change in general price level, we need to consider the increase in the prices of the item itself as well as its relative weightage or contribution of the item to the overall price level.
- Though there was a **12%** increase in transport costs from 2010 to 2011, but given the **weight assigned to the item of 1553**, the increase in transport prices only contributed **1.9%** to the overall increase in general price levels. In contrast, the weight assigned to housing is much higher at 2548, so despite housing prices only increased by 8.5%. Thus, the contribution of housing prices to the final increase in general price level was 2%. Hence rise in housing costs contributed the most to the change in the general price level.

(b) 'The People's Bank of China has already signalled it is switching from reining in the economy to boosting growth.'

With reference to the data, discuss whether there are sufficient grounds to support its change in economic focus. [6]

Introduction

The People's Bank of China believes that Chinese economic growth is slowing down and that the government needs to put in place policies to boost economic growth.

Body

There are some grounds to support the Chinese government's decision to change its economic focus as seen from Extract 5, foreign investment in China was almost 10% down in November on a year earlier. In addition, due to the Eurozone crisis, consumers in the Eurozone would have earn less income and demand for exports from China into the Eurozone would fall. Assuming import expenditure and domestic investment remains constant, net exports and investment would fall, this would lead to a fall in aggregate demand and national income. Chinese citizens would experience a decrease their income, reducing their purchasing power and material standard of living.

In addition, the decrease in national income would cause the tax revenue collected by the government to fall, assuming that the tax rate remains constant. With less tax revenue collected, assuming government expenditure remains the same, the government would be at the risk of a budget deficit. This would cause China to incur foreign debt which may hinder potential growth in future as the government would have to pay back the debt rather than increase government expenditure on infrastructure.

<u>However</u>, China is still at risk of inflation due to an inflow of hot money or "cheap capital" flowing into China. US is suffering from "anaemic growth" and is employing expansionary monetary policy. The increase in money supply in the US has lead to lower interest rates in the US. Thus, US investors seeking higher returns on short-term capital would shift their funds out of US banks and into Chinese banks. This would cause an increase in money supply in Chinese banks, which would lower the cost of borrowing and increase investment and consumption in China. This would cause a rise in aggregate demand and may cause inflationary pressures.

Such inflationary pressures can erode China's export price competitiveness leading to a fall in export revenue. In addition, imports will be relatively cheaper compared to domestically produced import-substitutes and this also leads to a rise in demand for imports and import expenditure. Overall, this can lead to worsening of China's current account balance.

Conclusion

The data provided in the extract is also not sufficient. Without information on the capital account, we cannot ascertain whether the capital account is in deficit or surplus. Thus, aggregate demand may be increasing or decreasing.

(c) (i) Using Table 4, compare the current account balance of the 3 economies. [2]

- Singapore and China both have a current account surplus in 2011 while the US is running a current account deficit.

- While China's current account surplus in absolute terms is greater than Singapore, when expressed as a percentage of GDP, Singapore's current account surplus is proportionately higher than that of China.

(ii) Assess the relative effectiveness of fiscal policy and the abilities of any 2 economies in Table 4 to use this policy to address the slowing economic growth brought about by the Eurozone crisis. [8]

Introduction

The Eurozone crisis brings about problems of worsening balance of payments

especially for its major trading partners which in turn translates into slowing economic growth. The ***relative effectiveness*** of fiscal policies depends on the **root cause** of the problem as well as the **conditions** within the 2 economies like Singapore and US. In addition, the ***abilities*** of these 2 economies to use expansionary fiscal policy to address the slowing economic growth brought about depends on the finances of the government as well as if the economy is faced with other prevailing domestic economic problems.

Brief explanation of problems brought about by Eurozone crisis

With concerns over the Eurozone sovereign debt crisis deepening, there is a fall in national income in this region of the world and business activity slowing down or even falling. This leads to a fall in purchasing power by the Eurozone countries that results in a fall in demand for exports from countries like Singapore and US. In addition, the pessimism within the region also leads to a fall in FDI by Eurozone investors into other countries as they may face a fall in funds.

Hence, there is likely to be falls in both export revenue and investment for countries like Singapore and US.

Analysis of expansionary fiscal policy

Expansionary fiscal policy can be used in these 2 countries which include the rise in government expenditure in areas like infrastructure and education. Alternatively, the government can also reduce taxes to boost economic growth. By reducing taxes such as the personal income tax, disposable incomes will increase so that **consumption** will rise. The government can also reduce corporate tax. This will result in a rise in post-tax profits which will induce more **investments**. A rise in government expenditure as well as consumption and investment expenditures will lead to a rise in AE.

At original level of national income, there is a shortage of goods and services. 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 amount of rise in induced consumption is determined by the value of MPC. 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.

Evaluation of extent of:

(I) Effectiveness

- Since expansionary fiscal policy aims to raise domestic demand through increasing government, consumption and investment expenditure, it does not clearly address root cause of problem and may be limited in its effectiveness to address falling economic growth. In particular, for a country like Singapore whereby its key engines of growth are external demand and it has a smaller reliance on domestic

demand, expansionary fiscal policy are likely to be relatively more ineffective in raising AD for Singapore compared to US which is more reliant on its domestic demand like consumption expenditure.

- The effectiveness of fiscal policy to boost economic growth depends on size of the multiplier. The value of Singapore's multiplier is small due to Singapore's high marginal propensity to save (MPS) and marginal propensity to import (MPM) [Provide reasons].

- Hence, using expansionary fiscal policy to boost economic growth is not very effective in Singapore due to the large withdrawals from the circular flow of income. Therefore, the Singapore government may have to spend relatively more or reduce tax further in order to achieve the desired outcome compared to US which has a larger multiplier size due to its smaller amount of withdrawals.

(II) Ability

- *As seen in Extract 6, US must also contend with significant fiscal debts and political gridlock.* With significant fiscal debts, it means that the US government is already currently facing large budget deficit. This limits the ability of the US government to finance an expansionary fiscal policy as the further government expenditure and reduction in taxes can cause a greater burden on the US government and its citizens to finance the interest payments of these fiscal debts. In addition, the ability to employ fiscal policy may also be further hindered by the political problems of the US government whereby different groups in the governments hold different views which can greatly slow down the policy-making process.
- Singapore, compared to the US, has greater ability to finance an expansionary fiscal policy as it can draw on its budget reserves to

Conclusion

On the whole, though expansionary fiscal policy may not tackle the root cause of the Eurozone crisis, it can help to cushion the extent of the fall in AD in the short term for countries like Singapore and the US. However, the effectiveness of the implementation of fiscal policy differs for different economies based on their characteristics of the country. Hence other policies may need to be further considered like depreciation of its currency for countries like Singapore which is more dependent on external demand. In addition, the ability of the government depends on both the current fiscal position as well as considerations of other economic problems for the country.

(d) Consider whether there are more winners or losers from the imposition of China's import taxes on American cars. [10]

Introduction

As seen in Extract 5, China is imposing punitive import taxes on gas-guzzling American cars, in response to likely US subsidies to protect the US domestic car industry. However, whether there are more winners or losers from the imposition of these taxes on American cars depends on factors like *the* Response from US government as well as the importance of car industry as a proportion of GDP for China and the US

The first group of gainers would be the Chinese economy in terms of an improvement in its current account as well as enjoying actual economic growth in the short run.

With the imposition of China's import taxes on American cars, the price of American imports will rise. Assuming demand for American car imports is price elastic due to the presence of many other substitutes like domestically produced cars as well as imports from other countries, this will lead to a more than proportionate fall in quantity demanded of imports and in turn a fall in import expenditure for China. Assuming export revenue for China is constant in the short run, net exports will rise leading to <u>an improvement in current account</u>.

In addition, the rise in net exports, ceteris paribus, will lead to a rise in AD for China leading to a multiple rise in its national income and hence <u>actual economic growth</u> in China. With the rise in production activities, there is also a rise in derived demand for labour leading to a rise in employment in China as well.

However, the extent of gains to China depends on whether the US government retaliates with its own protectionist measures since such import taxes has a beggar-thy-neighbour effect on the US. The US will suffer a fall in their export earnings due to the import taxes imposed by China. This leads to a fall in their national income and purchasing power, hence they will import less. This will cause a reduction in the employment in the export sector of China that initially imposes the trade barrier. Overall employment in China may not improve with protectionist measures. This may be made worse if the US government decides to retaliate with protectionist measures of import taxes on China which is highly likely as seen in Extract 5 whereby both countries are already gearing up for a potentially damaging trade war.

However, there are also losers with the imposition of these import taxes, in particular, the American economy and car producers will be most directly hit in the short run.

American car producers will suffer a rise in export prices with the imposition of import taxes on them by China. Assuming demand is price elastic, quantity demanded will fall more than proportionately, hence leading to a fall in export revenue for the American car industry. With total cost remaining constant, this will lead to a fall in profits for the American car producers which can lead to a fall in production levels. With this, there can be a fall in derived demand for labour leading to massive unemployment in its car industry.

In the long run, overall US economy may suffer. With the fall in total export revenue for car producers especially if car industry contributes to a large percentage of the US GDP, this can lead to a fall in net exports, ceteris paribus, AD, national income and employment will fall.

The extent of losses for US depends on the price elasticity of demand for American made SUVs. If Chinese consumers perceived American cars to be of better quality or it seems more prestigious to own a foreign car, the demand for American car exports may be price inelastic, leading to a less than proportionate fall in quantity demanded, which may lead to a rise in total revenue. However, this may only be in the short run as Chinese consumers may turn to cheaper substitutes from other developed countries like the Eurozone.

Another group of gainers like to benefit indirectly would be the Chinese government as well as other domestic car producers and related suppliers within the Chinese economy.

Government may gain through tax revenue collected through tariffs – can be used to develop infrastructure or subsidise investment in R&D in the domestic car industry to develop new areas of CA.

Overall, the Chinese economy may gain in terms of economic growth and employment. With import taxes imposed on American cars, Chinese consumers will increase demand for domestically produced vehicles, leading to a rise in production levels and business activity within China. This results in greater optimism within the economy and in turn higher expected profits can be gained. With this, investment expenditure is likely to increase, ceteris paribus, AD increase leading to an immediate rise in national income. Consequently, this rise in incomes will lead to a rise in induced consumption and a rise in withdrawals. The rise in induced consumption can also benefit other suppliers and retailers. The amount of rise in induced consumption is determined by the value of MPC. 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.

Extent of benefit for winners depends on the importance of car industry for the Chinese economy in terms of its contribution to the percentage of GDP. The extent of benefit will be greater the larger the contribution of the car industry to the economy in terms of GDP. This is because the spillover effects on related suppliers like domestic suppliers of car spare parts, car maintenance services will benefit more.

On the whole, protectionism is at best a short-term measure which will only benefit a few agents in the economy at the expense of long-term negative impact for consumers and the economy in general – wastage of scarce resources.

Levels	Descriptors
3	§ Thorough analysis of gains or losses with clear links to macroeconomic or microeconomic goals. § Good balance: - Explained gains **and** losses - Explained impact on China **and** US § Well-explained, consistent attempts at evaluation of extent of gains / losses § Justified and insightful conclusion with an overall stand of whether there are more gains or losses with the imposition of import taxes.
2	§ Adequate analysis of gains or losses with some links to macroeconomic or microeconomic goals. § Lack of good balance: - **Only** explained gains **or** losses - **Only** explained impact on China **or** US § Some attempts at evaluation of extent of gains / losses § Unsupported conclusion
1	§ Superficial analysis of gains or losses with no clear links to macroeconomic or microeconomic goals. § Lack of scope: only explained 1 gain or 1 loss to a particular group or economy. § No / superficial attempts at evaluation of extent of gains / losses

SERANGOON JUNIOR COLLEGE
JC 2 Preliminary Examination

ECONOMICS **9732/02**
Higher 2

Paper 2 **Essay Questions** 2013

2 hours 15 minutes

Additional Materials: Writing paper

READ THESE INSTRUCTIONS FIRST

Write down your name and civics group 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.

1 Most people buy luxury wristwatches for their perceived excellent quality or higher status. Others can only afford cheaper brands.

Critically examine the likely impact of a large fall in cost of production in the midst of a recession on the revenue earned from the sales of different categories of wristwatches. **[25]**

Question requirement

- Wristwatches range from higher-end luxury brands like Rolex and TAG Hauer to cheaper brands.
- A supply (fall in cost) and a demand (incomes fall in a recession) triggers are given.
- Focus on elasticities of demand – the use of PED and YED would be sufficient, given the triggers.
- Appropriate diagrams are necessary.
- Focuses on the impact of each trigger **and** combined impact of both triggers on the **sales revenue (PxQ)** of different wristwatches.
- Answer should conclude with some generalization on the similarities and differences observed in the revenue earned.

Suggested Answer

Introduction

- Wristwatches have different brands, ranging from the higher-end luxury brands like Rolex or TAG Hauer to the mid-range Citizen or Rado and cheaper unknown brands.
- There is a wide variety to cater to the different consumer wants based on their ability & willingness to pay.
- A supply (cost) and a demand (incomes) triggers are given.
- The elasticities of demand – namely price-elasticity of demand (PED) & income-elasticity of demand (YED) – would affect the equilibrium prices and quantities of different brands of wristwatches when there is a large fall in cost of wristwatch manufacture and a fall in incomes.

Body

When there is a large fall in the cost of wristwatch manufacture, ceteris paribus, the equilibrium quantity would increase while the equilibrium price would fall in the market.

The large fall in the cost of wristwatch manufacture could arise from decreases in prices of inputs like labour or metals used in their manufacture. Due to the lower production costs, there would be a rise in supply/ output by manufacturers.

However, given the same rise in supply, the extent of the effect on the revenue would differ for different wristwatch brands, depending on whether they are the luxury, normal or inferior brands.

- Luxury and normal wristwatches are likely to have price-elastic demand where Qdd would rise more than proportionately due to a fall in their prices from the fall in production costs, ceteris paribus.
- In comparison, luxury brands would have a more price-elastic demand than other brands because consumers perceive them to be of excellent quality or of higher status.

A fall in prices means consumers will be more likely to be able to afford them. A fall in their prices would mean a higher real purchasing power (income effect) and consumers would switch from a cheaper substitute (substitution effect), in this case, a normal or even an inferior brand. Although still price elastic, normal wristwatches would face a smaller increase in Qdd compared to luxury brands.

- In the case of inferior wristwatch brands, as real purchasing power is increased by the fall in prices (income effect), Qdd would rise less than proportionately, ceteris paribus as demand is price-inelastic. This is because when their prices fall due to the large fall in costs of production, there are now better substitutes available in the wristwatch market for consumers who had intended to buy inferior wristwatch brands.

- With price-elastic demand for luxury and normal wristwatches, the fall in prices from the large fall in costs of production would be less than the fall in prices in the case of inferior wristwatch brands which have more price-inelastic demand. This is because luxury and normal wristwatch production are likely to use more skilled labour or better quality materials and their costs are likely to fall less than those used in inferior wristwatch manufacture. Hence, the price fall for luxury wristwatches would be less than that for normal and inferior wristwatches.

- With price-elastic demand for luxury and normal wristwatches, the large fall in costs of production would cause increases in revenue as the price falls cause more than proportionate increases in their quantities demanded. In the case of inferior wristwatch brands which have more price-inelastic demand, the fall in price would cause a less than proportionate increase in quantity demanded, resulting in a fall in revenue.

With a recession, incomes will fall, ceteris paribus, and the equilibrium quantity and price would fall more than proportionately for the luxury brand, fall less than proportionately for the normal brand & rise more than proportionately for the inferior brand.

A fall in incomes means consumers will have a lower purchasing power to upgrade from a normal or inferior to a luxury brand or from an inferior to a normal brand. The fall in demand is shown by the leftward shift in demand curve as seen in diagram 2, resulting in a **decrease in revenue for both the luxury and normal brands**.

A luxury brand has a **positive income elasticity of demand** so that as consumers' income falls, there is a more than proportionate decrease in quantity demanded at each price, ceteris paribus. A normal brand has an income elasticity of demand of between 0 and +1 e.g. if income falls by 10%, there is a less than proportionate fall in demand by less than 10%.

The inferior brand has a **negative income elasticity of demand** i.e. demand increases as income falls. This is because it is a better substitute in times of falling real incomes if the consumer in in the market to purchase wristwatches. The inferior brand gains due to the need to cut down on luxury and even normal brands in difficult economic times, resulting in a **more than proportionate increase in demand.**

Combined impact of a large fall in costs in a period of recession when incomes are falling:

Combined impact of decreases in costs and incomes on total revenues of the different brands is indefinite if there is a fall and increase in total revenues from the 2 triggers separately. This occurs in the 3 brands when the decrease in costs and the decrease in incomes are analysed separately. **The actual result on revenue will depend on whether the impact of the fall in costs on total revenue or the fall in incomes on total revenue is greater.**

Conclusion

Different brands of wristwatches would have different price elasticities and income elasticities of demand which would cause the quantities to respond differently in either magnitude or direction or both to the changes in the market such as fall in costs or incomes. The different responses depend largely on how consumers view and value the brands and how they react to the changes in the market conditions, given their taste and preferences for the brands.

Since total revenue is made up of price x sales volume, any factor affecting either component will affect the total revenue. When the impact are in different directions, there will be uncertainties as to whether the overall impact from simultaneous changes in the market variables will increase or decrease total revenue.

Level Marking Scheme

Level	Descriptor	Marks
4	Addresses the question fully, showing good understanding of the underlying economic concepts in the analysis of the wristwatch market	21 -25
3	Understands the requirements of the question but unable to sufficiently examine the combined impact of the triggers on revenues	15 - 20
2	Able to address the requirements of the question but limited in scope or depth	9 - 14
1	Has a limited understanding of the requirements of the question shown either by the omission of/limited discussion of elasticities or revenue or different brands	1 - 8

2 Singapore's latest attraction, Gardens by the Bay, comprises an Outdoor Gardens with free entry and two Cooled Conservatories with entry charges. Those living in Singapore, whether Singapore citizens or foreign residents, are charged the same lower rates, compared to tourists.

(a) Explain whether the above case is an example of price discrimination. **[10]**

(b) To what extent is the practice of price discrimination beneficial? **[15]**

Suggested answer:

PART A

Introduction

Under certain conditions, the monopolist might be able to exploit its market position by engaging in price discrimination. A firm is able to practise price discrimination as long as it has market power.

Price discrimination takes place when a firm sells the **same product or service** at **different prices**, where such price differences **do not** result from **differences in its cost of production.** Not all price differences are examples of price discrimination because if price differences are due to cost differences, then they are non-discriminatory.

The Outdoor Gardens and the two Cooled Conservatories provide visitors rather similar enjoyment of nature and greenery but they are not an example of price discrimination.

Singapore's latest attraction, Gardens by the Bay, comprises an Outdoor Gardens with free entry and two Cooled Conservatories with entry charges. It is likely that the two Cooled Conservatories would have higher costs of production compared to the Outdoor Gardens in terms of the fixed costs for designing and building the physical structures for air-conditioning or the sourcing for different types of appropriate plants which must be from more temperate places as well as variable costs like the air-conditioning and the maintenance and upkeep of the physical structures and the plants. The Outdoor Gardens have free entry not because they have zero costs but their costs, both fixed and variable, are likely to be much lower than the Conservatories. It is possible that the company is waiving the charges for the Outdoor Gardens in order to attract visitors, especially residents, who would be less willing to pay to view greenery similar to those in the region. Hence the price difference is likely to be due to cost differences and is therefore not an example of price discrimination.

Those living in Singapore, whether Singapore citizens or foreign residents, are charged the same lower rates, compared to tourists and they are an example of third degree price discrimination.

Assuming that the enjoyment of visitors to the Conservatories is similar, the price difference is not due to cost differences but due to the nationality and residency in Singapore. Tourists who are on short term visits to Singapore are charges higher rates and are thus subjected to price discrimination. This is because they fulfill the conditions for price discrimination to be practised.

There are conditions that must be present before price discrimination can be practised in the market.

- ***There must be some imperfections in the market***

  Market imperfections can be due to imperfect knowledge e.g. consumers' ignorance. Tourists on a package tour would usually pay for such entry fees as part of their travel charges and are usually unaware of the entry charges. In such a situation, the company can control its price when selling tickets to the tour agencies. Tourists who are travelling on their own, if they have not first checked the rates online, would be more willing to pay the higher rates to avoid a wasted trip there.

- ***Different price elasticity of demand for the good exists in each market***

  Different visitors have different willingness and ability to pay for the same good or service. The different elasticities of demand may be due to different tastes and preferences, different income levels, different locations and ease and availability of substitutes.

  The company will find it profitable to charge a higher price in markets where the demand is price inelastic and a lower price in markets where the demand is price elastic. Tourists are likely to have a more price-inelastic demand for the Conservatories as they would want to enjoy the scenic experience given the limited time they have in Singapore. Citizens and foreign residents would have a more price-elastic demand as they have more opportunities to visit in the future.

- ***The seller must be able to separate the different sub-markets so that no re-selling can take place from a low-price market to a high-price market.***

  Markets must be effectively separated such that no resale can occur from a low-price market to a high-price market or from one buyer to another. If resale is possible, then prices in the different markets would tend to be equalized as consumers buy from the low-price market and sell in the high-price market in order to make profits. Thus, the company must have full control over the supply of the product in any part of the market. This condition explains why price discrimination is easier to apply to services like the Gardens by the Bay. There is no possibility of resale of tickets as visitors would need to show proof of their citizenship or residency in Singapore.

<u>Levels Marking Scheme</u>

Level	Descriptor	Marks
3	Able to identify and explain the example using relevant knowledge of price discrimination	7 - 10
2	Unable to explain the example adequately but has good or even excellent knowledge of price discrimination	5 - 6
1	Unable to explain the example but has some knowledge of price discrimination	1 - 4

PART B

Introduction

The practice of price discrimination is beneficial when society benefits in terms of greater welfare from satisfaction or profits. However, if the higher prices charged only increase the monopolist supernormal profits and market dominance, then consumer welfare will be reduced.

Benefits from First Degree Price Discrimination (also known as perfect price discrimination)

- This is an extreme case of price discrimination where the monopolist can negotiate individually with each buyer and sell each **individual unit** of the output at the **highest** price that the buyer is willing and able to pay.
- If the discriminating monopolist is able to discriminate perfectly between every buyer, he could extract all the consumer surplus. If the monopolist could sell the first unit of a good for $4, the second for $3, the third for $2 and the fourth for $1, this would yield total revenue of $10, rather than a mere $4 if all four units were sold at a uniform price of $1. This clearly shows that if the monopolist can discriminate among the units sold, it can always earn more than when a single price is charged. Producer surplus or welfare would be increased.
- If the monopolist now spends the increased revenue on lowering costs or on developing better products or service, then consumers would also benefit in the long run. Government tax revenue could also be increased with increased profits of the firm. The tax revenue can then be spent to improve consumer welfare through spending on infrastructure, facilities or welfare grants.
- There is allocative efficiency as P = MC and there are no shortages nor surpluses in the market.

Limitations of First Degree Price Discrimination

- Much depends on what the monopolist firm does with its increased revenue arising from the highest prices charged for the different units of a good or service. If the firm retains all the profits for its own use or uses the revenue to pay for its rising costs, then consumers will not be better off. The firm will maximise its producer surplus while consumer surplus becomes zero.

Benefits from Second Degree Price Discrimination

- The discriminating monopolist charges different prices for different **'blocks'** of the same good sold, according to how much they purchase. That is, the monopolist sets a uniform price for an initial specific quantity followed by a concession of a lower price for an additional batch of goods.

- For example, electricity companies in some countries charge a high price for the first so many kilowatts. Additional kilowatts are charged at a much lower rate.

Limitations of Second Degree Price Discrimination

- If lower prices are charged for subsequent units, then it is possible that low-usage consumers are actually subsidising those who are heavy users. This also means some degree of inequity in the charges levied.
- The more prices that can be charged, the greater the sellers' ability to increase its revenue at the expense of consumers.

Benefits from Third Degree Price Discrimination

- The monopolist charges different prices for the same product in **different markets** that have different degrees of price elasticity of demand for the product in order to increase its total revenue. A higher price charged in the market for consumers with price-inelastic demand will increase its total revenue just as a lower price charged in the market for consumers with price-elastic demand will increase its total revenue as well.

- Third degree price discrimination is the most common form of price discrimination. Price discrimination enlarges the market. For example, different MRT fares are charged to students and adults going to the same destination. In a way, the adults are helping to subsidise the fares for students. This allows certain groups of consumers, like the students, being able to enjoy the good or service at a lower cost. The monopolist, as another example, can charge the richer consumers a higher price and the poorer ones a lower price. This enables the product or service to be within the reach of poorer consumers and increases overall consumer welfare in society.

- Price discrimination is beneficial and may be necessary to help a monopoly cover all its cost when charging a uniform price can result in a loss and final exit from the industry. If the good or service is essential to society, then the exit of the firm from the industry will be detrimental as it results in welfare loss. Hence, to ensure that the monopoly continues to provide the service, price discrimination may be necessary.

Limitations of Third Degree Price Discrimination

- The more prices that can be charged, the greater the sellers' ability to increase its revenue at the expense of consumers.
- Inefficiency in resource allocation - 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 for the last unit of output produced, P=MC. The profit-maximising monopolist, by having a high degree of market power, restricts his output and charges a higher price for his product than socially desirable. Thus, monopoly results in an inefficient outcome for the society.

Conclusion

The extent to which the practice of price discrimination is beneficial or not depends largely on the behaviour and purpose of the firm in using its monopoly power in the market. In theory, there are reasons for and against price discrimination and in reality, it has been practised in some markets. Given the tendency of a firm's self-interest in protecting its market power and profits, consumer interests should also be protected to a certain extent. If there is greater consumer awareness of their consumer sovereignty and voice, then the firm's monopoly power can be kept in check. Otherwise, the government needs to intervene to regulate the monopoly power.

Levels Marking Scheme

Level	Descriptor	Marks
4	Able to discuss the extent of the benefits and costs of price discrimination	12 -15
3	Balanced answer which may not be of sufficient depth or scope	9 – 11
2	Has adequate analysis but not balanced in approach	6 – 8
1	Has a limited understanding of the benefits/costs of price discrimination	1 – 5

3 The Chinese government believes it has more information to overcome pollution oversight as well as to ensure a steady transition from low-cost manufacturing to a more service-oriented economy.

(a) Explain how firms' missing information on costs and immobility of factors of production lead to inefficiency in resource allocation. **[10]**

(b) Assess whether government intervention to address the above problems will lead to more efficient resource allocation. **[15]**

Introduction

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 allocation of resources and equity among various income groups. Essentially, resources must be allocated such that the right type and amount of goods and services are produced at the lowest possible average cost. That is, production is both **allocatively and productively efficient** respectively.

Body

Firms' missing information can bring about allocative inefficiency when negative externalities are present like in the case of industrial pollution.

If the manufacturing of chemical products pollutes the environment, this gives rise to **external cost**. Latter include medical bills incurred by residents living near the polluting factories who fall sick due to prolonged exposure to air pollution, fishermen's' loss of income due to destruction in marine life. They are the third parties who are not involved in the production/consumption of chemicals but incur cost which are not compensated for and such cost are not reflected in the firms' costs of production. Hence the **true or social cost** of production is underestimated. Resource allocation by market forces alone will result in **overproduction** of the product from society's viewpoint. A **welfare loss to society** is incurred.

The firms' private cost of production consists of cost of labour, raw materials, capital equipment etc. for producing chemicals.

When there are negative externalities in production, the full opportunity cost of production to society > firms' private cost by the amount of marginal external cost.

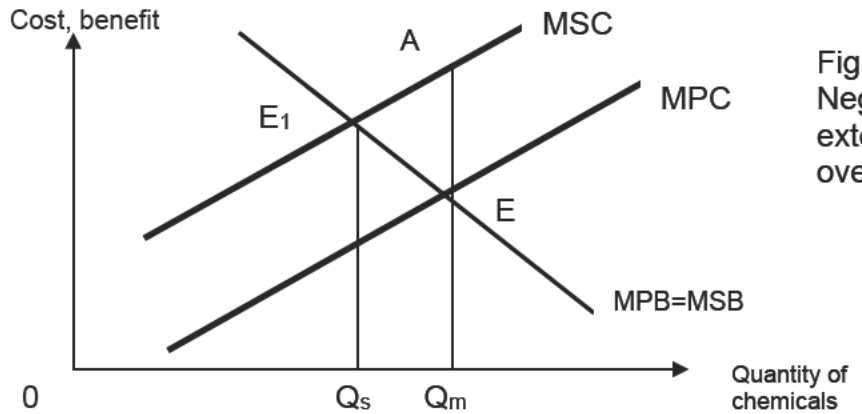


Fig 1: Negative externality and overproduction

In figure 1**,** OQm is the **market equilibrium output level** where MPB=MPC as the chemical firms take into account only their private benefit and costs, ignoring all third party effects. In contrast, OQs is the **socially optimum output level** where MSB=MSC. It is attained after taking into account social benefits and costs where society's welfare is maximized as the **benefit society gains from the last unit of this good equals the next best alternative good foregone.** The existence of MEC leads to a **divergence** between MPC and MSC, thus MSC curve is above MPC curve. Overproduction of Qs Qm brings about a welfare loss of EE1A. This is because for **each additional unit produced beyond OQs, the costs to society > benefit. By summing up this excess of MSC over MSB for the additional units Qs Qm**, there is a deadweight loss to society equal to area EE1A**.** Hence firms underestimated their MPC causing **overproduction** via the price mechanism.

Immobility of factors of production also lead to inefficiency in resource allocation.

One assumption of the perfectly competitive model is that all factors of production are perfectly mobile where they can move easily from one type of production to another. In reality, this is not always the case. Labour may be immobile occupationally and geographically which result in economic inefficiency.

Occupational immobility of labour can lead to productive inefficiency**.** Labour is **occupationally immobile** if workers cannot move easily from one job to another because they lack the relevant skills demanded by sunrise, expanding industries. For eg. As consumers shift their demand from low to higher end goods & services, workers should have changed their jobs accordingly. However this may not be possible as some workers lack the necessary skills, resulting in structural unemployment due to a skills mismatch. The resultant unemployment means that the economy is functioning inside its PPC ie. productive efficiency is not achieved.

Geographical immobility of labour also lead to productive inefficiency. Besides moving between occupations, workers may need to move between locations too. But they may be **geographically immobile** due to barriers like family and social ties, huge differences in price of housing and cost of living between regions.

Level	Descriptor
L3	Detailed, accurate explanation of how the 2 sources of market failure lead to inefficiency with clear reference to either productive or allocative efficiency
L2	Generally clear explanation with some gaps in analysis.
L1	Limited content coverage. Displayed conceptual errors with gaps in analysis.

Part B

Assess whether government intervention to address the above problems will lead to more efficient resource allocation. [15]

Introduction

Free market forces of demand and supply brings about efficiency in resource allocation when there is perfect competition and no third party effects. However in reality, these assumptions seldom

exist thus the market alone will not ensure efficiency in resource allocation. There is market failure which can be brought about by externalities and factor immobility. As such, government needs to intervene to bring about higher efficiency.

Body

Due to the overproduction of goods that results in negative externality, government needs to intervene to ensure a more efficient allocation of resources.

§ Government could impose a **tax equal to marginal external cost**. A tax on production has the same effect as an increase in cost of production of polluting firms. Effectively, the tax shifts the firm's marginal private cost curve vertically upwards by the full amount of the tax. If the tax is calculated accurately to reflect marginal external cost the firm inflicts on a third party, the firm is said to internalise the external cost. The resulting higher total cost now induces polluting firms to reduce production to an amount equal to OQ_s which is the socially optimum output level where MSB = MSC. The welfare loss arising from overproduction is thus eliminated.

Evaluation:

§ Many economists favour the tax solution to correct externalities because it still **allows the market to operate**. On one hand, it forces firms to take on board the full social costs of their actions. On the other hand, consumer sovereignty is also protected as consumers who are willing and able to pay a higher price for the good can continue to get it.

Alternatively, the government can use regulation to address the market failure due to negative externalities.

Government regulation can come in various forms as seen below.

(1) Issue tradable pollution permit

- Government sets a quantitative limit on the level of carbon emissions and give carbon permits to each firm/industry.
- Firms which are better equipped to reduce carbon emissions than its allocated amount can supply/sell the credits gained to the less efficient firms so that the less efficient firms can emit over their allocated limit.
- The gradual reduction of total quantitative limit is to create a shortage and firms will react according to their profits motive.

(2) It can order the **closure** of high polluting firms;

(3) Impose heavy **fines** on factories which release carbon beyond the regulated amount;

(4) Pass laws to **regulate** their production behaviour.

For e.g. countries are empowered by Environmental Pollution Control Act to prohibit and made illegal certain types of air, water and noise pollution. Government can also impose legal limits on the emission level which firms must meet. By doing so, it is actually forcing producers to internalize.

Evaluation:
The advantage of (2) to (4) is that they are simple and clear to understand, making them relatively easy to administer. Inspectors or the police can conduct spot checks to see that the law is obeyed.

Government must also intervene to reduce geographical and occupational immobilities so as to cut down on wastage of resources.

- To reduce occupational immobility arising from a mismatch of skills, government can send workers for training, retraining and education to ensure a rise in labour productivity to reduce structural unemployment. Higher productivity will reduce production costs, raise AS, national output hence employment. This is to ensure that workers are equipped with the necessary skills for an increasingly knowledge based economy to ensure their employability.
- To reduce geographical immobility, government can give housing subsidies or rental rebates to make workers more willing to move between regions.

However because government's policies have limitations, efficiency in resource allocation may not come about despite their intervention.

- The main problem of imposing a tax which equals MEC is that there is lack of knowledge. The **damage from pollution is extremely difficult to assess**. In this respect, the government may fail to tax the right amount. An overestimation or underestimation of the size of external cost would mean either a <u>less than or more</u> <u>than social optimum level of output</u>.
- Regulation in its most extreme form ie. closure of polluting firms, is a blunt weapon. It does not incentivise firms to look for environmentally friendly ways of producing their goods. Other problems include the need for manpower to assess the tax. This poses an additional cost to the government.
- In terms of tradable pollution permit, there are high administrative costs associated with monitoring pollution emissions as the number of firms involved is large and there is a need for tough systems in each country to verify and report emissions. In addition, funding for poor countries to develop new technology is a problem.
- Moreover, government's measures to reduce both types of immobilities require considerable funding hence incur opportunity cost as funds could be used in provision of merit/public goods. Time is also needed for workers to be trained thus occupational immobility may not go away quickly.

Also, efficiency in resource allocation may not come about as government can also fail.

Government is a bureaucratic organization where the administration is characterised by <u>excessive routine, red-tape and bureaucracy</u>. In addition, <u>imperfect information</u> and political objectives of the government may <u>create inefficiencies</u> when they intervene in markets Government's <u>slow decision-making can translate into higher cost</u> of production hence consumers would end up paying a higher price for the good.

Level	Descriptor
L4	Thorough & balanced approach with regards to the strengths & limitations of govt intervention. Displayed competency in explanation and evaluation of 3 measures
L3	Had a good knowledge of role of govt intervention in terms of its strengths & limitations. Displayed good understanding of 2 measures well in terms of analysis & evaluation
L2	Inadequate coverage of measures as well as examining the role of govt intervention.
L1	Cursory explanation which lacks elaboration

4 Fears are growing that the UK is running the risk of a period of painful "stagflation" – the toxic cocktail of stagnating growth, high unemployment and rising prices.

(a) Explain the possible factors that can cause stagflation in a country. **[10]**

(b) Discuss whether the Singapore government should focus more on achieving low unemployment or price stability. **[15]**

PART A

Introduction:

- **Define stagflation:** A period of persistent rise in GPL coupled with high unemployment and stagnating or falling real national income.
- **Direction of essay:** This essay aims to explain the factors causing a simultaneous change of rising AD and falling AS leading to rising GPL and falling employment as well as falling real national income.

Body:

One possible factor of stagflation is falling AD.

UK's trading partners such as USA may be experiencing economic recession which means there is falling national incomes in USA. This will lead to a fall in purchasing power of their residents which leads to fall in demand for their own domestically produced goods and services as well as foreign produced goods and services such as those from UK. UK will experience a fall in demand for her exports. This leads to a fall in total revenue of her exports. Assuming total expenditure on imports constant, there is a fall in (X-M). Thus, there leads to a fall in aggregate demand. This is represented by a leftward shift of AD curve from AD_0 to AD_1.

Another factor that could lead to stagflation is rising oil prices which resulted in falling SRAS.

E/E2: Oil is an important input to produce many final goods and services. Oil is traded internationally and is subjected to market conditions as well as production decision by the major oil producing countries, Organization of the Petroleum Exporting Countries (OPEC). Increase in price of oil could be due to OPEC restricting its output so as to raise price to gain higher revenue. Thus, leading to fall in supply of oil and hence, a rise in price of oil. When UK imports oil from these countries, she experiences a rise in costs and hence a fall in profits. UK firms will reduce their supply of final goods and services. There will be a fall in SRAS represented by a leftward shift of SRAS curve from $SRAS_0$ to $SRAS_1$.

Stagflation arises due to fall in AD and a larger fall in AS occurring simultaneously resulting in higher GPL.

When both AD and AS fall simultaneously, assuming the fall in AS is greater with oil prices taking up a huge proportion of total cost in many industries, there will be a shortage Y_2Y_3 at original GPL which exerts upward pressure on GPL. As GPL rises, level of AS rises and level of AD falls, ceteris paribus. GPL continues to rise until the shortage is eliminated. Thus, resulting in persistent rise in general price level of goods and services from P_0 to P_1 and falling real national income from Y_0 to Y_1. Since there is a fall in production activities due to a relatively larger fall in SRAS compared to fall in AD, there is a fall in employment of resources such as labour because labour is a derived demand. This leads to rising unemployment as well.

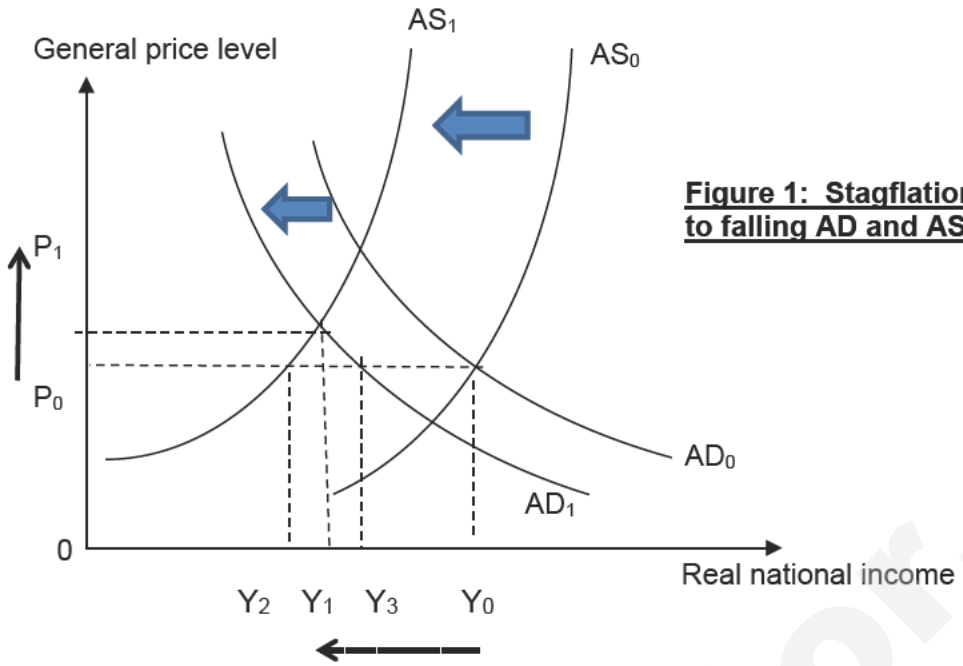


Figure 1: Stagflation due to falling AD and AS

Level	Descriptors
3	• Thorough explanation of at least **one** AD and **one** AS factors causing stagflation in UK • Usage of relevant examples to integrate into analysis to explain the main factors causing stagflation in UK
2	• Sufficient explanation of how AD and AS factors cause stagflation in UK • May / may not use relevant examples to support analysis. • Some gaps evident in some of the analysis. • Some conceptual error/s may be evident.
1	• Smattering of ideas. • Listing rather than explanation of factors leading to either rise in inflation or a fall in economic growth but not both. • Substantial conceptual errors. • Generally weak answer. Limited application of economic analysis.

PART B

Discuss whether the Singapore government should focus more on achieving low unemployment or price stability. **[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 key terms:
  - (i) Price stability
  - (ii) Low unemployment

Body

Singapore government should focus more on achieving price stability compared to low unemployment rate.

- **External Benefit – Improvement in balance of payments**

  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, price of imports will be more expensive and assuming demand of imports is price elastic, quantity demanded of imports will fall more than proportionately. This leads to a á TRx + â Tem and in turn a á net Xs which helps to improve current account.

  In addition, price stability in which there is lower inflation leads to lower costs & uncertainty in the country as future projections of costs and revenues are more accurate with price stability. This can help to improve a country's attractiveness as an FDI location. So investors will move their funds into Singapore from other countries.

- **Internal Benefit – Economic growth and low unemployment**

  Price stability will maintain the purchasing power of savings if the nominal interest rate paid on savings greater than the rate of inflation. Hence, people will have more incentive to save due to higher returns from savings. This will lead to a á in the volume of savings and in turn a á funds available for productive investment. As a result, there will be a á productive capacity of the whole economy seen by a rise of the aggregate supply and hence potential economic growth is achieved.

However, on some occasions, the Singapore government has changed its priority to focus more on achieving low unemployment rate goal when high unemployment problem is more severe than inflation problem.

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 chose to depreciate the currency to stimulate economic growth and achieve full unemployment.

- **Raises the level of employment & SOL**

  Low unemployment means that there is a rise in the level of production in the economy. This means that there would be a rise in the demand for labour since demand for labour is a derived demand. Hence, there would be a fall in unemployment. In this sense, there is no conflict between economic growth and low unemployment. At the same time, there would be a rise in people's incomes, which means that their purchasing power has increased. Hence, they are able to buy and enjoy more goods and services, leading to a rise in their material standard of living.

- **Brings about less inequity in income distribution**

  Where there is economic growth and low unemployment, there will be an increase in government tax revenues, assuming no change in the tax rates. These tax revenues can be redistributed to the poor in the form of subsidies, hence narrowing the income gap. Hence, there is less income inequity and both higher and lower income groups get to enjoy higher levels of purchasing power leading to a rise in their material SOL.

The possible conflicts in achieving these 2 goals of price stability and low unemployment should be considered as well.

However, the achievement of low unemployment may not be the main focus. This is because its attainment can come at a cost of unsatisfactory BOP. When there is low unemployment, there is a rise in national income. Hence, there is a rise in purchasing power, which would lead to a rise in demand for goods and services, including imports. As there is a high marginal propensity to import due to the lack of natural resources in Singapore, there would a large increase in import expenditure. Ceteris paribus, net exports would fall, which would lead to worsening of the current account. Ceteris paribus, BOP would worsen. However, it is worth-noting that Singapore has thus far been experiencing a current account surplus. In this light, the conflict between low unemployment and worsening BOP may not occur.

Level	Description
L4	· For an answer that is able to analyse clearly the extent of government concern by considering the three criteria of the severity of the problem, the characteristics of the economy as well as the existing economic conditions prevailing in the economy.
L3	· For an answer that is able to analyse the extent of government concern but lacking in clarity with no clear considerations of criteria to determine the extent of the concern. · Good analysis with some evaluation
L2	· For an answer that is able to explain clearly why the government should be concerned with either high unemployment or high inflation and make limited or no attempt to analyse the level of concern by considering at least one factor such as the severity of the problem or the characteristics of the economy. Some conceptual errors in explanation. · Good analysis but limited/no evaluation.
L1	· For an answer that shows some awareness of why the government should be concerned with either high inflation or high unemployment but conceptual errors are evident.

5 **(a)** Explain the links between interest rate and exchange rate. **[8]**

(b) To what extent does the Eurozone debt crisis affect the Singapore government's decision to continue using the exchange rate as a tool to achieve non-inflationary economic growth? **[17]**

Part (A)

Intro

The interest rate is the price that borrowers of money (e.g. firms and households) must pay to those who have the money (e.g. banks) for the use of the money. Exchange rate is the price of one currency in terms of another currency. It is the amount of domestic currencies that must be paid to obtain one unit of the foreign currency.

Body

1. Increase in interest rate would lead to appreciation of domestic currency via fall in GPL in the country.

- Increase in interest rates leads to higher cost of borrowing. This in turn reduces consumption, investment and thus AD. A fall in AD leads to a surplus of goods and services, thus creating downward pressure on prices. This leads to a fall in GPL in the country.
- In turn, this translates to a fall in prices of exports and if DD for Spore's exports is price elastic due to many substitutes available, this will lead to a more than proportionate rise in quantity demanded for exports, thus increase in export revenue. Hence, there will be **rise in DD for SGD** in the foreign exchange market to pay for our exports.
- In addition, with the fall in GPL in the country, assuming domestic inflation of major trading partners are higher, imports are now relatively more expensive leading to a fall in demand for imports, hence fall in import expenditure. This will result in a **fall in SS for SGD** in the foreign exchange to purchase imports.

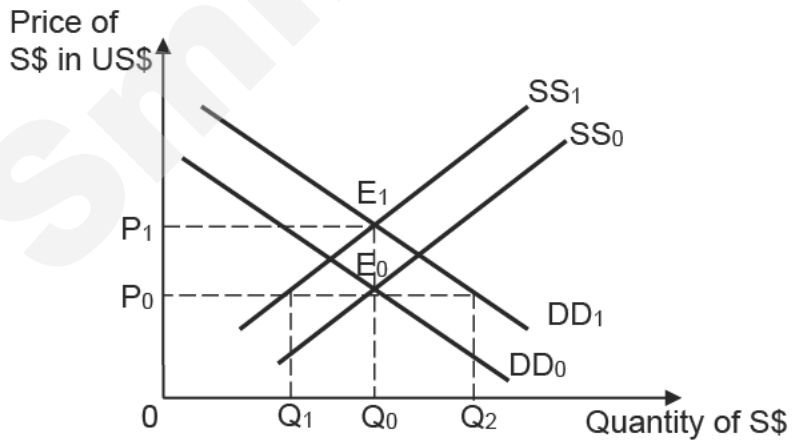


Figure 1: Change in the Exchange Rate

When DD for SGD increases from DD_0 to DD_1 and SS for SGD decreases from SS_0 to SS_1, this leads to a shortage of SGD in the foreign exchange market at original exchange rate of P0, which creates an upward pressure on prices. The adjustment will continue until the shortage is eliminated at E_1 where SGD has appreciated from P_0 to P_1.

2. **Increase in interest rate would lead to appreciation of domestic currency via fall in national income of the country.**

- The rise in interest rate which leads to a fall in AD as explained above also leads to a fall in national income of Singapore. This leads to a fall in purchasing power, thus fall in DD for imports from other countries, leading to fall in import expenditure. Hence, there will be a **fall in SS of SGD** in the foreign exchange market, shortage of SGD, creating upward pressure on prices, which leads to an appreciation of SGD.

3. **Increase in interest rate would lead to appreciation of domestic currency via hot money flows.**

- Increase in interest rates implies higher rate of returns for holders of funds. When interest rates in Singapore increase relative to US, this may attract inflow of hot money to take advantage of the higher rate of returns. This leads to **increase in DD for SGD** in the foreign exchange market.
- In addition, there is less outflow of hot money from Singapore to other countries by current investors who choose to invest more in Singapore. This leads to **a fall in SS of SGD** in the foreign exchange market.
- Both the rise in demand and fall in supply for SGD will lead to a shortage of SGD, creating upward pressure on prices, which leads to an appreciation of SGD.

Levels	Descriptors
L3	§ Thorough analysis on how the variables are related. Links are clearly shown.
L2	§ Some analysis on how the two variables are related. Links are not clearly shown.
L1	§ Superficial analysis on how the two variables are related.

(b) To what extent does the Eurozone debt crisis affect the Singapore government's decision to continue using the exchange rate as a tool to achieve non-inflationary economic growth? **[17]**

Intro

- The MAS adopts the exchange rate policy by allowing a gradual **<u>appreciation</u>** of SGD to achieve a sustained non-inflationary economic growth.
- However, in view of the Eurozone debt crisis which has impact on our macroeconomic goals, it is necessary to assess the relevance of this tool especially when the EU countries are one of our major trading partners.

Body

1. **The Eurozone debt crisis may lead to a fall in Spore's production, national income and employment.**

- With the crisis, this means that there is a loss of confidence in the EU countries and thus investment falls à fall in AD à fall in national income of EU countries.
- With fall in national income in EU countries à fall in their purchasing power à fall in DD for goods and services including the exports of Spore à fall in TRx of Spore à ceteris paribus, fall in net exports of Spore à fall in AD à surplus à downward pressure on prices à firms have

less incentive to produce à fall in national income. This in turn leads to a fall in employment since labour is a derived demand.

L: Hence, the debt crisis has led to a negative impact on Spore in terms of worsening current account balance, economic growth and employment.

2. In view of the Eurozone debt crisis, we <u>should change</u> our existing policy of allowing the appreciation of SGD.

- The government can allow the SGD to depreciate à ¯P exports in foreign currency + - P imports in domestic currency à If DDx and DDm are price elastic due to many substitutes available à more than proportionate - Qd exports and more than proportionate ¯Qd imports à - TRx and ¯TEm à - net exports, thereby sustaining growth and employment.

L: Hence, we should depreciate instead of continuing to appreciate the SGD.

Evaluation

- However, the effectiveness of this policy also depends on the economic outlook. If **pessimism** remains, such measure will not effectively raise net exports as people rather delay their spending during uncertain times. Hence, DD for our exports is price inelastic which leads to a less than proportionate rise in Qd for exports, thus fall in export revenue.

3. Having said this, we may not want to change the policy of appreciation of SGD.

a) Although the EU countries are one of our major trading partners, it has not reached a stage whereby it has an adverse impact on our net exports. The ***<u>condition</u>*** in the EU countries is such that not all EU countries are in crisis. The extent of the impact of the crisis on us is still minimal.

b) The ***<u>characteristics</u>*** of Spore is such that we are a small economy with limited resources, hence need to import final goods and services and raw materials for survival. Singapore's lack of natural resources and its dependence on international trade implies that it is **vulnerable to inflation from external sources** such as imported inflation and inflation due to rise in export demand. Appreciation of SGD allows us to control inflation in the following ways:
   - Firstly, appreciation of SGD à - P exports in foreign currency + ¯P imports in domestic currency à if DDx and DDm are price elastic due to many substitutes, this leads to a more than proportionate ¯Qd exports and more than proportionate - Qd imports à ¯TRx + - TEm à ¯ net exports à ¯AD à ¯GPL
   - Next, appreciation of SGD à ¯P imported final goods and services, thus reducing inflationary pressures.
   - Lastly, appreciation of SGD à ¯P imported raw materials à ¯COP à - AS if producers pass the cost savings to consumers à ¯GPL + - NY thus economic growth

4. **Even with the Eurozone debt crisis and the vulnerability to imported inflation remain, inflation in recent years arose from domestic pressure. Hence, macro-prudential measures which focus on the health of the financial system as a whole, are used to <u>complement</u> the traditional exchange rate policy.**

<u>[Other policies like supply-side policies are also acceptable]</u>

- Inflation in recent years arises from high rental rates and high private transport costs. Government thus need to address such inflationary pressure by using macro-prudential measure instead of continuing to use the exchange rate policy.

- For example, to tackle high private transport costs, government has reduced the car loan period from 10 to 5 years and adjusted the maximum loan of from 100% of the price of car to 60%.
- This effectively reduces DD for new cars and thus, has led to the fall in CPI inflation and prevents spillover effects on other parts of the economy such as higher business costs which may cause a fall in economic growth.

Level	Descriptors
L4	· Showed good understanding of how the Eurozone debt crisis can affect Singapore. · Thorough analysis on whether to continue using appreciation of SGD. · Make frequent and appropriate explained evaluative remarks during the development of an answer. · Provide an evaluative summary at the end of an answer (e.g. with an evaluative stand / judgement) ·
L3	· Showed good understanding of how the Eurozone debt crisis can affect Singapore. · Good analysis on whether to continue using appreciation of SGD. · Some discussion on the criteria in making the decision.
L2	· Showed some understanding of how the Eurozone debt crisis can affect Singapore. · Some analysis on whether to continue using appreciation of SGD. Analysis may be one-sided.
L1	· Showed some understanding of how the Eurozone debt crisis can affect Singapore. · Superficial analysis on whether to continue using appreciation of SGD.

6 Discuss whether globalisation will always improve a country's economic performance and standard of living. **[25]**

Suggested outline

Intro

- Globalisation refers to the process of continuing integration of countries in the world where national markets become increasingly interlinked. It leads to greater interdependence between countries as there are greater flows of goods, services, labour, capital and technological know-how amongst countries. This is made possible due to advancement in technology and lowering of transport costs.
- There are benefits and costs arising from globalisation. These in turn affect the economic performance in terms of the ability to achieve the macro or microeconomic goals and SOL.

Body

1. Impact on BOP

a) Improvement in current account

- Globalisation could bring about lower price of imports due to lower costs of transport. In addition, countries become more interdependent when they sign FTAs where trade barriers such as tariffs are reduced or removed.
- Hence, there is a fall in prices of our exports to these countries. If DD for our exports is price elastic, this will lead to a more than proportionate rise in Qd for our exports, thus increase our export revenue.
- Likewise, Spore has to remove tariffs on imports which leads to a fall in prices of imports. If DDm is price elastic, this will lead to a more than proportionate rise in Qd for imports, thus increase in import expenditure.
- Overall, assuming that the rise in export revenue is greater than the rise in import expenditure, there will be a rise in net exports thus improving current account and BOP for Spore.

b) Improvement in capital account

- Globalisation not only brings about greater flow of goods and services, but also investment. Our ability to attract FDI from other countries depends on our ability to build a conducive business environment such as an attractive corporate income tax rate which stands at 17% and is the 2nd lowest in Asia after HK (16.5%).
- Ceteris paribus, such inflow of investment will lead to an improvement in our capital account and BOP.

Evaluation

- While the local conditions make it easier and cheaper for foreign firms to set up plants in Spore, the inward FDI is also affected by other factors. One of the factors affecting firms' decision is labour costs. With increasing labour costs due to tight labour market and a tightening of immigration policy (2013), our ability to remain attractive may diminish faster compared to countries such as Korea and Taiwan, which have similar capabilities but are able to offer lower wages.

2. Impact on growth and employment

a) Actual growth and employment

- With a rise in net exports as mentioned, AD would increase. This results in a shortage at the original equilibrium price and hence, an upward pressure on prices. The higher prices encourage firms to increase production. Since labour is a derived demand, there will also be increase in employment as firms need more workers to increase the production.

- If the economy is below full employment, this leads to higher income and economic growth. The resultant rise in national income would lead to a rise in induced consumption, which would bring about a further increase in national income. Extent of rise in NY depends on size of MPC. The higher the MPC, the greater the increase in NY. Eventually national income will increase by a multiple of the initial rise in exports.

b) Potential growth

- With the rise in FDI, it would lead to growth and employment in the SR.
- In addition, in LR, increase in investment on capital goods and technology transfer lead to rise in productive capacity. This increases AS which increases the full employment level of real national output and thus potential economic growth.
- Overall, such increases in AD and AS are beneficial as it allows us to enjoy sustained non-inflationary growth.

Evaluation

- The extent of rise in national income depends on the size of multiplier. The characteristics of Spore are such that we have a low size of multiplier at 1.3 due to large withdrawals arising from high savings where 20% of gross income goes into compulsory savings in CPF. In addition, people save for other purposes such as precautionary purpose. Overall, about 50% of gross income is saved. Also, due to our dependence on imports, every $1 spent, 60cents go into imports. Hence, rise in national income is smaller than other countries such as US with larger size of multiplier.

3. Impact on inflation

- When a country trades, competition from the imports can stimulate greater efficiency in production in the country as firms must keep their costs low in order to remain competitive. This implies more efficient production and better utilisation of the country's resources. In addition, by specialising in the goods that it has comparative advantage in, the country could also enjoy lower cost of production to remain competitive. Therefore when countries trade, consumers now trade get to enjoy lower prices
- Therefore, instead of consumers having to pay higher domestic prices for domestically produced goods in which Spore has a comparative disadvantage, the goods can now be obtained more cheaply from our trading partners who have the comparative advantage.
- This helps to lower import prices and lowers the possibility of imported inflation which also allows consumers from both countries can now enjoy cheaper goods thus increase their purchasing power and increase their material standard of living.

Evaluation

- However, if the rise in net exports as explained above occurs during at a time where the economy is near or at full employment, this will lead to inflation. As exports is more than 200% of Singapore's GDP, - (X–M) à demand-pull inflation in the short-run due to supply-side constraints.

4. Impact on unemployment

- Globalisation brings about technology transfer thus other countries may catch up with us in producing the goods that we have a comparative advantage. For example, with their fast pace of growth and adoption of technology, China is also increasingly producing mid or high-end electronic products such as telecommunications equipment. Huawei is now the biggest telecommunications equipment manufacturer in the world (2012).
- Thus, globalisation results in Singapore losing her comparative advantage to these countries which are fast in catching up with us. This leads to a fall in demand for Singapore's manufactured goods, which results in a fall in production activities due to a fall

in demand for the final goods. Consequently, there is retrenchment of workers in this industry since demand for labour is a derived demand, resulting in unemployment

- However, workers retrenched from these sunset industries are unable to move over to expanding industries such as high-end manufacturing, knowledge-based and service industry (e.g. the Integrated Resorts) as they are not equipped with the relevant skills required.
- Such occupational immobility leads to structural unemployment which is not beneficial as it also implies fall in SOL.

Evaluation

- The impact on us also depends on our ability to respond fast enough to changes. Since the CA a country enjoys is dynamic as it changes over time when others catch up with us, such a potential loss of jobs could be minimised if our government has the foresight to look into new niche areas before we lose our CA to other countries.

5. Impact on income gap

- Globalisation has led to greater financial flows across national border. This has resulted in exposure to new ideas and technology. New technology creates greater demands for workers with higher skills. In Spore, the use of technology is widespread in both manufacturing and services sector, raising the skills premium in a substantial portion of the economy.
- Consequently, such technological change favours those in the sunrise sectors (eg: pharmaceutical sector) with higher skills, DD for high-skilled labour rises, thus rise in wage rate for them. At the same time, fall in DD for low-skilled workers in the sunset sectors (eg: cleaning services) as the DD for their final products fall. This leads to a fall in wage rate for low-skilled workers.
- Hence, there is a widening income gap between the skilled and the unskilled.

Evaluation

- The impact on us also depends on our ability to respond via implementation of effective policies to address the widening income gap. Despite measures taken by the government to distribute growth dividends to its people whereby the poor gets more than the rich, our Gini coefficient still increased. Hence, globalisation has not improved our economic performance and SOL.

6. Impact on SOL

- SOL refers to the material and non-material well-being of the people.
- Globalisation enhances the **material well-being** because
    - with increased employment and national incomes, it implies that people have higher purchasing power, thus increase in level of consumption which increases level of material SOL.
    - before trade, countries can only produce and consume up to the frontier of their PPC. Increased trade therefore allows countries to consume at a point outside the PPC which is a desirable but previously unattainable point.

- Globalisation enhances the **non-material well-being** because
    - with higher growth, government is now able to collect more tax revenue which they can spend on public infrastructure, improving the access and quality of health care and education.

Evaluation

- In recent years, there have been debates on how the influx of foreign labour has put pressures on our infrastructure which led to a more congestion living environment on this small island, thus reducing the non-material well-being.
- Hence, SOL of some groups does not improve even though there is EC performance.

Conclusion

To a large extent, globalisation will bring about improvement in a country's economic performance and SOL. This is especially so for Spore which is a small country with limited resources where our ability to achieve economic performance and SOL cannot be dependent on just internal factors.

L4	· A well-developed balance answer (positive impact and negative effects) that shows strong content knowledge. · Analysis is supported with real life examples. · Evaluation was well-supported with economic concepts.
L3	· An answer which is well-developed where positive impact and/or negative effects were discussed. · Real life examples may be used sparingly. · Some evaluative comments were provided.
L2	· An elaborated one-sided answer (or 2-sided answer but briefly explained) that focuses on either the positive or negative effects of globalisation. · Real life examples may not be used.
L1	· An answer that shows a brief explanation of the effects of globalisation. · Limited attempts to link the effects to economic performance and SOL.

H1

TAMPINES JUNIOR COLLEGE
JC2 PRELIMINARY EXAMINATION

CANDIDATE NAME

CIVICS GROUP | 1 | 2 | | | |

TUTOR NAME

ECONOMICS 8819

Monday, 16 Sept 2013

3 hours

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.

Section A (Case Study) [70%]
Answer **ALL** questions

Section B (Essay) [30%]
Answer **ONE** essay question

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

This document consists of **9** printed pages.

Section A

Answer **all** questions in this section.

Question 1 The Rise of Singapore's Integrated Resorts

Extract 1: As Casino Begins, Watch for its Social Impact

From the inception of the idea for the first casino in 2004, it has met with much resistance among concerned citizens. Several groups, including the Muslim and Christian communities and social activists, expressed their disapproval to the casinos — a move that is both peculiar and noteworthy in apathetic Singapore society.

Despite public worries over the negative social impact of casino gambling as well as opening of doors to undesirable activities including money laundering, prostitution, and organised crime, Prime Minister Lee Hsien Loong announced in April 2005: 'After weighing the matter carefully, the Cabinet has collectively concluded that we had no choice but to proceed with the (Integrated Resorts) IRs.'

As a social safeguard to combat excessive gambling, the gambling levy was put in place, together with the setting up of the National Council on Problem Gambling and measures such as 'casino exclusion', to stop problem gamblers and those in financial difficulties from entering the casinos in Singapore.

Already, the crimes are rolling in along with the chips that the casino is raking in. It is inevitable. When you want to open something like a casino, you are really opening a can of worms. Hopefully, somehow, the money the casinos make and the shot in the arm for the tourism industry will be more than enough to cover the social costs. But how high a price can society afford to pay?

Adapted from www.globalissues.org, 9 March 2010

Extract 2: Sin Galore

Since opening last April the Marina Bay Sands (MBS) casino has become perhaps the most profitable in the world. Together with Resorts World Sentosa (RWS), another casino complex opened in Singapore last February, it is close to out-grossing the entire Las Vegas strip. Singapore seems to have gone from strait-laced container port to gambling mecca in one bound.

Yet no one is bragging about it. The entrance to the MBS casino is curiously hard to find, tucked away in the basement. Neither casino is advertised anywhere in Singapore. For decades Singapore's government resisted pressure to allow casinos at all, fearful of the crime and social ills they might breed. When it finally relented, it insisted that access to the casinos by Singaporeans should be controlled. Foreign tourists enter free but locals must pay a hefty S$100. Also, the casinos must be part of larger entertainment complexes.

MBS, which is owned by America's Las Vegas Sands, markets itself as a business and convention centre. Its 57th-floor "skypod", which seems to balance precariously atop three curving towers, is widely admired. Its infinity "skypool" is now the go-to

destination for starlets who wish to splash around in bikinis for the cameras. It also has the world's biggest ballroom and a perfectly humungous shopping centre. RWS, owned by Malaysia's Genting, projects itself as a family resort: it boasts a large Universal Studios set, as well as the obligatory fun rides.

An estimated 85-90% of the resorts' takings come from gaming. And those takings are sweet: Aaron Fischer, an analyst at CLSA, a broker, estimates that the two resorts raked in about $5 billion in their first year—more than triple what some people expected. Mr Fischer predicts that this year they will take $6.5 billion. That would be close to Las Vegas but well behind Macau, the only place in China where casinos are allowed, and which has more than 30.

Thanks to low taxes—roughly 17% compared with Macau's 39%—Singapore's casinos are fabulously profitable. Mr Fischer reckons that RWS will earn $2 billion this year, enough to pay back the costs of building the entire 47-hectare site in little more than two years. Between April and November last year the two resorts paid S$420m in taxes. This year the island's economy is expected to grow by 6-7%, of which the resorts will account for a quarter.

Source: The Economist, 24 Feb 2011

Extract 3: One year On

Just one year after opening its first casino, Singapore has emerged as Asia's hottest new gambling capital with a revamped cityscape and billions of dollars pouring into the economy.

"Singapore has made a dramatic entry to the casino gaming market," financial consultancy PricewaterhouseCoopers said in a report estimating the city-state's casino gaming market at US$2.8 billion (S$3.57 billion) in 2010. The first casino opened in Malaysian-controlled Resorts World Sentosa on February 14, 2010, with US-based Las Vegas Sands following two months later as the world economy was still clawing itself out of recession.

Due to the casino complexes, tourist arrivals in Singapore last year hit 11.6 million, breaking by far the previous record of 10.3 million set in 2007. Most of the visitors came from the Asia-Pacific region, with mainland China, Australia, Indonesia and India together accounting for 53%. Tourist spending helped fuel Singapore's 14.7% gross domestic product (GDP) growth in 2010, making it Asia's fastest-growing economy, after a 1.3% contraction in 2009.

PricewaterhouseCoopers predicted that Singapore would overtake South Korea and Australia this year to become the second-largest Asia-Pacific casino market behind traditional leader Macau. "In 2011, with a full year's operation for both resorts, we expect revenues to reach US$5.5 billion, growing to US$8.3 billion by 2014," it said.

But the resorts have also created thousands of new jobs for Singaporeans, and tourists rave over non-gambling attractions like Universal Studios.

"Visitor arrivals have really come in stronger and I think that's a direct spinoff from having the IRs on shore," said Barclays Capital senior regional economist Leong Wai Ho. The resorts were contributing in the region of 0.3 to 0.4 percent of GDP, with the

potential for that to increase to 0.7 percent in the near future. "That's only when both casinos, both IRs are up and running fully, so we're not there yet actually. Contributions to date have been significant, but I think the potential is for more to come," he said.

In the latest financial statement issued by parent company Las Vegas Sands, Marina Bay Sands was shown to have raked in US$1.02 billion in revenues from its casino operations in 2010. Resorts World Sentosa declined to disclose specific casino revenue numbers, but its total revenue stood at $1.53 billion for the nine-month period ending September 30, 2010.

Source: www.oneasianews.org, 13 February 2011

Table 1: Economic Indicators of Singapore

	2007	2008	2009	2010	2011	2012
GDP (At Current Market Prices, S$million dollars)	268,062.2	269,658.1	274,655.3	315,921.2	334,092.7	345,560.5
GDP (At 2005 Market Prices, S$million dollars)	247,218.4	251,538.9	249,559.8	286,446.7	301,228.4	305,201.5
Population (millions)	4.58	4.84	4.99	5.08	5.18	5.31
Inflation Rate (%)	2.1	6.6	0.6	2.8	5.2	4.6
Unemployment (%)	2.1	2.2	3.0	2.2	2.0	2.0

Source: Singapore Department of Statistics, 2012

Questions:

(a) Using Table 1,

(i) Compare between the real and nominal GDP of Singapore from 2007 to 2012. [2]

(ii) Describe the trend in real GDP per capita from 2007 to 2011. [2]

(b) How far does the concept of price elasticity of demand help to explain the success of the Integrated Resorts in Singapore? [6]

(c) **(i)** With reference to Extract 1, explain how the effective working of the market mechanism is being hindered. [4]

(ii) Assess whether the policies mentioned in the extracts are adequate in reducing the welfare loss to society. [8]

(d) Comment on how the development of the Integrated Resorts affects Singapore's standard of living. [8]

[Total: 30 marks]

Question 2 Unemployment in Greece

Extract 4: Greece's unemployed young

Jobs of any kind are scarce in today's Greece. In a country of 11 million people, the economy lost more than a million jobs as businesses shut their doors or shed staff. Unemployment has reached 27 percent—higher than the U.S. jobless rate during the Great Depression—and is expected to rise to 28 percent next year. Among the young, the figure is twice as high. Meanwhile, cuts to Greece's bloated public sector are dumping ever more people onto the job market.

Studies of joblessness in the U.S. and Japan have shown that extended periods of unemployment in the early years of a worker's career can depress earnings for decades. Greek society and the education system have done a dismal job preparing citizens to compete in a globalized, technology-driven economy. Up until the crisis, it was the dream of every parent to have their child become a doctor or a lawyer. Now the country has an excess of both. Meanwhile, with the public sector sweeping up many recent graduates, there was little incentive for universities to offer the technical skills companies now demand. The Greek government, prompted and assisted by the EU, has started to roll out measures intended to reduce youth unemployment, including training programs, grants for small businesses, and subsidies for companies that hire young people. But those policies are unlikely to do much as long as the economy continues to sink. "I admit there are structural problems in Greece," says Theodoros Ampatzoglou, governor of the Greek Manpower Employment Organization, the government agency in charge of tackling unemployment. "But the basic problem isn't matching labor supply and labor demand. The problem is that there's very little demand."

Source: www.businessweek.com, 25 July 2013

Extract 5: Migrants stay busy as unemployed Greeks spurn menial jobs

There are just over 500,000 immigrants living in Greece legally, but it's estimated that there are at least as many undocumented migrants. While illegal immigration has been a concern for years, it's become a hot-button issue now that there are 1.3 million Greeks out of work. Still, despite claims by some politicians—notably those from the far-right—that migrants are stealing jobs, locals are wary of farm work and other labor-intensive jobs, although the country has endured a deep recession since 2008. Strawberry pickers, for example, are paid between €20 and €25 a day ($26 to $33) for around 10 hours' work. They live mostly in makeshift huts cobbled together from plastic sheeting and pieces of wood, and have no access to toilets.

The bottom line: Even with unemployment at 27.2 percent, most Greeks won't consider taking on work now performed by illegal migrants.

Source: www.businessweek.com, 25 April 2013

Extract 6: Greek crisis and the future of the European Union

Monetary union was meant to bring the chain of 16 resilient economies closer together, sturdily linked for a globalized world. It was supposed to offer greater stability than could be achieved from disparate currency regimes built on national financial discipline and also offer the world a strong alternative to the dollar. Unity was seen as strength. The financial probity preached by Germany, the strongest member of the zone, would be adopted by other member states as virtue prevailed and laxity was banished. The euro would emerge as a second great world currency alongside the dollar.

The Greek crisis has brought the pressure of global financial markets to bear, with the inevitable potential for contagion. What the Greek crisis has shown is that union is not everything and that membership of the zone does not protect weak states from the pressures of international finance. Countries still issue their own bonds, even if they are denominated in euros, so they remain vulnerable to attacks by investors betting that these instruments will decline in value. In putting a premium on loans to Greece, governments in the euro region acknowledged that some member states are less creditworthy than others.

The respectable path generally recommended for countries with unrepayable debt and its associated problems is currency devaluation. The devaluation option is available only to countries, such as Britain, which have retained their own national currencies. However, Greece, like most other EU member-states, has long since adopted the euro as its currency. Thus, whatever may be the merits of devaluation, that option is not available to Greece.

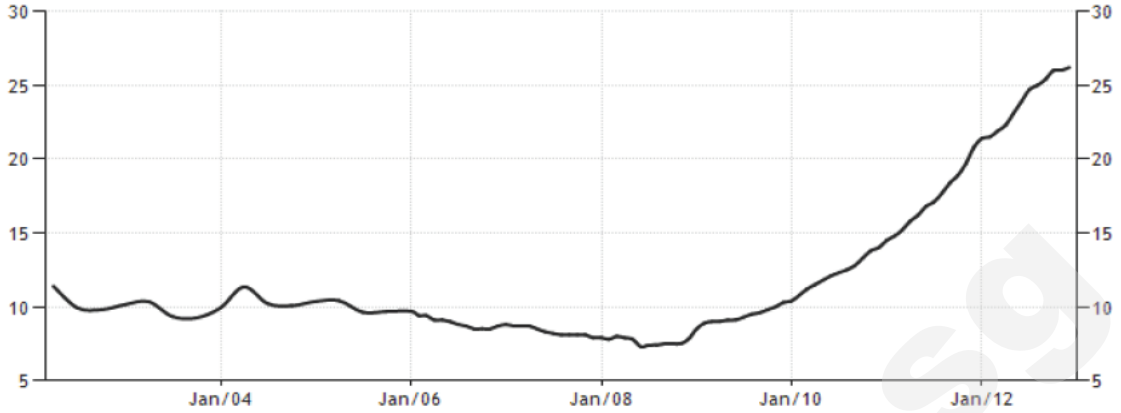
However, a recent suggestion from Germany that repeat offenders against the euro's rules should face expulsion, might change that.

Sources: http://yaleglobal.yale.edu, 05 May 2010,
www.newsweekly.com.au, 29 May 2010

Table 2: Unemployment Rate
Euro Area vs Greece, 2008 – 2012

	2008	2009	2010	2011	2012
	Euro Area				
Youth Unemployment	15.8	20.1	21.1	21.4	23.0
Overall Unemployment	7.6	9.6	10.1	10.2	11.4
	Greece				
Youth Unemployment	22.1	25.8	32.9	44.4	55.3
Overall Unemployment	7.7	9.5	12.6	17.7	24.3

Chart 1: Unemployment Rate
Greece, 2002 – 2012



Source: Eurostat (http://epp.eurostat.ec.europa.eu)

Questions:

(a) With reference to Table 2, compare youth and overall unemployment in the Euro Area with that in Greece. [2]

(b) Using Chart 1, identify the unemployment trend in Greece. [2]

(c) **(i)** Using the information available, explain the possible causes of unemployment in Greece. [4]

(ii) Examine the effectiveness of the measures in Extract 4 in reducing unemployment in Greece. [5]

(iii) Other than the measures mentioned, comment on another way to reduce unemployment. [3]

(d) Consider the impact of currency devaluation on Greece, should its 'expulsion' from the EU take place. [6]

(e) Discuss how the trend towards globalization affects Greece's balance of payments. [8]

[Total: 30 marks]

Section B

Answer **one** question from this section.

3. **(a)** Distinguish between public and private goods, and determine if public housing is a public good. [10]

(b) Using concepts of scarcity, opportunity costs and production possibility curves, discuss if the allocation of land use for public housing is justified. [15]

4. 'With increasing globalisation, Singapore has to invest ahead in the fundamentals that will drive Singapore's economic success and ensure that growth remains inclusive, benefiting all members of society, while encouraging a spirit of self-reliance. The government also has to ensure that resources are allocated efficiently in order to ensure environmental sustainability.'

Adapted from Ministry of Finance, 1 February 2010

(a) Explain how globalisation may hinder a government in achieving its economic objectives. [10]

(b) With reference to the above statement, discuss the usefulness of the policies adopted by the government to achieve its economic objectives. [15]

END OF PAPER

H1 Economics
Tampines Junior College
Preliminary Examination
Suggested Answers

Section A

Question 1 The Rise of Singapore's Integrated Resorts

Extract 1: As Casino Begins, Watch for its Social Impacts

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Yet no one is bragging about it. The entrance to the MBS casino is curiously hard to find, tucked away in the basement. Neither casino is advertised anywhere in Singapore. For decades Singapore's government resisted pressure to allow casinos at all, fearful of the crime and social ills they might breed. When it finally relented, it insisted that access to the casinos by Singaporeans should be controlled. Foreign tourists enter free but locals must pay a hefty S$100. Also, the casinos must be part of larger entertainment complexes.

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Unemployment (%)	2.1	2.2	3.0	2.2	2.0	2.0

Source: Singapore Department of Statistics, 2012

Answers

a) i) Compare between the real and nominal GDP of Singapore from 2007 to 2012. **[2]**

Note:
'At 2005 market prices' refers to real GDP.
'At current market prices' refers to nominal GDP.

Similarity: Both real GDP and nominal GDP have been facing an increasing trend from 2007 to 2012.

Difference:
Nominal GDP has been increasing at a faster rate compared to real GDP.

OR

Nominal GDP is consistently on a upward trend but real GDP faces a slight variation between 2007 to 2009 before continuing its upward trend.

ii) Describe the trend in real GDP per capita from 2007 to 2011. **[2]**

Real GDP per capita = Real GDP / Population

	2007	2008	2009	2010	2011
Real GDP per capita	53,977.82	51,970.85	50,001.98	56,387.15	58,152.80

General Trend: Generally, real GDP per capita has been on an increasing trend from 2007 to 2011.

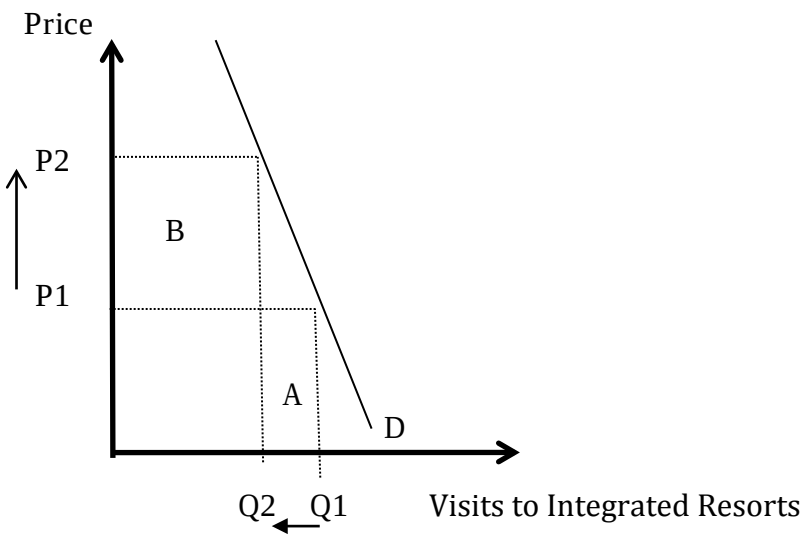
Refinement: Real GDP per capita has been falling from 2007 to 2009 before the reversal takes place.

b) How far can the concept of price elasticity of demand be used to explain the success of the operators of the Integrated Resorts in Singapore? **[6]**

The success of the casinos operators in Singapore can be measured economically by the amount of profits they earn. The profits of the casino operators can be determined by Profits = Total Revenue – Total Costs.

The demand for Integrated Resorts is price inelastic as they position themselves to the tourists as a business, convention centre and a family resort as mentioned in Extract 2. To the tourists, the Integrated Resorts are a 'must see' attraction (neccesity to the tourists) not to be missed.

Hence, to maximize total revenue, Integrated Resorts operators will raise their prices which will lead to a less than proportionate fall in the quantity demanded. The total revenue gained from the rise in price (Area B) more than offsets the total revenue loss (Area A) due to the fall in quantity demanded as shown in Figure 1 below.



Assuming total costs remaining constant, the rise in total revenue will lead to a rise in total profits, explaining the success of the Integrated Resorts.

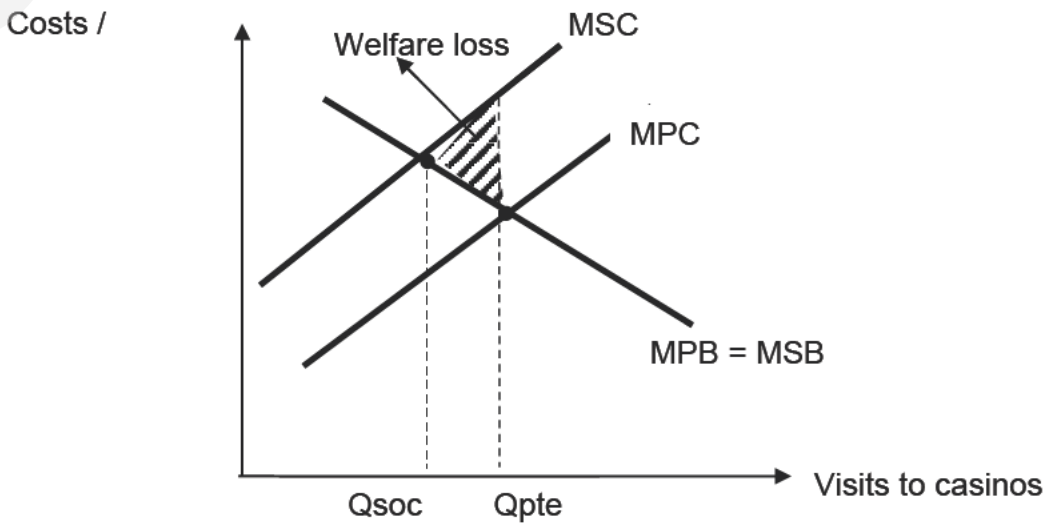
However, the pricing strategy alone is not the only contributor which explains the success of the Integrated Resorts. The recent improvement in the global economy has led to an increased income of the foriegners which makes them spend more into travelling and hence improving tourism into Singapore. With greater volume of tourists into Singapore, the increase in demand for visits to the Integrated Resorts have driven up the sales which led to higher total revenue and hence increased profits which is one of the other factors explaining the success of Integrated Resorts.

Thus, the concept of price elasticity of demand only explains the success of Integrated Resorts to a small extent. Though being one of the determinant to the success of the Integrated Resorts, price elasticity of demand is not the sole contributor to the rise in profits. The success of the Integrated Resorts is also contributed by the other factors that are in play such as the economic environment and government's policies.

c) i) With reference to Extract 1, explain how the effective working of the market mechanism is being hindered. [4]

With reference to Extract 1, Para 2, the opening of the casino gambling has led to the unintended activities of money laundering, prostitution, and organised crime. Gambling generates negative externalities where social issues of broken families, violence upon others and robbery on innocent victims occur without any compensation made to them.

The effective working of the market mechanism is hindered (market has failed) as social efficiency is not achieved. With the presence of negative externalities, the marginal social cost is greater than the marginal private cost, as MSC = MPC + 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 Qsoc where MSC = Marginal Social Benefit (MSB).

At Qpte, MSC is greater than MSB. An additional visit to the casino adds more to social cost than to social benefit. As a result, price mechanism overallocates resources to the activity of gambling. Hence, there will be a welfare loss as shown by the shaded area and the market mechanism is hindered in efficiently allocating resources.

ii) Assess whether the policies mentioned in the extracts are adequate in reducing the welfare loss to society. **[8]**

Policies mentioned in extracts:

<u>Thesis: Policies mentioned in extracts adequate to reduce welfare loss</u>

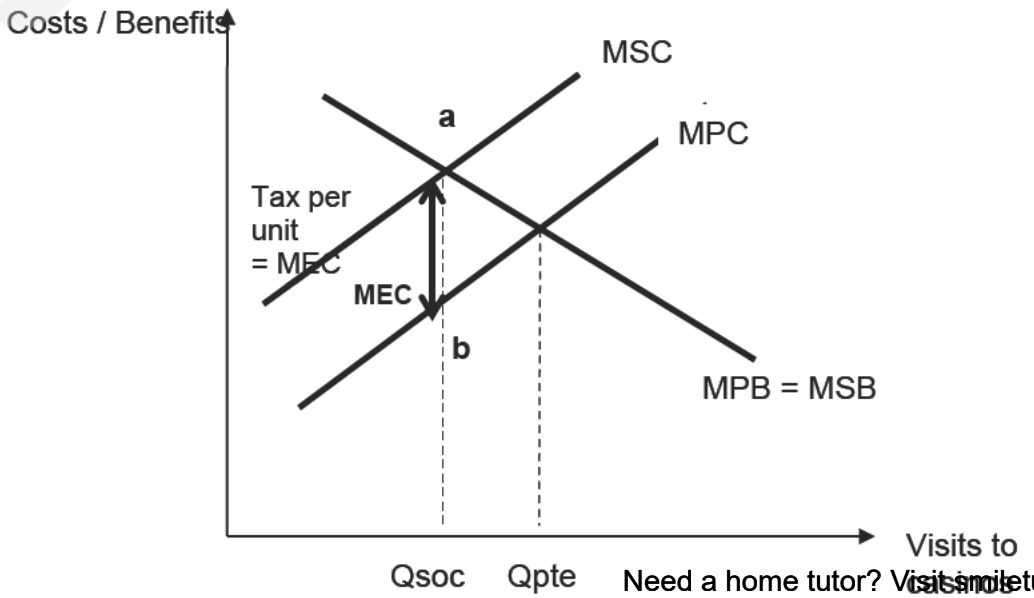
Note: Choose 2 policies from the extracts and elaborate

- <u>Legislation ➔ Casino Exclusion for problem gamblers & those with financial difficulties (Extract 1)</u>

The government sets a criterion to exclude known problem gamblers from entering the casinos. Singaporeans with financial difficulties and earning lower incomes are restricted from entering. This will exclude a group of patrons into the casino which can help reduce the number of visits into the casinos to the social optimum level.

- <u>Levy $100 for Singaporeans (Extract 2)</u>

This is done by placing a tax (levy) of $100 per entry on Singaporeans to enter the casinos so as to increase the costs of the patrons. The tax is priced at Marginal External Cost (MEC) so as to correct the problem of welfare loss by forcing Singaporeans visiting the casinos to internalize their externalities.



Due to the tax which is priced at MEC at the socially optimum level, the Marginal Private Cost (MPC) curve world shift to the left from MPC to MSC and, due to the higher price, number of visits to the casinos will be reduced from Q_{pte} to the socially optimum level, Q_{soc}. Hence, this reduces the welfare loss.

However, there are many Singaporeans who may not feel that the $100 levy is a significant amount as they are able to make use of their earnings in the casinos to offset the $100 levy and hence may limit its effectiveness in deterring Singaporeans from entering the casinos.

- <u>Legislation è Casino Exclusion - Credit checks and background check of Singaporeans entering the casinos (Extract 1)</u>

Regulations should be made to ensure that only those who have a clean record and the ability to gamble are allowed into the casinos. More often than not, gamblers who are addicted to gambling and accumulated heavy debts are the main patrons into the casinos. Credit and background checks on Singaporeans who enter the casinos are to be enforced to prevent financially burdened gamblers into the casinos to reduce the risk of aggravating the financial debts of these group people.

However, it can be administratively challenging as the casinos will need to work with the banks and government to acquire the databases to enforce such checks on their patrons. The casinos will also need to employ and train more manpower to help conduct the checks and to prevent patrons who do not fulfill the requirements of the credit / background checks from entering the casinos.

- <u>Legislation è No advertising to be done for casinos and for casinos to be part of the entertainment complex (Extract 2)</u>

As the government does not encourage Singaporeans to visit the casinos, any form of advertising on the casinos are disallowed. This is to reduce the emphasis on the casinos. Furthermore, to reduce the awareness of the existence of the casinos, casinos will need to be part of the entertainment complex rather than a standalone. This helps to reduce its overall exposure and hopefully reduce the number of visits to the casinos to the optimal level.

<u>Linking bridge to Anti-thesis (Evaluation)</u>

The above mentioned policies only sufficient to act as a deterence to reduce the possibility of Singaporeans visiting the casinos which will lead to the reduction in welfare loss.

However it is inadequate as it may not solve the root cause of the problem. Issues are more pertinent with compulsive gamblers and social awareness needed for the public / future generations to be aware of the social ills. Gamblers who are addicted to gambling may

not see the mentioned policies as a form of deterrence.

Anti-thesis: Policies mentioned in extracts inadequate to reduce welfare loss and hence proposing other solutions

Note: Suggest 1 policy and elaborate for anti-thesis

- Legislation è Age limit and restrictions to who can enter the casinos.

Entry to the casinos should be limited only to adults at the age of 21 years old and above. In a family trip to the Integrated Resorts, parents are not allowed to bring their children into the casinos to prevent exposing the young child's mind to such social vices at an early stage. Adults are deemed to be more mature and having the ability to weigh the costs and benefits of gambling for themselves.

- Campaigns è Voluntary self-exclusion

Gamblers who are unable to control their addiction can voluntary choose to be on the scheme of self-exclusion to prevent their entry into the casinos. However, the effectiveness can be limited as it requires the strong commitment of the gamblers to take the self-initiative to put themselves in this programme.

- Education è Awareness to the public

Advertisements and documentary shows can be introduced to show case the social ills of gambling and real life cases of people who fell victim to gambling in Singapore' casinos. This will create awareness to the public and allow them to weigh between the short-term gratifications of gambling versus the long-term costs of gambling should they lose their wealth in their addictions.

Also, education which reinforces on the social ills of gambling should be taught to the younger generation before they get to be exposed to the vices in the early stages of their lives.

However, education though provides the awareness to the public cannot ensure that all will be equally receptive to the message delivered to them.

Conclusion: The policies mentioned in the extracts serve to mainly act as a deterrence to reduce the number of Singaporean visitors into the casinos. However, much of the welfare loss in society are contributed by gamblers who are addicted and make repeated return visits to the casinos. Hence, these policies alone are inadequate to solve the root of the problem and the government will need to couple other policies which specifically targets and help reduce the gambling addiction of these group of gamblers.

The Singapore government will need to reduce the number of Singaporeans visiting the casinos through 3 main methods: To educate

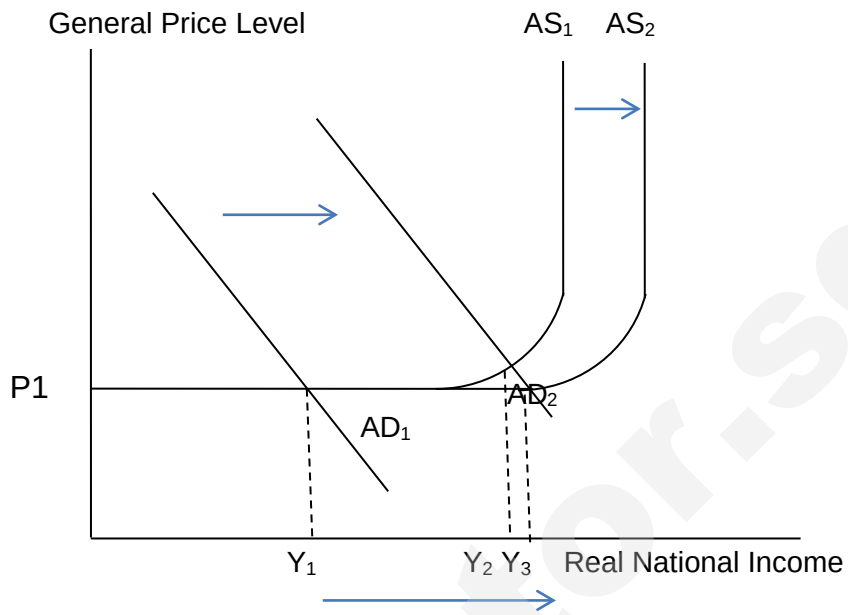
its citizens of the social ills of gambling from a young age, providing the social support to prevent addicted gamblers from worsening their financial situation and to provide regulations / legislations which deters visitors from visiting the casinos.

Level	Descriptors	Mark
L2	A discussion which assess the policies mentioned in the extract and recommends other policies to reduce welfare loss from gambling.	4-6
L1	One sided discussion that only focuses on assessing the policies mentioned in the extract	1-3
Evaluation		
E1	Taking a stand and understanding why the policies mentioned in the extracts are insufficient	1-2

d) Coment on how the construction and development of the Integrated Resorts affect Singapore's standard of living. [8]

The development of the Integrated resorts has led to locals visiting the malls in the IR which contributes to an increase in consumption (C). FDIs were attracted in as foreign companies saw the potential in the development of the tourism hotspot such as restaraunts and entertainment outlets that led to an increase in investments (I) and tourists were attracted into Singapore to visit its first casino and their purchases in Singapore led to the increase in tourism expenditure (X) and hence leading AD to shift rightwards from AD1 to AD2. With AD increasing, firms will experience a fall in inventories. This will signal to the firms to increase production. Firms will hire more workers leading to increasing output This results in falling unemployment and increasing income from Y1 to Y2. As income increases, spending by the households will increase. As one's spending becomes another 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. The increase in real GDP is seen in Table 1. Singapore faces higher economic growth of 14.7% in 2010 (Extract 3) accompanied by higher real GDP per capita which represents higher disposable income of the individuals where they are able to purchase more goods and services both locally and from abroad which increases the variety of goods enjoyed that raised their material standard of living (SOL).

The development of the Integrated Resorts has also led to the creation of more jobs for Singaporeans as mentioned in Extract 3. Job creations were especially evident in the tourism industry such as the hotel managers, croupiers, cleaners and this helps to raise employment level in the economy which provides stability in the country as most workers are being employed improving the material and non-material standard of living. These workers will have to undergo trainings in order to take on their respective jobs. These trainings will increase the skills sets of the workers and raise their efficiency and productivity capacity which enhances their mobility to take on different roles in their jobs in future.



Furthermore, the development of the Integrated Resorts has helped to make Singapore a more vibrant and beautiful city with improved scenic view. With the huge amount invested into the development of the Integrated Resorts, much have been done to improve the outlook where the glistering lights of the IR which are shown at night helps to enhance the night life of the Singapore city. The IR also provides an outlet for leisure with its Universal studio and entertainment complex which help to strengthen family bondings and relieve stress of individuals from a hard day's work.

However, in the development of the IRs during its construction phase, there were environmental issues which led to the generation of negative externalities. The air pollution has worsened due to the movement of heavy vehicles transporting materials to build IR and affected the health of those within the vicinity. Noise pollution was also evident due to heavy vehicles movement and issues of traffic congestions led to reduced efficiency in the short run. These issues resulted in welfare loss for the Singaporeans during the short term and lowers the non-material SOL.

After the completion in the development of IR, negative externalities took a different form where issues of higher crime rates, broken families and stress level to people who take up loans and end up in debts due to gambling in the casinos of the IRs arose which affected the peaceful state of Singapore.

Overall, the benefits in the development of the IR has brought about both material and non-material gains to Singapore. The development of the IR provides a mean and solution for Singapore to attain sustainable economic growth and to continue to position Singapore as a tourists attractions to compete with its neighbouring country. However, the non-material standard of living of the people in

Singapore took a toll with the rise in crime rates and violence due to gambling issues. To further improve the non-material standard of living of the people in the long term, the government will have to make use of its tax gains it achieve from the profits of the IRs to be channeled to devising measures which will help to rectify and reduce the issues related to gambling in casinos.

Level	Descriptors	Mark
L2	A two sided discussion which adequately addresses how the material and non-material standard of living of Singapore has been affected.	4-6
L1	One sided / Underdeveloped discussion that focuses on the material standard or non material standrd of living of Singapore.	1-3
Evaluation		
E1	Taking a stand on whether the standard of living in Singapore has improved with the construction and development of IR.	1-2

Question 2 Unemployment in Greece

Extract 4: Greece's unemployed young

Jobs of any kind are scarce in today's Greece. In a country of 11 million people, the economy lost more than a million jobs as businesses shut their doors or shed staff. Meanwhile, cuts to Greece's bloated public sector are dumping ever more people onto the job market.

Studies of joblessness in the U.S. and Japan have shown that extended periods of unemployment in the early years of a worker's career can depress earnings for decades. Greek society and the education system have done a dismal job preparing citizens to compete in a globalized, technology-driven economy. Up until the crisis, it was the dream of every parent to have their child become a doctor or a lawyer. Now the country has an excess of both. Meanwhile, with the public sector sweeping up many recent graduates, there was little incentive for universities to offer the technical skills companies now demand. The Greek government, prompted and assisted by the EU, has started to roll out measures intended to reduce youth unemployment, including training programs, grants for small businesses, and subsidies for companies that hire young people. But those policies are unlikely to do much as long as the economy continues to sink. "I admit there are structural problems in Greece," says Theodoros Ampatzoglou, governor of the Greek Manpower Employment Organization, the government agency in charge of tackling unemployment. "But the basic problem isn't matching labor supply and labor demand. The problem is that there's very little demand."

Source: www.businessweek.com, 25 July 2013

Extract 5: Migrants stay busy as unemployed Greeks spurn menial jobs

There are just over 500,000 immigrants living in Greece legally, but it's estimated that there are at least as many undocumented migrants. While illegal immigration has

been a concern for years, it's become a hot-button issue now that there are 1.3 million Greeks out of work. Still, despite claims by some politicians—notably those from the far-right—that migrants are stealing jobs, locals are wary of farm work and other labor-intensive jobs, although the country has endured a deep recession since 2008. Strawberry pickers, for example, are paid between €20 and €25 a day ($26 to $33) for around 10 hours' work. They live mostly in makeshift huts cobbled together from plastic sheeting and pieces of wood, and have no access to toilets.

The bottom line: Even with unemployment at 27.2 percent, most Greeks won't consider taking on work now performed by illegal migrants.

Source: www.businessweek.com, 25 April 2013

Extract 6: Greek crisis and the future of the European Union

Monetary union was meant to bring the chain of 16 resilient economies closer together, sturdily linked for a globalized world. It was supposed to offer greater stability than could be achieved from disparate currency regimes built on national financial discipline and also offer the world a strong alternative to the dollar. Unity was seen as strength. The financial probity preached by Germany, the strongest member of the zone, would be adopted by other member states as virtue prevailed and laxity was banished. The euro would emerge as a second great world currency alongside the dollar.

The Greek crisis has brought the pressure of global financial markets to bear, with the inevitable potential for contagion. What the Greek crisis has shown is that union is not everything and that membership of the zone does not protect weak states from the pressures of international finance. Countries still issue their own bonds, even if they are denominated in euros, so they remain vulnerable to attacks by investors betting that these instruments will decline in value. In putting a premium on loans to Greece, governments in the euro region acknowledged that some member states are less creditworthy than others.

The respectable path generally recommended for countries with unrepayable debt and its associated problems is currency devaluation. The devaluation option is available only to countries, such as Britain, which have retained their own national currencies. However, Greece, like most other European Union (EU) member-states, has long since adopted the euro as its currency. Thus, whatever may be the merits of devaluation, that option is not available to Greece.

However, a recent suggestion from Germany that repeat offenders against the euro's rules should be forced to exit the EU, might change that.

Sources: http://yaleglobal.yale.edu, 05 May 2010
and www.newsweekly.com.au, 29 May 2010

Table 2: Unemployment Rate
Euro Area vs Greece, 2008 – 2012

	2008	2009	2010	2011	2012
	Euro Area				
Youth Unemployment	15.8	20.1	21.1	21.4	23.0
Overall Unemployment	7.6	9.6	10.1	10.2	11.4
	Greece				
Youth Unemployment	22.1	25.8	32.9	44.4	55.3
Overall Unemployment	7.7	9.5	12.6	17.7	24.3

Answers:

(a) (i) Define the term "unemployment". [1]

Unemployment (of labour) refers to the number of people who are actively looking for work, i.e. those who are willing and able to work at the current wage rate but are without a job.

(ii) With reference to Table 2, compare youth and overall unemployment in the Euro Area with that in Greece. [2]

Similarity: For both the Euro Area and Greece, youth unemployment is higher than overall unemployment.

Difference: Overall unemployment rose faster (216%) than youth unemployment (150%) for Greece (216% vs 150%), whereas for the Euro Area, overall unemployment rose at about the same rate as youth unemployment (50% vs 46%).

(b) (i) Using the information available, explain the possible causes of unemployment in Greece. [4]

'Recession' (Extract 5) + 'little demand' (Extract 4) à Cyclical/demand-deficient UnM
Lack of 'technical skills' (Extract 4) à Structural UnM

(ii) Examine the effectiveness of the identified measures in Extract 4 in reducing unemployment in Greece. [5]

Identification of measures: "training programmes, grants for small businesses and subsidies for companies that hire young people" à supply-side policies

How the measures work:
<u>"training programmes":</u> Develop technical skills in youths to complement university education which had 'little incentive to offer the technical skills' à improve match between technical skills which 'companies now demand' and skills offered by youths à reduce structural UnM
<u>"grants for small business and subsidies for companies that hire young people":</u> Reduce cost of production for firms à increase production and output à hire more workers à reduce structural UnM

How well the measures work:
(+): They target youth unemployment which contributes significantly to overall unemployment (Table 2 shows youth unemployment is more serious than overall unemployment). Hence reducing youth unemployment will reduce overall unemployment as well, c.p.
(-): Youths may be unreceptive to training to improve their technical skills. From Extract 5, Greeks in general "spurn" "labour-intensive", hands-on work – the kind of jobs that demand technical skills.
(-): Grants and subsidies provided by the government might worsen the "unrepayable debt" (Extract 6) that Greece suffers from since it can hardly be financed by increasing taxation on an increasingly unemployed (Table 2) Greek population à panic over inability to repay debt à spread to global banking system à uncertainty over future economic outlook à loss of business confidence à fall in I and net exports à ↓AD à ↓Y, output & employment

(iii) Other than the measures mentioned in Extract 4, comment on another policy option to reduce unemployment. [4]

Expansionary FP
- How it works: ↑G (public projects to generate employment) & ↓T (reductions in income and corporate tax rates) à ↑AD à ↓ Demand-deficient UnM
- How well it works: Worsen 'unrepayable debt' (Extract 6). C & I unresponsive to tax cuts due to dismal outlook
OR

Expansionary MP
- How it works: ↓i/r à ↑C & I à ↑AD à ↓ Demand-deficient UnM
- How well it works: ↓i/r à speculative capital (hot money) outflow à compounds debt problem as need to repay loan made on speculative capital. (Moreover, single currency (Euro) mandates that Greece loses autonomy over monetary policy.)

(c) Given that Greece's exit from the European Union does take place, analyse the likely impact of currency devaluation on the Greek economy. [6]

<u>Explain impact on Greece of devaluing her currency</u>:
Explain impact on 4 macro goals:
- Devaluation à ↓Px in foreign currency & ↑Pm in local Greek currency à ↑Qtydd for exports & ↓Qtydd for imports à Assuming M-L condition holds à Improvement in net exports à improvement in current a/c and BOP, c.p. + ↑AD à ↑Y, output & employment by the K process à EG + ↓UnM
- GPL may increase but since Greece is undergoing recession à Keynesian range à demand-pull inflation unlikely

Evaluate impact:
- Currency devaluation reduces demand-deficient UnM but does little to reduce structural unemployment
- M-L condition may not hold in the short-run due to prior contractual agreements and importers being unable to find domestic substitutes for the higher-priced imports in the short-run à Epx + Epm <1 à Greece's economic problems may worsen instead of improve in the SR

- If Greek debt (Extract 6) is denominated in foreign currency (most likely the case as borrowing was from abroad), weakening the Greek currency will inflate the debt à cause more bankruptcies + loan defaults à wide-spread closure of businesses and firms à worsen unemployment, income and output à negative growth

(d) Discuss how the trend towards globalization could affects Greece's economic growth and its balance of payments. **[8]**

INTRODUCTION

· **Define globalisation**

Increasing integration of economies around the world especially through
- Free flow of goods and services (free trade)
- Free flow of capital and investment (financial flows)
- Free flow of people (labour migration)
- Free flow of ideas and knowledge (technology)

· **Summarise the driving forces behind the trend of globalization**

Globalisation is driven primarily by the gains from the theory of comparative advantage, and enhanced by the advances in technology which made it easier for firms to set up production facilities in the country which enjoys CA in the production of the goods. The opening up of markets and the general reduction in trade barriers has been supportive of this growing trend.

BODY

Globalization improves the BOP & boosts economic growth

i) Globalization drives trade and investment

• Globalization à increase in trade & investment

• Other economies becoming more open due to globalization à easier for export penetration into these economies and also to invest in them due to greater profitability of investments with rising exports à net X and FDI increase à improvement in both the current and financial account would cause BOP to improve + AD increase à economic growth

(ii) Globalization boosts tourism

• As unemployment rises and competition for jobs intensifies, wages fall resulting in falling costs of production and falling prices of goods and services à low prices attract tourists to culturally and historically rich Greece (globalization is characterized by free flow of people) à boosts employment in tourism and hospitality industries (one of the few thriving industries in present-day Greece) à improves the current account à improves the BOP + helps with economic recovery

Globalization worsens the BOP & economic growth

(i) Outflow of incomes from the country

• Outflow of interest, dividends and profits from speculative gains and FDI worsen the current account à worsens the BOP

(ii) Globalization results in ↑ vulnerability

• Globalization increases integration of Greece with the world and increases its vulnerability to external shocks like oil shocks and financial meltdown in US à Increases the volatility of net X & EG à worsens current account & slows down economic growth

• Free flow of capital and investment which characterizes a globalized economy à

implies increased susceptibility to destabilizing capital and investment flows when an economy such as Greece faces problems and investor confidence plummets à worsens existing problems as foreign investors may easily relocate to other investment locations with better prospects à production and employment levels will fall causing widespread unemployment. Capital flight worsens debt problems as speculators pull out funds à worsens capital and financial accounts + business closures and widespread unemployment à slowdown in EG

(iii) Globalization results in brain drain
• As technology makes it easier for people to flow between countries, the most talented and resourceful of Greeks will also be the most mobile – they are likely to migrate to other countries in search of work which is difficult to find in present day Greece à brain drain à reduce productive capacity for Greece, slowing down potential growth

(iv) Globalization hampers economic recovery of Greece
• Economic integration of Euro area countries à single currency à lose autonomy over MP à one less policy option to improve BOP & EG

CONCLUSION
Stand: It appears that globalization has done more harm than good to Greece's BOP & EG.
Justification: Globalization has compounded the problems that Greece faces, and made their impact felt in the rest of the world like a 'contagion' (Extract 6). Greece's "unrepayable debt" has led to panic over her inability to repay her debt which spread to the global banking system and resulted in uncertainty over the economic outlook for the future, triggering capital outflows and hampering trade and investment in Greece, worsening her current, capital and financial accounts, as well as her economic growth.
Evaluative comments: Yet since globalization is a phenomenon that is unlikely to stop, it is important for economies to use appropriate policies to leverage on this phenomenon to maximize its potential benefits, and to minimize the costs. The painful recovery process that Greece is currently undergoing is necessary in order that she acquires 'financial discipline and probity' alongside 'banished laxity'. The increase in efficiency and cutting out of financial excesses will eventually benefit her as economies become increasingly integrated.

Level	**Descriptors**	
L1	Listing of some ways in which globalization can worsen or improve BOP & EG for Greece	1-2
L2	An explanation of only how globalization can worsen BOP & EG for Greece OR An explanation of only how globalization can improve BOP & EG for Greece OR An explanation of globalization can worsen and improve BOP & EG with no application to context	3-4
L3	A rigorous and balanced discussion of how BOP & EG c an worsen and improve for Greece	5-6
Evaluation		
E1	Evaluative stand/judgement of whether globalization improves or worsens BOP & EG for Greece	1-2

Section B

3. **An exceptionally large number of new homes are currently being built as part of the cooling measures for the housing bubble. The housing bubble benefits no one and hurts many when it bursts. This allocation of land would hopefully moderate housing prices, so that it would remain affordable for most residents.**

Source: Minister Khaw Boon Wan on Housing Policies, Budget Debate 2013

(a) Distinguish between public and private goods, and determine if public housing is a public good. [10]

(b) Using concepts of scarcity, opportunity costs and production possibility curves, discuss if the allocation of land use for public housing is justified. [15]

Suggested answer

a) Distinguish between public and private goods, and determine if public housing is a public good. [10]

	Public Goods	**Private Goods**
1. State Definition	· Non-rivalrous · Non-excludable	· Rivalrous · Excludable
2. List Examples	· Street lights, lighthouses, pavement, flood-control dams, public drainage, public services such as national defence and police	· Education, Healthcare, housing, cars, alcohol
3. Explain characteristics in relation to example	Example of Street light **i. Public goods are non-rivalrous in consumption** (i.e. quantity available for consumption does not diminish with more users) à consumption of the street light by one person does not deprive others from consuming it à It does not matter if 1 individual, 10, 100 or 1000 individual utilizes the streetlight à cost of providing the good to 100 people is the same as the cost of providing the good to 1,000 people à quantity of lighting remains	Example of Public housing **i. Private goods are rivalrous in consumption** (ie. Quantity available for consumption diminishes with more users) à consumption of housing by one person deprive others from consuming it. **ii. Private goods are excludable in consumption** (it is possible to exclude a non-payer consuming the good) à Individuals will need to pay the unit before receiving their keys.

	unchanged regardless of the number of users **(ii) Public goods are <u>non-</u>excludable in consumption.** (it is impossible to exclude a non-payer consuming the good) à Individuals can free-ride and utilize the streetlight once it is installed without need of payment **(iii) Gives rise to issue of free-ridership** à there is no expression of demand, P=0. Price mechanism fails, there is no signal to producers and no incentive for producers to produce.	**(iii) Housing is considered a private good** by the government of Singapore à since it is both excludable and rivalrous in consumption.
4. Highlight problem if left to the free market (private sector)	· \ If left to the free market, there would be **nil provision of public goods**. Hence there is a <u>missing market</u> for public goods. The market has failed because no resources will be allocated to the production of public goods like street lights. · Complete market failure à justify a greater extent of govt intervention	· \ If left to the free market, there would be production**/consumption of private goods**.

Public housing is a private good.

- Consumption is rivalrous, since a consumer's consumption would reduce amount of flats available for the next consumers.
- Furthermore, there are regulations restricting the consumption of public housing. In Singapore, public housing is only available for married couples or singles above the age of 35, with combined monthly income below SGD 10,000.

Singapore government intervene in the market of housing because they perceive there is market failure in the provision of housing. Housing could foster sense of belonging to Singapore, and promote racial harmony among its diverse population. These external benefits suggest that consumption of housing could be viewed as having positive externality on the economy. Thus, the government would intervene in this market.

<u>Synthesis</u>

Government tend to intervene in the markets for both public and merit goods since both these goods provide substantial benefits to the society. In the context of

Singapore, the government has stepped in to provide for these goods directly as can be seen from its allocation of resources to national defence and public housing.

Level	Descriptors	Marks
L3	Elaborated and rigourous explanation detailing the differences between public and private goods. Good analysis of whether public housing is a public good.	7-10
L2	Comparison made between public and private good. Analyse if public housing is public good.	5-6
L1	Attempt to explain public and private goods with little/no comparison made. Did not identify if public housing is public good.	1-4

b) Using concepts of scarcity, opportunity costs and production possibility curves, discuss if the allocation of land use for public housing is justified. [15]

Dissecting the preamble

An exceptionally large number of new homes are currently being built as part of the cooling measures for the housing bubble. The housing bubble benefits no one and hurts many when it bursts. This allocation of land would hopefully moderate housing prices, so that it would remain affordable for most residents.

Points we can learn from preamble:
1) there is a large increase in supply of public housing in current time period à does not address current shortage/problem
2) There is a problem of housing bubble à unsustainable increase in housing prices à detrimental effects on the economy if it was to burst à unemployment, loss of savings/wealth/assets, recession, worsen investors/consumers' confidence
3) there is a need to ensure housing prices remains affordable to most residence à equity issue

<u>Introduction</u>

- **Scarcity refers to the situation where there are limited resources which cannot satisfy unlimited wants**. As such, there is a need for choices to be made.
- This gives rise to the concept of **opportunity costs, which refers to the next best alternative forgone**. When choices are made, there will be opportunity costs incurred, since there are alternatives forgone.
- Opportunity costs could be represented as implicit and/or explicit costs.
- <u>Implicit costs refer to costs which cannot be expressed in monetary terms such as time wasted. Explicit costs are costs that can represented in monetary terms such as prices of goods</u>.
- In allocating land to be used for construction of public housing, the government would have necessarily made choices and forgo certain alternatives. Through examining some of the choices forgone, it can shed lights on whether the choice to allocate land for public housing is justified.
- The presence of a housing bubble has garnered concern from the government. The bubble would cause property prices to rise rapidly, pricing it out of affordability for Singaporeans and residents. This suggests that there is a **shortage of housing in the market, since scarce commodity would experience increase in prices.** The act of allocating land to public housing would have meant that there are alternatives forgone.

- These choices could be analysed through the use of **production possibility curves [PPC], which illustrates the maximum amount of 2 goods an economy can produced, assuming that this is within the same time period, using the same level of technology, the same amount of resources and that all resources are fully and efficiently used.**

Main body

In the following analysis, we shall proceed with the **assumption that all resources are fully and efficiently used in the Singapore economy.**

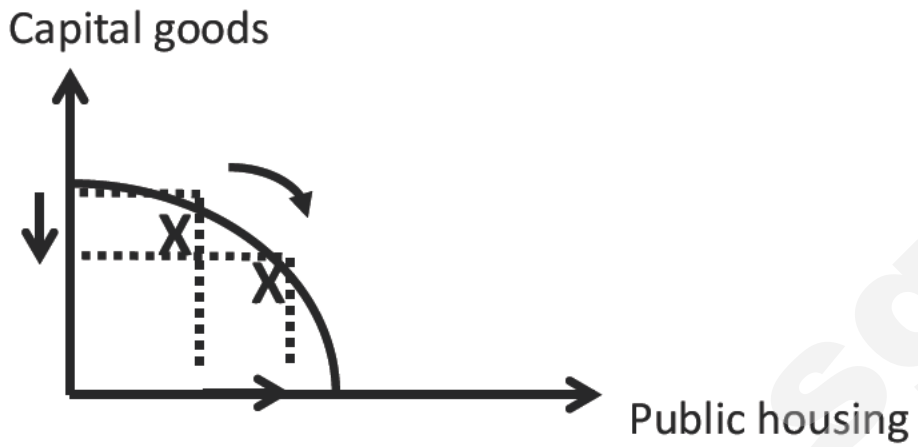
<u>Thesis à the allocation of land to public housing is justified</u>

<u>1) Cooling measures for housing bubble</u>

- Singapore has been experiencing a housing bubble à phenomenon whereby the prices of public housing have been driven sharply, partly due to speculations. à there is **scarce amount of housing** available for the consumers.
- Consumers have **the expectations that future prices would be even higher** à reinforces the increase in prices à self-fulfilling prophecy.
- Public housings can be considered to be **an asset for retirement for many Singaporeans** à the bursting of the housing bubble would have detrimental effect on the economy à wipe out of retirement funds à govt would have to intervene by relying on reserve à **implicit opportunity costs if govt does not intervene**
- Consider other **implicit and explicit opportunity costs of bursting of bubble** [if govt does not intervene] à rising unemployment in construction sector, recession, worsening economic outlook, loss of assets/savings/wealth.

- Consider the **opportunity costs of allocating land to public housing** there is **scarcity of land in Singapore à** Assuming land use is maximized à Govt could have leased the land for commercial purposes, instead of public housing à generate revenue from the lease of land and increase job creation in the economy as more offices are available. Consequently, there will be increases in AD and therefore national income as productive capacity increase à income at full employment increases à factor quantity of capital/offices increases.
- Weighing the choices à **trade-off between <u>improvement in productive capacity and attracting FDI</u> against <u>aversion of housing bubble and associated economic shock</u>** à Prudent nature of SG government à more risk adverse à more inclined to deter the development of housing bubble à **higher opportunity costs of remedying the economy should the bubble bursts** à recession, unemployment in construction sector, worsening BOP due to pessimism of economy. Factor quality of resources would suffice to attract FDI and stimulate AD as well à highly skilled labour force.
- Allocation of land to build more housings would be an effective method to increase supply of housing and cater to rising demand
- This is illustrated in Figure 1 below, where the allocation of land towards public housing would indicate a trade-off in the provision of capital goods à **movement along PPC curve** à since all resources are fully and efficiently used.

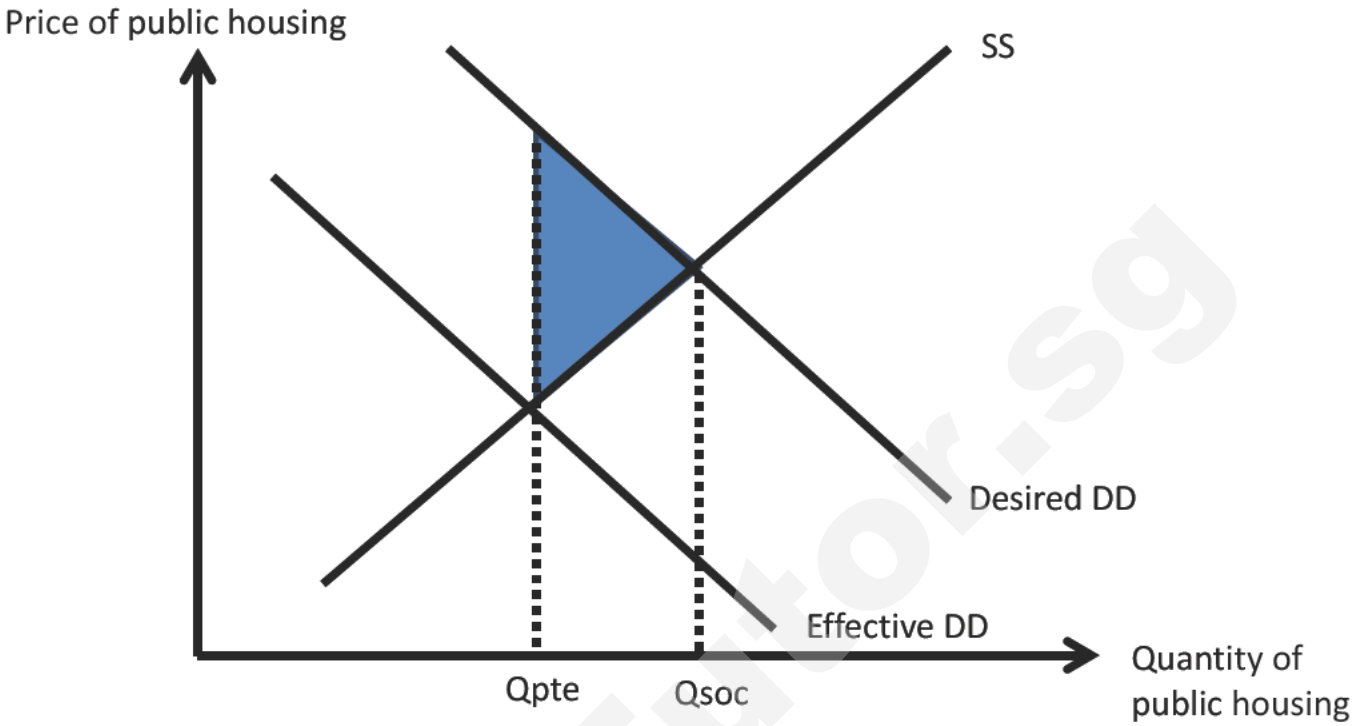
Figure 1: PPC Diagram for Singapore, between Capital goods and Public housing



2) Public housing is considered to be a *merit good* by Singapore government

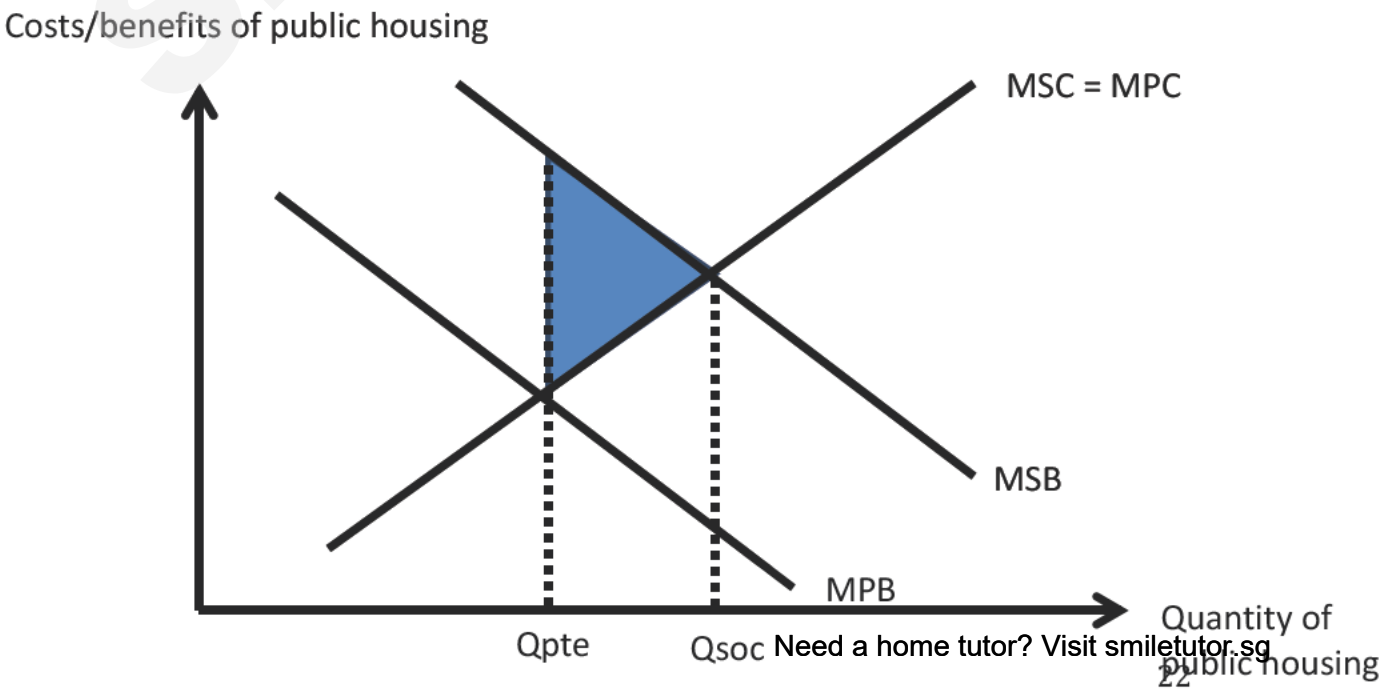
- Public housings are a form of asset investment for Singaporeans, which can be utilized as **retirement collaterals → retirement funds in future.**
- This leads to **underestimation of true benefits** in the consumption of public housing from the government's POV.
- The consumption is currently set at Qpte where effective demand for public housing intersects supply of public housing.
- The government sets desired demand higher and therefore Qsoc is derived from the intersection of desired demand and supply.
- Since Qsoc is greater than Qpte, there is **underconsumption of public housing in the eyes of govt. → insufficient housing produced → housing is in scarce amount**
- This leads to **development of welfare loss** as indicated by shaded region in Figure 2, thus the market fails.
- To address this market failure, the **allocation of land to public housing is justified as government do indeed provide merit goods.** In Singapore, government has provided for other merit goods such as education and healthcare.
- Since **land is scarce in Singapore**, there is a need for government to intervene to ensure the best allocation of resources → maximize the welfare/benefits the economy can enjoy from the use of land
- The allocation of land to public housing would lend to increase in consumption of public housing and therefore correct the market failure.

Figure 2: Underconsumption of Public housing in Singapore



- Ownership of public housing would instil a sense of rootedness for new residents
- Reinforce national identity → **reduce brain drain OR retain the foreign talents SG has attracted to stay on.**
- Racial quota for HDB flats would reinforce racial harmony amongst residents → **Ethnic integration policy**
- Promotes social cohesion → contributes to social security and diversity.
- This gives rise to external benefits of public housing consumption in Singapore → **positive externality in consumption of public housing.**

Figure 3: Positive externality in the consumption of public housing



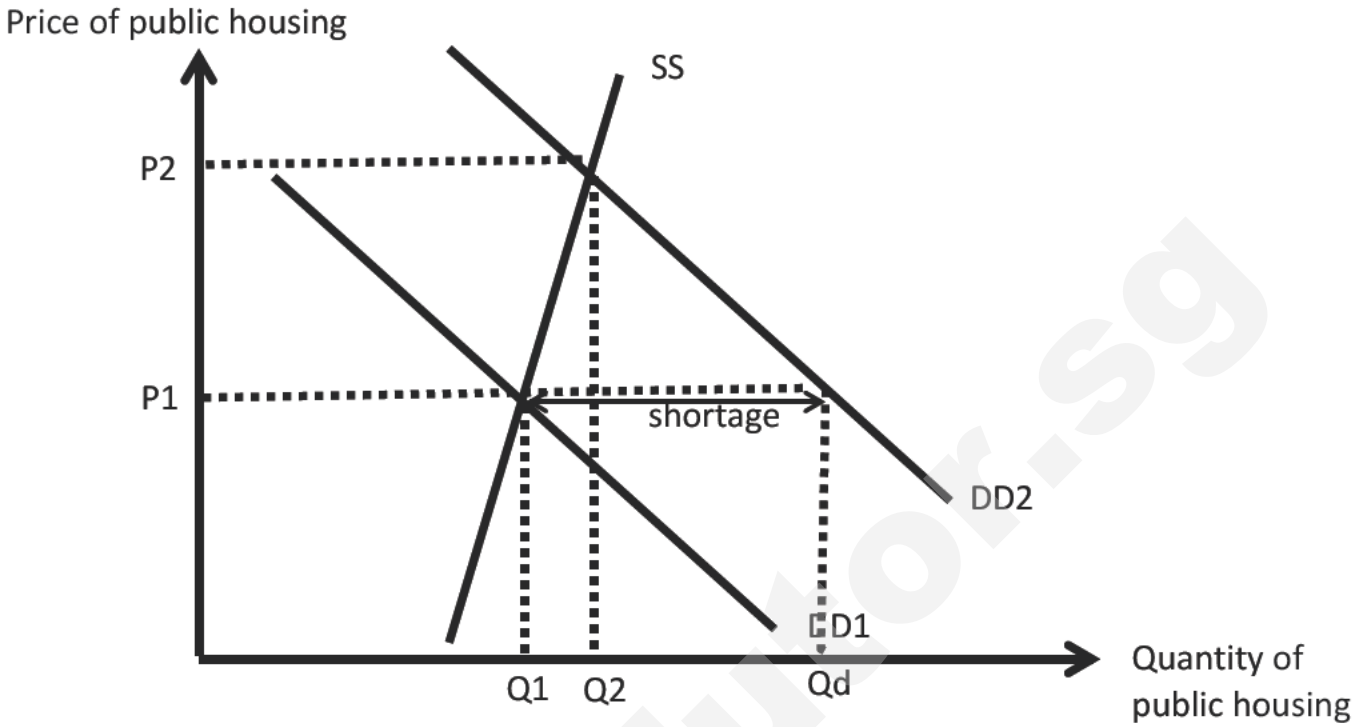
- In the consumption of public housing, the consumers would only consider their private costs and benefits.
- Private costs include the price of the property and the associated opportunity costs of options forgone in the consuming public housings, such as cars, holidays. Private benefits would include possible revenue from renting of the rooms and having personal space.
- Many consumers tend to disregard the possible external benefits generated like racial unity/national identity. Thus, the consumption would be set at Qpte, where MPB = MPC.
- As such, there will be social and private benefits curves, such that MSB = MPB + MEB
- The social optimal level of consumption is set at Qsoc, where MSC = MSB. There is underconsumption public housing in the market. At Qpte, MSC>MSB, additional units of public housing produced would add more to society's benefits than costs.
- **Welfare loss to society develops** from the underallocation of resources to public housing à **public housing is in scarcity.**

3) More public housing is required due to increase in population

à response to population white paper to increase to 6.9 million in 2030

- Benefits: Influx of foreign talent boost labourforce à increase in factor [labour] quantity à **expansionary effect on LRAS** à contributes to sustained growth
- Reduce reliance on labour force due to aging population. High opportunity costs of increase in taxes for working population à reduce incentive to work à affects labour productivity, which is a key factor for consideration of FDI.
- Increase influx of foreign talents à more housing are needed since **accommodation is a necessity**
- Housing requires time to construct à need to develop infrastructure to cater to increase in population à deter build-up of housing bubble
- **Supply and demand for public housing tend to be price inelastic** à any shift in demand/supply will lead to **sharp price movements**.
- As illustrated below, the supply of public housing tends to be price inelastic, since producers cannot easily manipulate quantity supplied in response to price movement as time is required to construct the flats.
- Thus, any increase in demand for public housing, for instance, expectations of higher public housing prices in the future, would result in an increase in prices of public housing to a larger extent compared to increase in quantity of public housing. à MAP
- This sharp increase in prices of public housing leads to a **secondary problem of inequity**. Low income consumers may be priced out of consuming this merit good.

Figure 4: Market for public housing



Anti-thesis → allocation of land to public housing is not justified

1) High opportunity costs → Land scarcity

- Refer to figure 1 → **due to land scarcity, allocation of land to public housing would incur high opportunity costs**, since land could be used for commercial purposes, which could stimulate actual growth
- Since **land is scarce** and a primary factor input, there has to be efficient allocation of this resource.
- Consider allocation of land for commercial purposes → One Marina
- Opportunity costs of rental of offices, creation of jobs, attracting FDIs
- Allocation of land to public housing would not generate as much tangible returns to the country.
- HDB makes hundreds of millions of losses with each year → factoring land costs and construction and govt subsidy → construction of public housing worsens fiscal position of government in contrast to revenue generating projects like commercial offices → **high opportunity costs incurred for provision of public housing**

2) Provision of other merit goods

- Other merit goods could benefit society → R&D → develop new sectors of growth → lend to export competitiveness → improves resilience to external shock which is crucial in current economic conditions where recessions are occurring with higher frequencies.
- Consider land allocated for One North → Research facility for development of biomedical hub → new area identified as key sector of growth → **opportunity costs** → chance to develop key sector of growth and improve resilience of economy
- Education → another form of merit goods which can contribute to improvement in productive capacity of economy. Furthermore, established education facility could attract better FDI and foreign talents

- Consider land allocation for SUTD à 4th public university in Singapore à to increase proportion of graduates in Singapore à improve factor quality of labour à attract foreign investment à **opportunity costs à expansionary effect on economy**
- Healthcare à merit goods and key sector of growth à medical tourism à FDI to start up medical services in SG à good reputation of high quality medical services in South East Asian region.
- Consider land allocation for Khoo Teck Puat hospital à infrastructure required to cater to increase in population and aging population à establishing more healthcare providers in housing estates. **Opportunity costs of revenue from medical tourism and attracting FDIs**

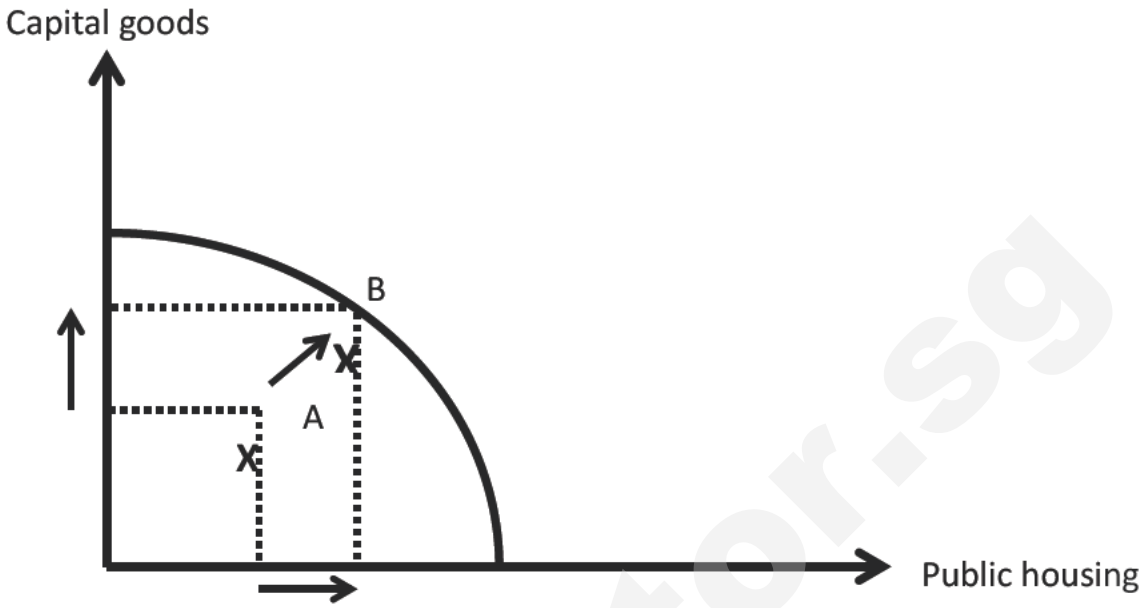
3) Possibility of overcorrection

- Information lag à As government does not possess all information à likelihood that there are error in the derivation of Qsoc à may have led to **overallocation of scarce resources** to the market of public housing à resulting in further welfare losses and therefore greater inefficiency in the allocation of resources à government failure results à **incurs greater opportunity costs**
- Time lag à the construction of many public housing in current time period may be remedy the shortage experienced. à market of public housing would likely experience greater increase in demand for public housing and therefore higher increase in prices before the supply of public of housing could increase à possibility of surplus of public housing in the future à reinforce bursting of bubble in the future à **incurs greater opportunity costs**
- Implementation lag à HDB is a large government body à bureaucratic red tape which could hinder the administrative process à leads to higher costs of production, more time required for vetting processes etc. à leads to slower response to current shortage in the market à problem of housing bubble would worsen before intervention is applied. à **worsens the opportunity costs incurred**

4) Assuming resources are not fully used

- Assuming Singapore has land which are unused currently à Economy is producing within PPC instead of on the curve à it is possible to allocate land to public housing, **without incurring opportunity costs** à economy is able to achieve **pareto optimality,** which refers to making consumers better off without any compromise on their existing welfare.
- This would be illustrated by an outward movement towards to **PPC curve**, from point A to point B, as shown in the figure 5.

Figure 5: PPC diagram for movement towards curve



Synthesis

Government has to employ cost-benefit analysis in order to allocate land use most efficiently. Furthermore, government has to consider the short and long run implications of the allocation of land. While Singapore has been active in land reclamation, this is neither a feasible nor sustainable option.

Evaluative conclusion

Public housing are sold with a lease of 99 years → govt would be able to re-possess the land and can re-allocate the land for other uses in future → poor planning could lead to wastage of resources in construction and tearing down of buildings.

In lieu of housing bubble → concern could be centred on ensuring prices of public housing remain equitable → primary objective of public housing → consumption of HDB flats even for the low-income → foster Singaporean sense of rootedness.
More importantly → this is an opportunity for the government to demonstrate its resourcefulness in reducing the bubble before it threatens the economy with likelihood of recession and poor investment outlook.
Complementing policies → Regulations in housing market to ensure equity and reduce speculation on housing has been imposed. However, as there are no perfect policies, there remains a need for govt to implement a basket of policies.

Level	Descriptors	Marks
L3	Elaborated and rigourous explanation detailing the **pros and cons** of allocating land for public housing with **constant references made to the concepts of scarcity, opportunity costs and production possibility curves.**	9-11
L2	Clear explanation as to **why the allocation of land use to public housing is justifiable**, with consideration to alternative land use and other goals of governance. References **to opportunity costs and production possibility curves** are required.	6-8
L1	**Attempt** to explain why provision of public housing is desirable, with some economic analysis on **merit goods/positive externality.** References to **opportunity costs** incurred must be addressed.	1-5
Evaluation	Descriptors	Marks
E2	Reasoned judgement with insights on current economic development and how decisions made by government could be affected by long run and short run objectives.	3-4
E1	Conclusion with stance made, which lacks economic analysis.	1-2

4. **'With increasing globalisation, Singapore has to invest ahead in the fundamentals that will drive Singapore's economic success and ensure that growth remains inclusive, benefiting all members of society, while encouraging a spirit of self-reliance. The government also has to ensure that resources are allocated efficiently in order to ensure environmental sustainability.'**

Adapted from Ministry of Finance, 1 February 2010

(a) Explain how globalisation may hinder a government in achieving its economic objectives. [10]

(b) With reference to the above statement, discuss the usefulness of the policies adopted by the government to achieve its economic objectives. [15]

a)

<u>Introduction</u>

- **<u>Define globalisation</u>**: Globalisation is defined as the process through which an ***increasingly freer flow of ideas, people, goods, services, and capital*** leads to the integration of economies and societies.

a. free flow of **ideas**
b. free flow of **people**
   - § international movement of labour or migration ***(Link to freer flow of labour)***
c. free flow of **goods and services**
   - § free trade or trade liberalisation ***(Link to freer flow of trade)***

d. free flow of **capital & investment**
   - § emergence of worldwide financial markets and better access to external financing for corporate, national and subnational borrowers result in rapid movements of capital and integration of financial markets ***(Link to freer flow of capital)***
   - § rise and expansion of multi-national corporations (MNCs) within and across countries e.g. Microsoft, Citigroup, IBM etc.

- State government micro-economic goals – economic efficiency and equity
- State government macro-economic goals – low inflation, low unemployment, sustained economic growth and healthy balance of payments.

Main Development

1. Explain how globalisation hinders a government from achieving its macro-economic objectives.

Globalisation could result in the risk of falling trade owing to rising competition in the international arena.

- For example, Singapore is squeezed between low cost emerging countries like China and India and high-tech export countries like Japan. With China and India catching up fast, Singapore loses its comparative advantages in low-cost manufactured exports, ceteris paribus à Falling X competitiveness in low-cost manufactured goods
- Globalisation could results in the risk of falling investment owing to rising competition in the international arena. Rising competition for investment world-wide**.** Countries like Singapore face falling Investment (I) as foreign and local firms (especially labour-intensive industries) as such firms relocate to countries with lower cost of production.
- Increased vulnerability to external shocks à Globalisation increases integration of economies with the world and hence increases its vulnerability to external shocks like oil shocks and financial meltdown in US. Countries will be more prone to contagion effects of other countries' economic crisis. These shocks can be transmitted from one country to another through various channels---trade, financial and mechanical spillovers. External shocks could affect an economy through the trade channel à decreases net X.

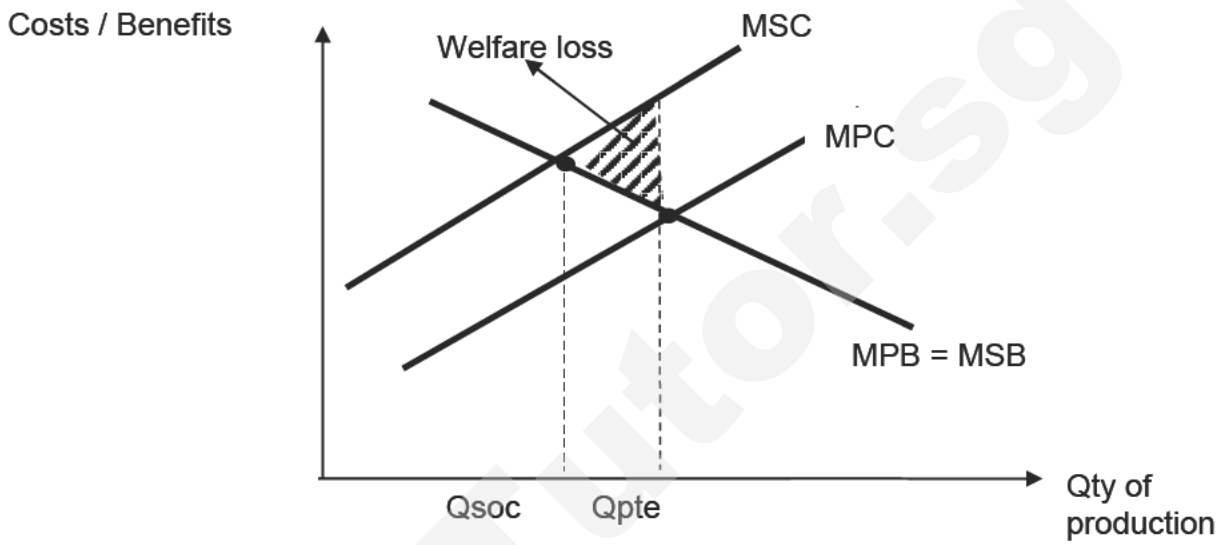
- Adverse effect on net X and I à fall in AD from AD0 to AD1 à leading to multiple fall in **actual growth and national income and employment. (internal effects)**
- Falling X competitiveness in low-cost manufactured goods à weakening of the trade a/c à weakening current a/c à **weakening BOP assuming capital & financial a/c remains unchanged (external effects)**

1. Explain how globalisation hinders a government from achieving economic efficiency.

- Globalisation gives rise to a freer movement of labor across countries. Such emigration can lead to welfare loss. Emigration has reduced the labour force in many countries including Singapore. Emigration of high-skilled workers leads to a decline in the productivity of those who stay behind. For example, qualified doctors, researchers, and engineers confer positive externalities on the rest of the population, and these are lost when they emigrate resulting in welfare loss to society and economic inefficiency.
- Globalisation facilitates the increase trade among countries. Trade could encourage MNCs to move to countries that have weak pollution controls and

export from there. There is often overconsumption of non-renewable energy by firms for their production processes. This overconsumption of non-renewable energy due to overproduction of goods and services generates negative externalities on third parties for which no compensation is made.

- The effective working of the market mechanism is thus hindered (market has failed) as social efficiency is not achieved. With the presence of negative externalities, the marginal social cost is greater than the marginal private cost, as MSC = MPC + 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 Qsoc where MSC = Marginal Social Benefit (MSB).
- At Qpte, MSC is greater than MSB. An additional unit of production of goods adds more to social cost than to social benefit. As a result, price mechanism overallocates resources to the production activity. Hence, there will be a welfare loss as shown by the shaded area and the market mechanism is hindered in efficiently allocating resources → economic inefficiency.

3. Explain how globalisation hinders a government from achieving equity.

- Increased technology progress due to globalisation rewards the premium on skills and depresses the share of income going to unskilled labour. On the other hand, the lowly-skilled worker faces the risk of losing his job to technology or a low-cost worker in or from another country → widening income gap between skilled and unskilled workers and greater income inequality of workers in booming and declining industries.

Marking Scheme

Knowledge, Application, Understanding and Analysis		
L3	A well-developed answer that consists of good application of relevant examples to explain how globalisation prevents a government from achieving its economic objectives.	**7 – 10**
L2	For an answer that uses economic analysis to explain how globalisation prevents a government from achieving its economic objectives. However, there is	**5 - 6**

	some lack in economic depth and rigor or a lack of examples to support the answer.	
L1	For an answer that shows a descriptive knowledge of how globalisation hinders a government from achieving its economic objectives.	**1 – 4**

'With increasing globalisation, Singapore has to invest ahead in the fundamentals that will drive Singapore's economic success and ensure that growth remains inclusive, benefiting all members of society, while encouraging a spirit of self-reliance. The government also has to ensure that resources are allocated efficiently in order to ensure environmental sustainability.'

b) With reference to the above statement, discuss the usefulness of the policies adopted by the government to achieve its economic objectives. [15]

Introduction

The Singapore government has implemented the following policies in order to achieve its economic objectives:

1. Fiscal policy with a supply-side intent à to achieve macro-economic objectives

2. Supply side policy à to reduce income inequality.

3. Micro-economic policies à to enhance the efficient allocation of resources

Main Development

1. Usefulness of Fiscal Policy with a supply-side intent to achieve macro-economic objectives

In order to remain competitive in an increasing globalised world and to prevent globalisation from hindering the economic progress of Singapore, the government must invest ahead, in the fundamentals that will drive Singapore's success: research capabilities, infrastructure and connectivity of a global city and a highly skilled workforce. This calls for the introduction of fiscal policy with a supply-side intent to

a) Increase research and development (R&D)
b) Providing the infrastructure and connectivity of a global city state
c) Increase access to education and training

- **Increase R&D capacity in Singapore**

  - As Singapore moves towards a knowledge-based innovation-driven economy to promote productivity and competitiveness in the global arena, there is a need for Singapore to identify potential strategic research areas in which Singapore can invest to develop new industries for the future.

  - The key drivers of these efforts are:

    a. World-class research-intensive universities – Universities play a prominent role in a knowledge-based, innovation-driven economy by developing the talent for the economy. The presence of world-class research intensive universities will be crucial to achieve and sustain this outcome. In addition, universities will play an increasingly important role in training talent needed for Singapore's areas of comparative advantage.

    b. Mission-oriented public sector research institutions – Public sector R&D activities can help to attract and anchor high value-added knowledge-intensive manufacturing activities of MNCs and Globally Competitive Companies (GCCs), as well as to grow the latter's R&D activities in Singapore. Through various innovation platforms that are facilitated by the public sector, the government also create opportunities for the local SMEs to collaborate and engage the large enterprises to build business partnerships and network.
  - The increase in R&D efforts in Singapore helps to develop the nation's productive capacity, develop niche areas and increase its competitiveness in the global arena.

- **Providing the infrastructure and connectivity of a global city state**

  - To attract MNCs into Singapore, there is a need to enhance physical infrastructure to increase industry collaboration and design innovation. Furthermore, Singapore pride itself as a global city state that provides all the necessary infrastructure provided to attract businesses, innovation and talents.
  - With this "Host to Home" strategy, the Economic Development Board aims to move Singapore from being a host to companies to become a home where business, innovation and talent are nurtured.
  - This strategy adopted by the government has effectively attracted significant amount of FDIs and talents into Singapore, thereby increasing its productive capacity.

- **Continuing Education and Training Masterplan (CET)**

  - The Continuing Education and Training (CET) Masterplan is a comprehensive plan to prepare the Singapore workforce for the future and maintain a competitive advantage for Singapore.
  - For employers – The plan aims to enhance quality and productivity by helping their workers acquire industry-relevant skills and stay ahead of industry developments.
  - For all Singaporeans – The plan will form the fundamentals of a lifelong learning system to help workers find their niches, seize opportunities in new

growth areas and remain relevant and employable. CET will enable our workers, including rank-and-file workers and professionals, managers, executives and technicians (PMETs) to remain employable with new and better skills.

- Emerging and growth industries– to equip Singaporeans with the skills for job opportunities in new growth industries, whether they are preparing for new jobs, switching careers or acquiring new skills.
- As part of the CET Masterplan, the Government will ramp up the capacity of the CET training infrastructure, establish stronger linkage between CET and pre-employment education institutions, and set up a specialised Institute of Adult Learning to develop the capability of adult educators. The aim is to quadruple the annual training capacity by 2010, from 22,000 to 80,000 workers. The Government will partner leading education and training providers, from both the public and private sectors, to set up quality CET centres for growth industries as well as expand existing CET centres to offer high quality and industry-relevant training courses.

- CET also looks into providing upgrading opportunities and structured assistance for low income workers so that they will also be able to achieve real and sustainable income growth through:
    - Introduce a broad-based incentive scheme to encourage employers to send their low-wage workers for training and for these workers to commit to training.
    - Develop a structured programme to train and place low-wage workers in better jobs. The programme could be customised to meet the needs of low-wage workers. It should cover basic literacy skills, placement into better jobs (be it with same or different employer), financial assistance to cover opportunity and other costs (e.g. training allowance, completion awards for key milestones), modular classes (to cater to their schedule as many are on rotating shifts with limited leave entitlement), peer support and counselling to provide positive reinforcement and support.
    - To ensure sustainability of our productivity efforts, there should also be a closer linkage between productivity and wage growth to motivate workers, through performance-based.
- This will increase the quality of our workforce thereby increasing Singapore's productive capacity.

- As a whole, with the increase in government expenditure in the area of R&D, infrastructure and in the education and training of workers, this will lead to an increase in the AD in the short run from AD1 to AD2, ceteris paribus (Illustrate with diagram) à <u>increase in actual growth, and a reduction in demand deficient unemployment.</u>
- On the other hand, the increase in Singapore productive capacity through R&D, education and training of workers and FDIs à increase in LRAS from LRAS1 to LRAS2 (illustrate with diagram) à <u>sustained EG, reduction in structural unemployment and a low rate of inflation.</u>
- There will also be an <u>improvement in Singapore's balance of payments</u>.
    - With increasing export competitiveness, this will lead to an increase in the net exports, ceteris paribus à improvement in the current account.
    - The increase in FDIs will lead to an increase in the capital account.

- To provide at least 1 well-explained limitation of supply side policies / fiscal policy with supply side intent.
    - Cost of financing G expenditure à could worsen government fiscal position.
    - Long gestation period required

2. Usefulness of Supply Side Policy to achieve lower income inequality

At the same time, the Government must also ensure that growth remains inclusive, benefiting all members of society, while encouraging a spirit of self-reliance. There is a need for the government to reduce income inequality in an environment of intense global competition. The best way to do this is for the Government to provide strong support for low-wage workers through the Workfare Income Supplement (WIS) Scheme.

Workfare Income Supplement Scheme

Globalisation, increased competition and the change in Singapore's comparative advantage have resulted in the lack of relevant skills and hence slower wage growth for low-wage workers à increasing income inequality between the skilled and unskilled workers.

- The objective of WIS is to supplement the wages and retirement savings of older low-wage workers as well as to encourage them to stay employed.
- In 2010, the WIS Scheme was enhanced by increasing the maximum WIS payment from $2,400 to $2,800, and increasing the qualifying average monthly income ceiling from $1,500 to $1,700 to encourage older low-wage workers to seek and to remain in employment.

- In 2012, the payment frequency of WIS was increased from twice a year to four times a year for employees to help them better meet their short-term needs. WIS was also extended to younger persons with disabilities (PWDs).
- As announced recently at Budget 2013, there will be further enhancements to WIS. Some of the key revisions include the extension of the income cap to $1,900 to benefit more Singaporean workers, higher WIS payouts of up to $3,500, higher proportion of WIS to be paid out in cash and increase in WIS payments to the CPF Medisave and Special Accounts.
- The combined changes to WIS and CPF contribution rates will help to boost the retirement adequacy of lower-income workers as well as raise the take-home pay for the vast majority of WIS recipients.
- The Government will constantly review the WIS to ensure that it is focused, timely and effective in <u>reducing the income inequality</u> in Singapore *thereby ensuring that growth remains inclusive, benefiting all members of society.*

Limitation

- Whilst WIS scheme may enhance the income of the low wage workers, it does not lead them out of their low wage condition.
- Low-wage workers face particularly severe barriers to upgrading themselves. As many low-wage workers depend on casual work to earn a living, their hours tend to be long and irregular, and they face high opportunity costs when they participate in training. Employers are also generally less supportive of training lower-skilled workers.

- Hence, WIS should be complemented with incentives such as the CET to encourage low wage workers to upgrade their skills in order for them to have better jobs that allow them to earn more.

3. Usefulness of micro-economic policies in allocating scarce resources efficiently (correct negative externalities arising from increasing globalisation)

As mentioned in Part (a), the increasing globalisation may lead to the generation of negative externalities on third parties not involved in the production / consumption of the goods and services. Whilst economic competitiveness is important, it should not be at the expense of environmental degradation. Hence, there is a need for government to mitigate or reduce the external cost to society through the use of micro-economic policies to bring about environmental sustainability (which is necessary to sustain Singapore's economic competitiveness).

- Government provision of the infrastructure needed for the development of renewable energy sources
  - The development of renewable energy sources, such as solar and biomass, can help enhance energy resilience and environmental sustainability.
  - Based on the Sustainable Singapore Blueprint, Singapore aim to have 5 percent of peak electricity demand supplied from renewable energy sources by 2020.
  - Singapore, therefore, needs to continue to support innovation and the infrastructure necessary to develop renewable energy sources as a component of our national energy portfolio.
  - This replacement of the use of crude oil and coal for energy needed for production with green energy can help reduce the negative externalities generated due to increasing globalisation taking place.
  - Explain 1 limitation of policy:
    - Cost of financing G expenditure à could worsen government fiscal position.

- Education and Campaigns on the importance of using energy more efficiently

  - At the same time, there is a lack of awareness and information among households, and even some companies, about their energy use and possible ways to use energy more efficiently.
  - Government agencies and non-governmental organisations should continue to work together to raise awareness, educate and provide accurate information to help firms and consumers choose equipment that best meet their needs.
  - Significant improvements can be achieved in the long run only if a mindset of energy conservation is inculcated in all firms and households.
  - Through education and campaigns, firms and consumers will be more aware of the harms of the overconsumption of energy and hence will reduce their demand of energy to the socially optimal level, thereby reducing welfare loss to society.
  - Explain limitation(s) of policy:
    - It takes time for education and campaign to take effect; hence it does not offer immediate solutions to the situation.

- Legislation (eg. GreenMark Incentive Schemes)
  - The government has introduced incentives such as GreenMark incentive schemes to encourage energy efficiency in buildings. There are also grants for companies to perform energy audits and build capability for energy conservation and efficiency.
  - Explain limitation(s) of policy:
    - High administrative cost involved introducing and implementing the GreenMark energy scheme.

Overall Evaluation

- In view of the nature of the Singapore economy, Singapore has gained much from globalisation. The combination of micro and macro economic policy measures adopted by the government is useful in assisting Singapore to ride on the waves of globalisation to attain the various macro and micro economic goals and reduce any possible trade-offs, despite their limitations. These measures are adopted after taking into account the fact that Singapore cannot isolate herself from the rest of the world due to the characteristics of its economy and thus need to embrace globalisation.
- The Singapore government needs to constantly review the current policies in order to **maximise the potential gains and minimise the potential costs of globalisation** given the global economic outlook.
- In the coming decade, there will be new challenges and opportunities for Singapore and Singapore will have to update her strategies and develop new capabilities through the policies discussed above. Singapore is well placed to succeed in the emerging post-crisis world. The global crisis has reinforced the shift of markets to Asia. There is therefore no lack of opportunities for Singapore in the decade ahead. Therefore Singapore needs to make use of its policies to build deeper capabilities and expertise to make the most of this window for growth. But to sustain growth, the government has to make better and more productive use of our resources, and especially by growing the skills and talents of its people and ensuring a more equitable society for all the live in.

Marking Scheme:

Knowledge, Application, Understanding and Analysis		
L3	For a well-developed analysis of at least 3 policies that can be undertaken to achieve Singapore's economic objectives, supported with relevant real world knowledge or examples. There is reference made to the preamble and limitations of the policies are clearly explained.	**9 - 11**
L2	For an underdeveloped analysis of at least 3 policies that can be undertaken to achieve Singapore's economic objectives, with some support of real world knowledge or examples. Little reference to preamble and mention of limitations of policies. OR	**6 - 8**

	A well-developed analysis of only 2 policies that that can be undertaken to achieve Singapore's economic objectives, supported with relevant real world knowledge or examples. There is reference made to the preamble and limitations of the policies are clearly explained. Max of 8 marks if policies address only the achievement of macroeconomic objectives or only the achievement of microeconomic objectives. Max of 8 marks for answers that has no application to pre-amble.	
L1	The answer shows some theoretical knowledge of policies with no application to pre-amble. Some conceptual errors displayed.	**1 - 5**

Allow up to 4 additional marks for 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**

H2

TAMPINES JUNIOR COLLEGE

JC2 PRELIMINARY EXAMINATION

CANDIDATE NAME	

CIVICS GROUP	1	2				TUTOR NAME	

ECONOMICS 9732/01

Paper 1

Tuesday, 3 Sept 2013

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

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

This document consists of **9** printed pages.

Answer **all** questions

Question 1

Public Transportation

Public transport is an essential service in densely populated cities which have low car ownership rates, such as Singapore, Hong Kong and London. Although Singapore's approach to public transport has led to affordable fares and operating efficiency, there is recent public feedback that public transport service standards and reliability have to be improved.

Extract 1: Nationalised Public Transport won't run well

Both SBS Transit and SMRT have submitted their proposals to the Public Transport Council (PTC), Singapore to raise fares. This has generated some responses, including a suggestion for our public transport system to be nationalised.

While this might seem like a very attractive idea, in reality, it has serious downsides. A nationalised public transport operator that depends on government funding and which operates on a cost recovery basis (i.e. reimbursement is made to the organisation for any incurred expense or provided service) would have little incentive to keep costs down. Not only would commuters have to pay more, nationalising the operators could result in a stagnation of service quality or efficiency over time.

On the other hand, it is the profit incentive of commercial enterprises that spurs efficiency and productivity improvements. This is the reason why many cities around the world have moved or are moving towards having commercial enterprises provide public transport services. Some have said that the public transport operators (PTOs) should not be making so much profit. However, it is not unreasonable for the PTOs to earn fair returns from the sizeable capital investments required to sustain their operations and to invest in future public transport needs.

Source: Adapted from SingaporeTransport Minister Lui Tuck Yew's Facebook response on the issue of nationalisation of transport, 14 July 2011

Extract 2: Calls for renationalising British railways

20 years after legislation paving the way for the privatisation of Britain's railways has passed by, the rail union National Union of Rail, Maritime and Transport Workers (RMT) has pledged for public ownership and renationalisation.

Privatisation has cost passengers more. Since 1995 the average ticket price has increased by 22% in real terms. Britain has Europe's highest commuter fares for both day returns and season tickets. Privatisation has made the railway more difficult to use. 35% of train users and 64% of non-users don't understand the rail ticketing system. Britain has lower coverage of electrification and high speed rail compared to similar countries in Europe. The cost of running the railway has more than doubled. It is estimated that privatisation costs the equivalent of £1.2bn a year compared to public ownership. Other European countries have better railways and lower fares because on the whole their services are in the public sector.

Source: RMT, published 18 January 2013

Extract 3: Road Pricing will cut traffic

Making Aussie motorists pay to use roads would ease traffic congestion in the nation's major cities and help boost economic productivity, a report has found. The report, Productive Cities: opportunity in a changing economy, said the system could take the form of road user charges, congestion charges, or time-of-day tolling.

It found that charging motorists to use roads would result in "a more efficient use of road space" and ultimately help to lift labour productivity. "In order to address traffic congestion, it is not enough to rely solely on building new roads without also paying attention to managing the demand for road space," the report states. Road pricing would "also go some way towards raising the revenue needed to increase the capacity of public transport". However the report conceded that governments would have to spend financial capital to implement such a system.

Source: adapted from http://www.news.com.au accessed on 7 August 2013

Extract 4: Residents enjoy free public transport in Tallinn

On 1 January 2013, Tallinn became the largest European city and the first European capital to provide free public transport to its residents. The initial results of the move are encouraging: the use of public transport in Tallinn has already increased by 10% while traffic in city centre has reduced by 15%.

Many major cities are seeking ways to reduce traffic levels in the city centre, turning to measures such as congestion charges or building new roads. However, the Estonian capital decided that offering free public transport to its 423,000 residents would be the most effective means of confronting the challenge. In addition to providing mobility to unemployed and low-income residents, free public transport has brought new passenger groups into the city centre in the evenings and weekends. This will boost the local economy, as these residents are likely to spend their free time and money consuming local goods and services.

The city council was already subsidising 70% of the costs of public transport, but this new initiative is adding a further €12 million to the city's annual transport expenditure. To cope with the new demand, Tallinn has invested in 70 new buses and 15 new trams. It has also put into place a series of deterrents to private car use, including expansion of exclusive bus lanes barred for private vehicles and increased parking charges and expanded paid parking area.

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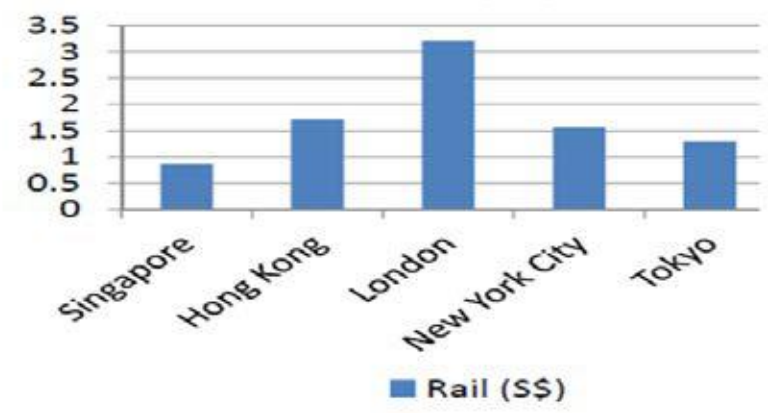

Note: 2010 rail fares adjusted using the 2009 Purchasing Power Parity (PPP) Conversion Factor published by the World Bank. 2009 fares used where 2010 fares were not available.

Source: Key Transport Statistics of World Cities

Figure 2: Fare affordability trend in Singapore

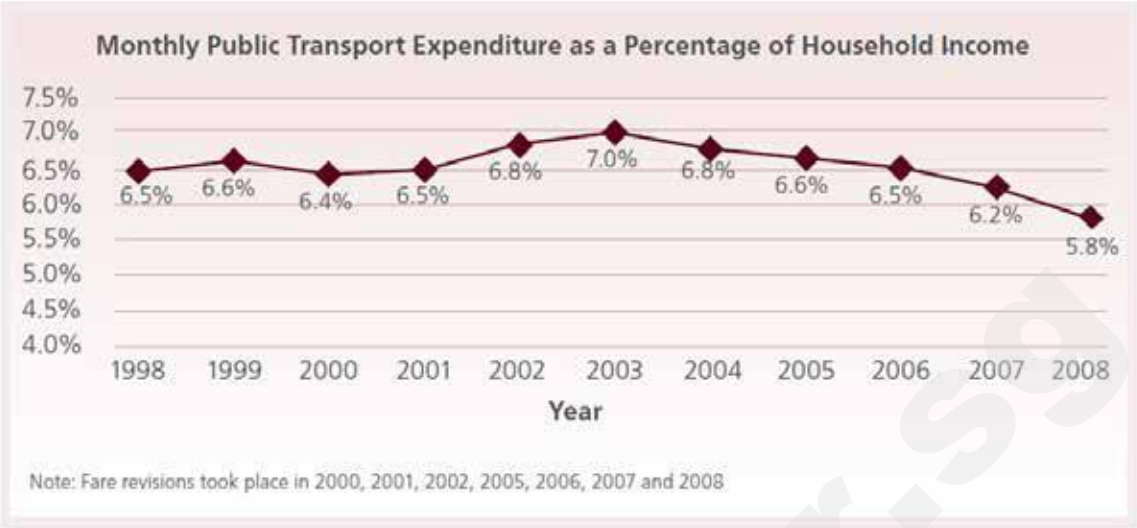

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Table 1: Rail routes cost per mile, London 2012

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Cardholders	Price
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Tertiary Student	$45
Full-time National Serviceman	$50

Source: Public Transport Council Singapore

Questions:

(a) **(i)** Summarize the average rail fares per passenger boarding of the major cities as given in Figure 1. [2]

(ii) Explain one demand and one supply factor that could account for the differences observed in part a (i). [4]

(b) With reference to Figure 2, explain how an increase in fares would likely impact the revenue of the rail company. [2]

(c) Explain the possible reasons as to why rail companies in Singapore and UK engage in price discrimination practices as shown in Table 1 and 2. [4]

(d) Using the data as far as possible, assess the relative merits of the measures a government can adopt to reduce traffic congestion. [8]

(e) With reference to the data where appropriate, to what extent do you agree that the provision of public rail transport must necessarily be undertaken by the government? [10]

[Total: 30]

Question 2

Policymaking in a time of slow growth

Extract 5: Opposing views at the Federal Reserve

Opposing views on the outlook for inflation and U.S. monetary policy by two top Federal Reserve (Fed) officials on Friday underscored divisions at the central bank.

In comments that reflect the majority view at the Fed, chairman Ben Bernanke said it was unlikely that recent spikes in commodity costs will lead to runaway increases in prices.

"With longer-term inflation expectations remaining stable -- and predicting that commodity price growth will stabilize -- my view is that the current monetary policy of low interest rates is appropriate," Bernanke said.

Richard Fisher, however, took a different view, saying that prolonged low interest rates could worsen what might otherwise be temporary inflationary pressures. He said the Fed should not compound the risk of inflation by adding more liquidity.

The prices of oil and other commodities have spiked, sparking inflation fears, hit by both strong demand from rapidly growing emerging economies and fears of supply disruptions amid a wave of pro-democracy protests in the Middle East and North Africa.

But Bernanke said that while costly fuel is putting a dent in household budgets, the overall effect on inflation is likely to be muted. In part that's because high unemployment -- at 8.8 percent in March -- is keeping wage-driven inflation under wraps, he said.

Several other Fed policy makers have pushed for the central bank to heed signs of possible inflation and to begin to think about raising interest rates. But Bernanke and other core members of the Fed's policy-setting Federal Open Market Committee have said the recovery is too fragile to withdraw support yet.

Given the still-fragile nature of the recovery, Bernanke said Fed officials should avoid discussing their exit strategy in too great detail, lest they send the wrong signal to the public and financial markets about the direction of interest rates.

In response to the deepest recession in generations, the Fed slashed interest rates to near zero.

U.S. gross domestic product grew at an annualized rate of 3.1 percent in the fourth quarter, a rate which is weaker than normally seen after a steep downturn.

Source: Adapted from Reuters, 8 April 2011

Extract 6: Quantitative Unease

Besides using interest rates, another aspect of U.S. monetary policy involves quantitative easing (QE). This too, has had its fair share of opposing views. Officials abroad said QE was causing the weakening of the U.S. dollar at the expense of America's trading partners. Moreover, developing economies fear that more quantitative easing in America will inflate prices and speculative bubbles in their own countries. Today policymakers in emerging Asia and Latin America are trying to rein

their economies in, not spur them on. The Chinese are grappling with an inflation rate that was the highest for three years.

Furthermore, QE would likely push up share prices and profits without feeding through to the wages of ordinary workers. Evidence suggests that QE cash ends up overwhelmingly in profits, thereby exacerbating already extreme income inequality.

Source: Adapted from The Economist, 13 August 2011

Extract 7: America's latest anti-China bill tackles a problem already being solved

At a time when America wants to grow its economy, the last thing it needs is a trade war. Yet America has passed a law which could lead to the imposition of duties on some Chinese solar imports. China has hit back by saying that the U.S. should "objectively analyse why some of its solar panel firms lack competitiveness".

The bill comes at a time when public support for free trade has been withering for a decade, tracking the decline in middle-class American manufacturing jobs. The main cause of that decline is rising productivity, which lets factories produce more stuff with fewer workers, but cheap Chinese imports have also been a factor. America's resentment of China has grown as its economy sputters while China's has galloped ahead. Barack Obama has pinned his hopes for recovery on a doubling of exports, a goal that China's many barriers to trade impede.

But American consumers will have suffered by being denied cheap products, and China will almost certainly have retaliated. Therein lies the greatest danger. This bill would escalate tensions between China and America, and risk sparking a trade war. This would damage global investor and business confidence at a time when both are scarce.

Furthermore, the bill seems more and more unjustified. Since June last year the yuan has appreciated 7% against the dollar. The rise in China's relative export prices has been even greater given its higher inflation rate. With stimulative fiscal and monetary policy bolstering domestic demand, China's current-account surplus has shrunk by two-thirds, from 10% of GDP in 2007. Meanwhile America's trade deficit has narrowed, and manufacturing employment has stopped falling. All this means the yuan is far less undervalued than it was a few years ago—if at all.

Source: Adapted from The Economist, 15 October 2011

Figure 3: Exchange Rate (Chinese Yuan per U.S. dollar)

Source: Bloomberg

Table 3: China's Current Account Balance

	2008	2009	2010	2011
Current Account, China (US$m)	420 569	243 257	237 810	136 097

Source: World Databank

Table 4: United States' Gini Index Value

Year	2008	2009	2010	2011
Gini Index	0.469	0.469	0.469	0.475

Source: U.S. Census Bureau

Questions:

(a) **(i)** Describe the trend in the value of the Chinese Yuan from 2009 to 2011. [1]

(ii) Explain a possible reason for the above trend. [2]

(b) Identify and explain the causes of inflation as mentioned in Extract 5. [3]

(c) Explain how quantitative easing can worsen income inequality. [2]

(d) Explain why the weakening of the dollar is "at the expense of America's trading partners". [4]

(e) With reference to the given data, analyse the effectiveness of America's policies to boost growth. [8]

(f) Assess the validity of the view that China is to be blamed for America's economic woes. [10]

[Total: 30]

END OF PAPER

H2 Economics
Tampines Junior College
Preliminary Examination
Suggested Answers
Paper 1

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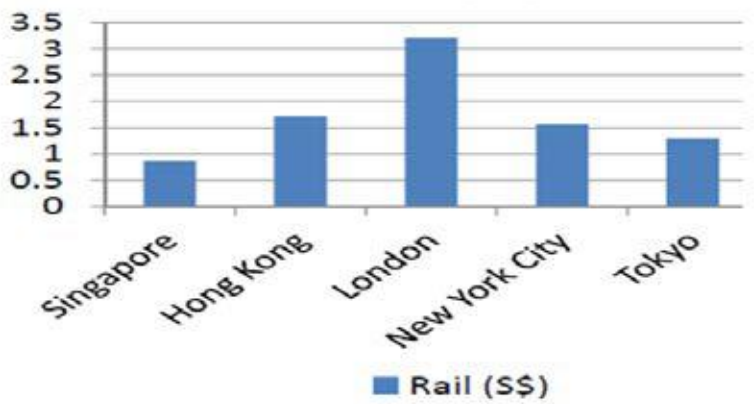

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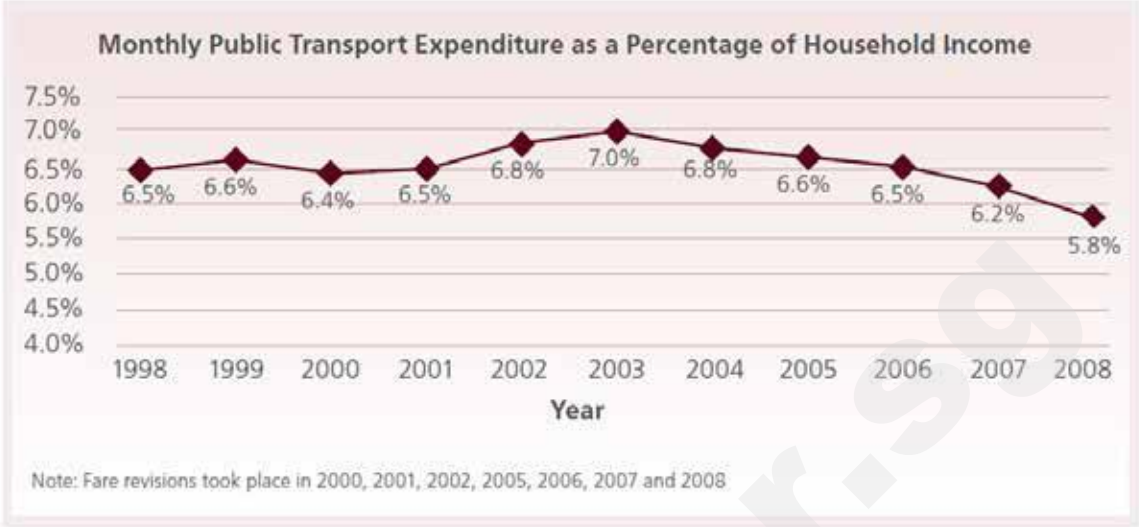

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Source: Public Transport Council Singapore

Suggested Answers:

(a) (i) Summarize the average rail fares per passenger boarding of the major cities as given in Figure 1. **[2]**

London's average rail fares per passenger boarding was the highest amongst the major cities whereas Singapore's was the lowest. Hong Kong, New York City and Tokyo had average fares that were approximately in the same range.

(ii) Explain one demand and one supply factor that could account for the differences observed in part a (i). **[4]**

To explain why London's fares were much higher than Singapore's:

Supply Factor
It can be inferred from Extract 1 and 2 that inefficiency in operation explains the differences in cost of operation whereby operator in Singapore is more cost-efficient unlike its counterpart in London. Therefore London's supply curve is relatively lower as compared to that of Singapore's. This means that London's supply curve is relatively lower and fare prices will be much higher.

Demand Factor
Furthermore, London is a much larger city as compared to Singapore and it is difficult to get around London without rail. On the other hand, there are other viable modes of transport in Singapore like public buses and taxis. Therefore, the demand for London's rail services may be much higher as compared to Singapore and hence, rail prices are much higher.

(b) With reference to Figure 2, explain how an increase in fares would likely impact the revenue of the rail company. **[2]**

With reference to Figure 2, public transport expenditure as a percentage of household income has been falling and it takes up only a small percentage of a household income. Thus even if the fares are raised households' purchasing power will not be greatly reduced, implying that the demand for Singapore's railway services is likely to be price inelastic.

If fares are raised, quantity demanded for rail services will fall by less than proportionately, thus total revenue for the rail company will increase.

(c) Explain the possible reasons as to why rail companies in Singapore and UK engage in price discrimination practices as shown in Table 1 and 2. **[4]**

Price discrimination (PD) occurs when a producer sells a product at more than one price and these price differences are not justified by cost differences.One of the required conditions for a firm to be able to practise PD is that there must be differing price elasticities of demand for

the good.

<u>Reason 1</u> (To increase revenue)
With reference to Table 1, the elasticities of demand for rail travel differ between tickets bought in advance vs those tickets bought that allow the commuters to travel anytime. The demand for tickets bought in advance is likely to be elastic because the commuter has ample time to plan their travel. A lower price charged will cause a more than proportionate increase in its quantity demanded leading to more revenue earned by the firm. On the other hand, the demand for tickets which allow commuters to travel anytime is likely to be price inelastic as the tickets would enable the commuters to embark even on a last-minute arranged trip. Charging a higher price will lead to a less than proportionate fall in its quantity demanded, leading to higher revenue earned by the firm.

<u>Reason 2</u> (For equity)
With reference to Table 2, concession passes are given to commuters who do not earn an income e.g. students or being paid a nominal sum such as full-time national serviceman. Given that travelling by rail is likely a necessity, the different prices charged to these commuters versus working adults for the same service offered can be explained by the firm desiring to help those who do not earn any income or earn only nominal amount i.e. for equity reasons.

(d) Using the data as far as possible, assess the relative merits of the measures a government can adopt to reduce traffic congestion. [8]

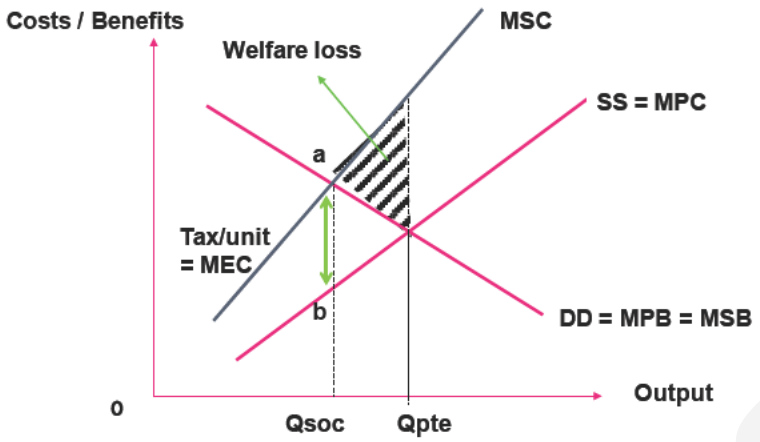
<u>Introduction</u>

The usage of motor vehicles creates the negative externality of traffic congestion to members of the society who are not involved in the consumption of driving / car usage. There may be external costs on these third parties in the form of time wastage and increase in fuel costs. Therefore, it can be said that there is the overconsumption of car usage, resulting in market failure. Thus, there is a need for the government policies to help resolve the market failure.

(Choose any 2 policies)

<u>1) Road Pricing (extract 3) à reduces demand for road usage</u>

<u>Explain policy</u>
Works like a tax per unit to equate MEC caused by the car journey (tax=MEC). Road users are charged according to the external cost of congestion that they impose on the rest of the society. 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.



- A Pigouvian tax ➔ ↑ cost of road usage that generates negative externalities due to over-consumption.

- The government 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 Qsoc, which is the socially efficient level. The welfare loss to society would be eliminated.

<u>Advantages of tax on road usage</u>

- Smoother traffic on the roads can help to boost labour productivity (extract 3). This can help to attract foreign direct investment and even have a positive impact on economic growth.

- The revenue needed to increase the "capacity of public transport" can be obtained from road pricing. (extract 3)

<u>Limitations of Road Pricing</u>

- The government might have to incur high administrative costs for the road pricing system to be set up (Extract 4).

- The outcome is less certain as it depends on the price elasticity of demand. Commuters might deem it a necessity to use private transport during peak hours so that they can get to work on time. An introduction of road tax will increase the costs of driving but may only reduce the quantity demanded for roads by less than proportionately. Therefore, the policy may not be so effective.

- Difficult to ascertain the optimal level of congestion/pollution on the road (extent of MEC), and hence the optimal ERP rates

- Diverts the problem to other small roads not covered by road tax → Results in congestion along other peripheral roads. To avoid paying

road tax, motorists take alternative routes to enter the city, hence in effect, transferring the traffic congestion from one area to another

- Increases business (transportation) cost and businesses in affected areas – not appropriate in face of rising cost and possible economic slowdown

2) Provision of public transport à reduces demand for road usage

Explain policy

- In extract 4, it is mentioned that the city of Tallinn is providing free public transport to all its residents. This is because free public transport would encourage consumers to switch from using private cars to using public transport instead, and in turn help to resolve the congestion problem. As the government is non-profit oriented, it does not need to charge a price to cover the cost of production. It can finance the development and operation of public transport through the taxes that it collects.

Advantages of policy

- Free public transport will help to "boost the local economy" as more residents will spend "their free time and money consuming local goods and services (extract 4). Increased consumption may result in greater economic growth

- Free public transport also helps to encourage equity within the society, which is a microeconomic goal of the government. It is said to provide more mobility to low-income groups who will no longer have to pay to travel (extract 4).

Limitations of policy

- If public transport is completely free, it is possible that there might be an overconsumption of public transport, which means that the socially optimal level of output is not achieved, resulting in deadweight loss to society.

- The provision of free public transport requires a high level of government expenditure; in order to provide finance for this free provision the government may have to impose high tax rates on citizens. This may in turn have disincentive effects on work, investment and hence adverse effects on the economic growth of the country.

3) Increasing the supply of road space

In extract 4, there is mention of the building of new roads to resolve the road space problem by major cities. By increasing the supply of road space, there is more space for both private vehicles as well as public transport on the road.

Advantage of policy
- There will be no extra costs to businesses and commuters.

Limitations of policy
- Government needs to consider how to fund the extra costs of road building.
- It may be difficult to find more space near the city centre, which is where much of the traffic congestion is at, in order to build more roads.

4) Expansion of exclusive bus lanes barred for private vehicles, increased parking charges and expanded paid parking area (extract 4)

Explain policies
- The expansion of exclusive bus lanes barred for private vehicles will mean that travel by bus will be made relatively smoother and more efficient as compared to before as there is more space allocated for buses. This will encourage commuters to travel by bus as compared to private transport.
- Increased parking charges will reduce the demand for private transport because the cost of driving for motorists would increase. An expanded paid parking area means that there are less free parking areas in the city. Drivers have no choice but to use the paid parking areas which would in effect, also increase the costs of driving. This will cause them to switch away from private cars and use public transport instead, thus alleviating the congestion problem.

Advantages of policies
- Increased parking charges and expanded paid parking area means that the government can collect more revenue. This extra revenue can be used to help fund the costs of providing free public transport.
- The expansion of exclusive bus lanes helps to resolve one of the root causes as to why commuters do not travel by public transport. This is because travel by private transport is relatively faster. If the time gap between travel by public and private transport can be reduced, commuters who had previously been turned off by public transport may change their minds.

Disadvantages of policies
- Less space for private cars on the road due to the expansion of exclusive bus lanes may mean that there may be even more congestion in the short-run for private cars. Motorists will need some time to adjust to the changes and realize that it may be relatively more efficient to take public transport now.
- Increased parking charges and expanded paid parking area will mean that business costs will increase. This increase in costs will be different across sectors and will be greater for industries like the logistics industry which rely heavily on the use of transport.

Overall evaluation

Comparison between policies

- In terms of costs, it is relatively easier to carry out the policy of road pricing as compared to the other policies. This is because there is revenue generated from road pricing which can be used to cover the initial set-up costs as well as the maintenance costs. Other policies like government provision of public transport is very expensive to fund.
- Policies like road-building will only be effective in the long-run as it takes time to build new roads. On the other hand, policies like government provision and road pricing can be enacted quite quickly.
- Road pricing has a negative impact on businesses in the form of higher business costs but policies like government provision and road building do not.
- It is relatively more difficult for small countries like Singapore to increase supply of roads due to space constraint as compared to introducing policies which focus on managing demand of road space like road pricing.

Synthesis

Thus, there is a need for the government to use a combination of policies to reduce traffic congestion. This is because despite the merits that each policy has, there is a need for one policy to help resolve the negative effects another. For example, the expansion of exclusive bus lanes may result in even more congestion in the short run for private cars. However, this problem can be alleviated if there is also an overall increase in the amount of road space in the long-run.

Mark Scheme

Level	Descriptors
L1 (1 – 3m)	Mere Listing of answers. Some conceptual errors in explanation. Some relevant points but not well explained.
L2 (4 – 6m)	Well-developed explanations on the merits of the measures in reducing traffic congestion - No reference to case materials (max 4m) - Good reference to case materials (full 6m) Max 5m if no/limited attempt to make a comparison
E1 (1 – 2m)	Some attempt at conclusion, acknowledging the need for different measures based on their relative merits.

(e) With reference to the data where appropriate, to what extent do you agree that the provision of public rail transport must necessarily be undertaken by the government? **[10]**

1. Consider the criteria used to judge whether the provision of public transport should be undertaken by the government

The provision of public transport can be undertaken by the private or public sector. The efficiency and equity criteria can be used to judge whether this good should be provided by the free market or the government.

Efficient allocation of resources refers to a situation whereby resources are allocated in such a way that no one can be made better off without

another being made worse off. That is social efficiency or pareto optimality is achieved. That is, it is achieved for any activity, where the **marginal social benefit (MSB) is equal to the marginal social cost (MSC).** On the other hand, equity concerns the distribution of resources i.e. whether the "benefits" from market activity are unfairly shared out.

Welfare is maximised when both efficiency and equity are achieved.

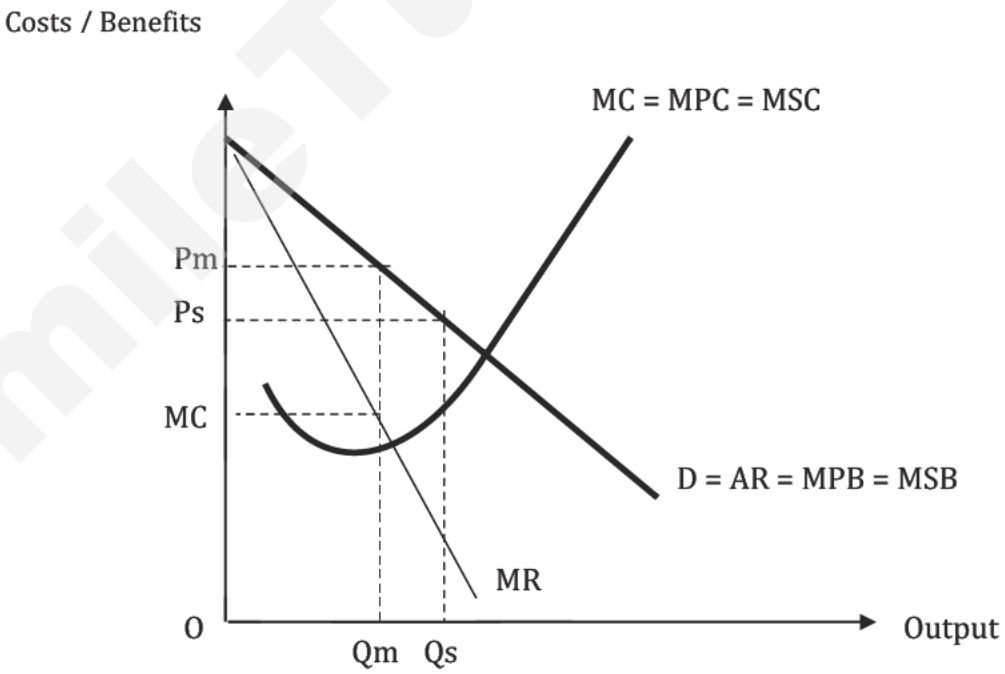
2. Consider why the provision of public transport should be undertaken by the government

(a) Market fails to provide it adequately (efficiency aspect)

(i) Market Dominance

Public transport requires "sizeable capital investments" as stated in **Extract 1** and thus to be a cost efficient firm, the firm will need to serve a large market such that its unit cost can be kept low. As such it is likely that the market can only support a few or one such firm. This will then give rise to much market power resulting in allocative inefficiency which would be a concern if price is charged much higher than marginal cost of operation.

Figure 1: Market dominance leads to inefficiency



From Figure 1, the socially efficient output is Qs, where MSB=MSC. The dominant firm with the aim of maximising profits, however, restricts output in order to obtain higher prices. It produces the lower output Qm (under-production), and charges a higher price Pm. At Pm, the MSB > MSC. At Qm, the last unit produced, there is more additional benefit than additional cost. There is a welfare loss to society by producing at Qm. If production is increased to Qs, welfare will increase - pareto optimality has not been achieved at Qm, indicating the presence of market failure.

In **Extract 2 para 2**, it was stated that provision by private firms for example in Britain has "cost the passengers more". Not only was higher prices charged, it was also "more difficult to use" and it was less dynamic efficient as there were "lower coverage of electrification and high speed rail" compared to similar countries.

Thus to avoid the abuse of market power, it may be better for the government to provide public transport as the aim of the government is to maximise welfare unlike a private firm.

(ii) Existence of positive externalities

Public transport also generates positive externalities. Public transport such as rail and buses can carry more passengers at one time. As given in **Extract 4**, in Tallinn when more people travelled by public transport, the traffic in the city centre was reduced and at the same time it encouraged more people to travel to the city centre and increase spending creating more business activities which boost the economy.

Figure 2: Existence of positive externalities

In a free enterprise economy, the price mechanism will only consider private costs and benefit, ignoring externalities.

To the individual producer, he will produce up to the point where MPB = MPC (private efficiency). He does not take into account external benefits generated. As such, Qpte is being supplied. However, the socially optimal level of output is at Qsoc, where MSC = MSB.

At Qpte, the MSB is greater than MSC. The last unit of output adds more to society's benefits than to society's costs. Therefore, the price mechanism under-allocates resources to the provision of the good. The good is "over-priced" resulting in lesser quantity being demanded and supplied. There is **under-provision** of the good that generates positive externalities, and hence a welfare loss to society occurs. The **shaded area** shows the total welfare loss to the society as a result of this under-allocation of resources. The market fails because social efficiency (Pareto optimality) has not been achieved at Qpte.

Similarly with the aim of welfare maximisation, the government can undertake the provision to the socially optimal level.

(b) Market fails to provide it adequately (equity aspect)

Public transport is an essential service and if it is charged too highly, it can become unaffordable to the lower income groups and reduced their mobility. Thus provision by the government can go beyond provision of service undertaken by the government but the government to also subsidies the fares for these groups of commuters.

3. Consider why the provision of public transport should not be undertaken by the government

(a) Government failure

However provision of public transport by the government i.e. public

firms operating as a nationalised firm, has its shortcomings. As given In **Extract 1**, the absence of profit motive can result in the firm having "little incentive to keep costs down" resulting in higher fares and also "stagnation of service quality or efficiency over time". High and unnecessary government expenditure could be incurred reducing the amount of funds available for other more productive uses in the economy.

4. Synthesis and Conclusion

In conclusion, although the provision of public transport can be undertaken by the government i.e. a nationalised firm supplying its service, it does not necessary mean that it must be the provider. As there are both merits and demerits of government and private provision, a thorough cost-benefit analysis will have to be conducted. In addition, it is also possible for the private firms to provide public transport and the government to regulate the industry to achieve efficiency and equity.

Level	Descriptors
L1 (1 – 3m)	The answer is largely irrelevant or incoherent, showing lack of understanding of the case materials and the economic issues and concepts involved. Some relevant points may be seen but the explanation is weak and has conceptual errors. Answer is much lacking in depth and scope.
L2 (4 – 6m)	Thorough and balanced consideration of whether public rail transport must be provided by the government to achieve welfare maximisation. The discussion should be well supported by examples with reference to case materials where relevant. LL2: The discussion may not be balanced or development is limited and lack contextualisation. Lack of examples to support arguments.
E1 (1 – 2m)	Evaluative comment or judgement not supported by analysis
E1 (3 – 4m)	Evaluative comment or judgement supported by analysis Some attempt at a conclusion.

Question 2

Policymaking in a time of slow growth

Extract 5: Opposing views at the Federal Reserve

Opposing views on the outlook for inflation and U.S. monetary policy by two top Federal Reserve (Fed) officials on Friday underscored divisions at the central bank.

In comments that reflect the majority view at the Fed, chairman Ben Bernanke said it was unlikely that recent spikes in commodity costs will lead to runaway increases in prices.

"With longer-term inflation expectations remaining stable -- and predicting that commodity price growth will stabilize -- my view is that the current monetary policy of low interest rates is appropriate," Bernanke said.

Richard Fisher, however, took a different view, saying that prolonged low interest rates could worsen what might otherwise be temporary inflationary pressures. He said the Fed should not compound the risk of inflation by adding more liquidity.

The prices of oil and other commodities have spiked, sparking inflation fears, hit by both strong demand from rapidly growing emerging economies and fears of supply disruptions amid a wave of pro-democracy protests in the Middle East and North Africa.

But Bernanke said that while costly fuel is putting a dent in household budgets, the overall effect on inflation is likely to be muted. In part that's because high unemployment -- at 8.8 percent in March -- is keeping wage-driven inflation under wraps, he said.

Several other Fed policy makers have pushed for the central bank to heed signs of possible inflation and to begin to think about raising interest rates. But Bernanke and other core members of the Fed's policy-setting Federal Open Market Committee have said the recovery is too fragile to withdraw support yet.

Given the still-fragile nature of the recovery, Bernanke said Fed officials should avoid discussing their exit strategy in too great detail, lest they send the wrong signal to the public and financial markets about the direction of interest rates.

In response to the deepest recession in generations, the Fed slashed interest rates to near zero.

U.S. gross domestic product grew at an annualized rate of 3.1 percent in the fourth quarter, a rate which is weaker than normally seen after a steep downturn.

Source: Adapted from Reuters, 8 April 2011

Extract 6: Quantitative Unease

Besides using interest rates, another aspect of U.S. monetary policy involves quantitative easing (QE). This too, has had its fair share of opposing views. Officials abroad said QE was causing the weakening of the U.S. dollar at the expense of America's trading partners. Moreover, developing economies fear that more quantitative easing in America will inflate prices and speculative bubbles in their own countries. Today policymakers in emerging Asia and Latin America are trying to rein their economies in, not spur them on. The Chinese are grappling with an inflation rate that was the highest for three years.

Furthermore, QE would likely push up share prices and profits without feeding through to the wages of ordinary workers. Evidence suggests that QE cash ends up overwhelmingly in profits, thereby exacerbating already extreme income inequality.

Source: Adapted from The Economist, 13 August 2011

Extract 7: America's latest anti-China bill tackles a problem already being solved

At a time when America wants to grow its economy, the last thing it needs is a trade war. Yet America has passed a law which could lead to the imposition of duties on some Chinese solar imports. China has hit back by saying that the U.S. should "objectively analyse why some of its solar panel firms lack competitiveness".

The bill comes at a time when public support for free trade has been withering for a decade, tracking the decline in middle-class American manufacturing jobs. The main cause of that decline is rising productivity, which lets factories produce more stuff with fewer workers, but cheap Chinese imports have also been a factor. America's resentment of China has grown as its economy sputters while China's has galloped ahead. Barack Obama has pinned his hopes for recovery on a doubling of exports, a goal that China's many barriers to trade impede.

But American consumers will have suffered by being denied cheap products, and China will almost certainly have retaliated. Therein lies the greatest danger. This bill would escalate tensions between China and America, and risk sparking a trade war. This would damage global investor and business confidence at a time when both are scarce.

Furthermore, the bill seems more and more unjustified. Since June last year the yuan has appreciated 7% against the dollar. The rise in China's relative export prices has been even greater given its higher inflation rate. With stimulative fiscal and monetary policy bolstering domestic demand, China's current-account surplus has shrunk by two-thirds, from 10% of GDP in 2007. Meanwhile America's trade deficit has narrowed, and manufacturing employment has stopped falling. All this means the yuan is far less undervalued than it was a few years ago—if at all.

Source: Adapted from The Economist, 15 October 2011

Figure 3: Exchange Rate (Chinese Yuan per U.S. dollar)

Source: Bloomberg

Table 3: China's Current Account Balance

	2008	2009	2010	2011
Current Account, China (US$m)	420 569	243 257	237 810	136 097

Source: World Databank

Table 4: United States' Gini Index Value

Year	2008	2009	2010	2011
Gini Index	0.469	0.469	0.469	0.475

Source: U.S. Census Bureau

(a) (i) Describe the trend in the value of the Chinese Yuan from 2009 to 2011. [1]

The value of the Chinese Yuan has appreciated against the USD from 2009 to 2011.

(ii) Explain a possible reason for the above trend. [2]

As indicated in Table 3, there were current account surpluses from 2009 to 2011. This would indicate an excess demand for the Yuan, which would exert an upward pressure on the yuan to appreciate.

OR

It was stated in Extract 7, para 4 that China experienced inflation and the strengthening of China's currency could be to curb inflation as a stronger Yuan could dampen China's rising net exports given relatively more expensive exports from China and cheaper imports into China.

(b) Identify and explain the causes of inflation as mentioned in Extract 5. [3]

Ext 5 à "The prices of oil and other commodities have spiked"
When the price of oil rises, due to it being a major factor of production, this would lead to a rise in cost of production and thus cause cost-push inflation.

Another source of inflation would be demand-pull inflation.
Ext 5 à "prolonged low interest rate" could worsen inflation.
With the use of expansionary monetary policy involving the lowering of interest rates, cost of borrowing would fall, leading to a rise in consumption. Investment will also rise as there are now more profitable investment projects available where MEI>interest

rate. AD would rise, causing rise in GPL assuming intermediate range and could lead to demand pull inflation.

(c) Explain how quantitative easing can worsen income inequality. [2]

Extract 6 states that "QE would likely push up share prices and profits without feeding through to the wages of ordinary workers"

Firm owners would also be the shareholders (the 'rich') who would enjoy an increase in the level of their wealth when QE causes the share prices and profits to rise.

In contrast, wage earners who do not own any factors of production (the 'poor') may not benefit from QE, assuming that they are fixed income earners. This would result in rising income inequality.

(d) Explain why the weakening of the dollar is "at the expense of America's trading partners". [4]

With the weakening of the U.S. dollar, trading partners would lose price competitiveness as their currencies would have appreciated against the dollar.

With appreciation of their currency, the price of their exports would rise in terms of U.S. dollars → Qd of their exports would fall more than proportionately, assuming demand for their exports is price elastic. Export revenue would fall.

The price of imports in terms of their own currency would fall → Qd would rise more than proportionately, assuming their demand for imports is price elastic. Import expenditure would rise.

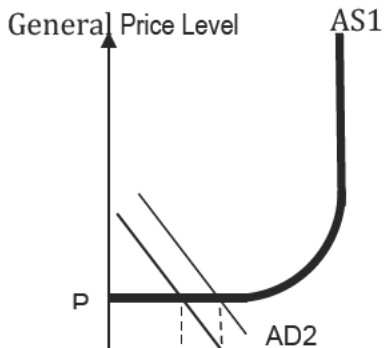
If Marshall Lerner condition (Epx + Epm > 1) is met, their net exports would fall. America's trading partners will experience a fall in AD and a multiple fall in national income via the reverse multiplier → dampen economic growth assuming their economy is not at the classical range.

(e) With reference to the given data, analyse the effectiveness of America's policies to boost growth. [8]

Any 2 policies from data:

Policy #1: Expansionary Monetary Policy (lowering of interest rates) [ext 5]

Explain policy: ↓interest rate → cost of borrowing↓ → ↑C&I → ↑AD from AD1 to AD2 → multiple ↑NY from Y1 to Y2 via the multiplier effect → boost actual growth.



Evaluation of Policy:

- With a fall in interest rates, C and I may not increase as there are other determinants of C and I such as economic outlook. Even with lower interest rates, there may be pessimistic business outlook which would discourage borrowing. The pessimistic outlook is seen in extract 5 where the economic recovery in US is described as “fragile” & weak economic statistics were reported (e.g. GDP growth rate that is weaker than usual after a steep downturn, high unemployment of 8.8% in March). Hence, AD & National income may not increase.
- Extract 5 states that “Fed slashed interest rates to near zero.” There is a limit to how much the Fed can lower nominal interest rates. If there is no increase in borrowing due to lower interest rates, eventually there would be a liquidity trap.

Policy #2: Quantitative easing [ext 6]

Explain policy: Quantitative easing is an unconventional expansionary monetary policy where money supply is increased when the Fed buys bonds from financial institutions with newly created money. This increase in money supply will increase the supply of loanable funds, lowering long-term interest rates.

Besides having the similar effect of causing an á C & I as in the above interest-rate policy, the â interest rate Ò hot money outflow Ò á supply of USD in the forex market Ò depreciation of USD à â price of exports in foreign currency Ò assuming that the demand for exports is price-elastic, there will be a more than proportionate á quantity demanded of exports Ò á export revenue. The depreciation of USD also causes á price of imports in domestic currency Ò assuming that the demand for imports is price-elastic, there will be a more than proportionate â quantity demanded of imports Ò â import expenditure. Assuming that the Marshall-Lerner condition holds, whereby the sum of price elasticities of demand for exports and imports is greater than one, the value of net exports (X-M) á à á AD Ò multiple á national income via the multiplier effect à boost actual EG.

Evaluation of Policy:
According to table 4, Gini Index has risen in America. This represents a deterioration in income inequality which could be due to quantitative easing (according to Extract 6, QE would likely lead to an increase in share prices and profits). A deterioration in income inequality may result in social discontentment and could adversely affect productivity and growth.

Policy #3: Protectionism - Imposition of taxes (tariffs) on Chinese imports [ext 7]

Explain policy:
Tariffs Ò á Price of chinese imports Ò assuming that the demand for chinese imports is price elastic, there will be a more than proportionate â quantity demanded of Chinese imports as consumers switch to the relatively cheaper domestic goods (hence this protects local industries) à â import expenditure (M) Ò á value of net exports (X-M) à á AD Ò multiple á national income via the multiplier effect à boost actual EG.

Evaluation of Policy:

§ Extract 7 states that there is likely to be retaliation from China (e.g. China may impose tariffs on US exports into China) à Trade war Ò dampen global investor confidence. This will cause a reduction in USA's export revenue as well as FDI which reduces AD and dampens growth in USA.

§ Extract 7 states that "American consumers will have suffered by being denied cheap products". Consumers would thus have to pay higher prices for certain goods when purchased from domestic producers. This reduces consumer welfare.

Evaluative conclusion:

Extract 5 stated that US GDP grew at a positive rate of 3.1% in quarter 4, hence the policies implemented has worked to some extent. However, this rate is weaker than usual, indicating that the policies have limited effectiveness. Monetary policy via lowering of interest rate has reached its limit due to interest rates being lowered to near zero already. On the other hand, protectionistic measures (tariffs) should at best be a temporary short-term policy as it results in American consumers being worse-off with higher prices and promotes inefficiency, coupled with a serious threat of retaliation. In the short-run, QE seems to be the more feasible policy. In the long run, these policies need to be supplemented with LR supply-side policies to bring about potential growth and ensure sustained EG. An example will be funding R&D to develop new areas of comparative advantage for future growth.

Mark Scheme:

Level	Knowledge, Application, Understanding & Analysis	Marks
L2	Explanation & evaluation of 2 policies from the data. Consistent application to context/data.	4-6
L1	Explanation of 2 policies from the data but evaluation/limitations are missing. Lacking in application to data. OR Explanation & evaluation of only 1 policy from the data.	1-3
E1	Any reasoned judgment.	1-2

(f) Assess the validity of the view that China is to be blamed for America's economic woes. [10]

<u>Identify America's economic woes:</u>
High unN (ext 5)
Slow EG (ext 5)
Income inequality (Table 4)

<u>Thesis: Yes, China is to be blamed:</u>

§ Extract 7: "cheap Chinese imports"
Fall in demand for domestically produced goods
Fall in employment levels
Loss of jobs by low-skilled workers Ò worsen income inequality

§ Fig 3 & Table 3: During 2009, exchange rates were undervalued as seen by the stable exchange rate values as China's current account was in surplus during the period, thus indicating that the Yuan should have appreciated instead. Moreover, Ext 7 stated that "the yuan is far less undervalued than it was a few years ago", implying the undervaluation of the yuan.
This would cause U.S. to lose export competitiveness due to the weak Yuan.

<u>Anti-thesis 1: No, evidence suggest that China is not to be blamed</u>

§ Fig 3: From mid-2010, Yuan is appreciating. However, from extract 5, America's economic growth was 3.1%, a rate that was slower than normal, even though the value of the Yuan did not pose as much a threat as before.

§ Table 3: China's current account surplus is worsening & Extract 7: "China's current-account surplus has shrunk by two-thirds" due to an increase in domestic demand caused by China's expansionary demand-management policies. This could indicate that China is buying more of U.S. exports. So instead

of being blamed for America's woes, China may actually be helping America to increase their exports earnings.

<u>Anti-thesis 2: There are other causes for US's economic woes besides China</u>

§ Extract 7: Main cause of decline in middle-class American manufacturing jobs is rising productivity, which lets factories produce more stuff with fewer workers Ò structural unemployment & rising income inequality.

§ Extract 5: Prices of oil and other commodities have spiked (eg due to unrest in the Middle East), for reasons not associated with China. Therefore, in terms of rising cost of production, China cannot be blamed for it Ò â SRAS Ò â NY.

§ Loss of comparative advantage in the production of US's products. This may be due to the lack of focus on continued innovation and research and development, resulting in higher opportunity costs of production and uncompetitive US products. US companies, especially low-value-added manufacturing/labour-intensive operations are thus relocating to low-cost countries such as China. Moreover, at a time when "global investor confidence is scarce" [Ext 7], there would be an even greater fall in foreign direct investment into the US due to the loss of comparative advantage Ò â X, I Ò â AD Ò multiple â NY via k effect Ò dampen actual growth & á unemployment. Also gives rise to structural unemployment if unemployed workers do not possess the skills to join other industries.

Evaluative conclusion:
China is likely to have contributed partly to America's economic problems. However, there are other causes as well, such as other global events (e.g. Middle East unrest), labour-saving technological advancement displacing jobs, and structural causes such as the loss of comparative advantage of US's products. The US government needs to implement LR supply-side policies to address these underlying causes, e.g. R&D to improve export competitiveness or to identify and develop new potential areas of comparative advantage. Retraining can also be carried out to equip the unemployed "middle class" to new jobs in these new growth industries.

Mark Scheme:

Level	Knowledge, Application, Understanding & Analysis	Marks
L2	Well-developed & Balanced argument. Good application to case material and identification of China's economic woes.	4-6
L1	An underdeveloped balanced argument. Lacking in application to case material. OR 1 sided answer.	1-3
	Up to 4 additional marks for evaluation	
E2	For an evaluative judgement based on economic analysis.	3-4
E1	For an unexplained judgment or one that is not supported by analysis	1-2

H2

TAMPINES JUNIOR COLLEGE
JC2 PRELIMINARY EXAMINATION

CANDIDATE NAME

CIVICS GROUP | 1 | 2 | | | |

TUTOR NAME

ECONOMICS 9732/02
Paper 2

Monday, 16 Sept 2013

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 and **one** from Section B and **one** from **either** Section A or Section B.

The number of marks is given in brackets [ ] 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 chosen questions must be from this section.

1. An exceptionally large number of new homes are currently being built as part of the cooling measures for the housing bubble. The housing bubble benefits no one and hurts many when it bursts. This allocation of land would hopefully moderate housing prices, so that it would remain affordable for most residents.

Source: Minister Khaw Boon Wan on Housing Policies, Budget Debate 2013

(a) Distinguish between public and private goods, and determine if public housing is a public good. [10]

(b) Using concepts of scarcity, opportunity costs and production possibility curves, discuss if the allocation of land use for public housing is justified. [15]

2. Using economic analysis, discuss the effects of an improvement in technology in the computer tablet industry and its related markets. [25]

3. Microsoft invests billions on Research and Development (R & D) which has contributed to a stream of innovations that have transformed business and the homes. To encourage innovation, intellectual property rights are given to innovators for a period of exclusivity to earn a reasonable return on their investment.

Source: The Straits Times "ASK: NUS ECONOMISTS" 16 Nov 2011

(a) Explain how barriers to entry affect a firm's pricing behaviour and profits earned. [10]

(b) To what extent is Microsoft's market power justified? [15]

Section B

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

4. Discuss the significance of the multiplier size, factor endowment and Marshall-Lerner condition in influencing macroeconomic policy decisions in Singapore. [25]

5. **(a)** Explain the causes of unemployment in developed and developing nations. [10]

(b) Discuss the view that the pursuit of low unemployment ought to be the central macroeconomic goal of a government. [15]

6. 'With increasing globalisation, Singapore has to invest ahead in the fundamentals that will drive Singapore's economic success and ensure that growth remains inclusive, benefiting all members of society, while encouraging a spirit of self-reliance. The government also has to ensure that resources are allocated efficiently in order to ensure environmental sustainability.'

Adapted from Ministry of Finance, 1 February 2010

(a) Explain how globalisation may hinder a government in achieving its micro-economic and macro-economic objectives. [10]

(b) With reference to the above statement, discuss the usefulness of the policies adopted by the government to achieve its economic objectives. [15]

END OF PAPER

H2 Economics
Tampines Junior College
Preliminary Examination
Suggested Answers
Paper 2

Section A

1. **An exceptionally large number of new homes are currently being built as part of the cooling measures for the housing bubble. The housing bubble benefits no one and hurts many when it bursts. This allocation of land would hopefully moderate housing prices, so that it would remain affordable for most residents.**

Source: Minister Khaw Boon Wan on Housing Policies, Budget Debate 2013

(a) **Distinguish between public and private goods, and determine if public housing is a public good.** **[10]**

(b) **Using concepts of scarcity, opportunity costs and production possibility curves, discuss if the allocation of land use for public housing is justified.** **[15]**

Suggested answer

a) Distinguish between public and private goods, and determine if public housing is a public good. [10]

	Public Goods	**Private Goods**
1. State Definition	· Non-rivalrous · Non-excludable	· Rivalrous · Excludable
2. List Examples	· Street lighting, lighthouses, flood-control dams, public drainage, public services such as national defence and police	· Education, Healthcare, housing, cars, alcohol
3. Explain characteristics in relation to example	Example of Street lighting **i. Public goods are non-rivalrous in consumption** (i.e. quantity available for consumption does not diminish with more users) à consumption of the street light by one person does not deprive others from consuming it à It does not matter if 1 individual, 10, 100 or 1000 individual utilizes the	Example of Public housing **i. Private goods are rivalrous in consumption** (ie. Quantity available for consumption diminishes with more users) à consumption of housing by one person deprive others from consuming it.

	streetlight à cost of providing the good to 100 people is the <u>same</u> as the cost of providing the good to 1,000 people à quantity of lighting remains unchanged regardless of the number of users **(ii) Public goods are <u>non-</u>excludable in consumption.** (it is impossible to exclude a non-payer consuming the good) à Individuals can free-ride and utilize the streetlight once it is installed without need of payment **(iii) Gives rise to issue of free-ridership** à there is no expression of demand, P=0. Price mechanism fails, there is no signal to producers and no incentive for producers to produce.	**ii. Private goods are excludable in consumption** (it is possible to exclude a non-payer consuming the good) à Individuals will need to pay the unit before receiving their keys. **(iii) Housing is considered a private good** by the government of Singapore à since it is both excludable and rivalrous in consumption.
4. Highlight problem if left to the free market (private sector)	· \ If left to the free market, there would be **nil provision of public goods**. Hence there is a <u>missing market</u> for public goods. The market has failed because no resources will be allocated to the production of public goods like street lights. · Complete market failure à justify a greater extent of govt intervention	· \ If left to the free market, there would be production**/consumption of private goods**.

Public housing is a private good.

- Consumption is rivalrous, since a consumer's consumption would reduce amount of flats available for the next consumers.
- Furthermore, there are regulations restricting the consumption of public housing. In Singapore, public housing is only available for married couples or singles above the age of 35, with combined monthly income below SGD 10,000.

Singapore government intervenes in the market of housing because they perceive there is market failure in the provision of housing. Housing could foster sense of belonging to Singapore, and promote racial harmony among its diverse population. These external benefits suggest that consumption of housing could be viewed as

having positive externality on the economy. Thus, the government would intervene in this market.

Synthesis

Government tends to intervene in the markets for both public and merit goods since both these goods provide substantial benefits to the society. In the context of Singapore, the government has stepped in to provide for these goods directly as can be seen from its allocation of resources to national defence and public housing.

Level	Descriptors	Marks
L3	Elaborated and rigourous explanation detailing the differences between public and private goods. Good analysis of whether public housing is a public good.	7-10
L2	Comparison made between public and private good. Analyse if public housing is public good.	5-6
L1	Attempt to explain public and private goods with little/no comparison made. Did not identify if public housing is public good.	1-4

b) Using concepts of scarcity, opportunity costs and production possibility curves, discuss if the allocation of land use for public housing is justified. [15]

Dissecting the preamble

"An exceptionally large number of new homes are currently being built as part of the cooling measures for the housing bubble. The housing bubble benefits no one and hurts many when it bursts. This allocation of land would hopefully moderate housing prices, so that it would remain affordable for most residents."

Points we can learn from preamble:

1) There is a large increase in supply of public housing in current time period à does not address current shortage/problem à Supply of public housing tends to be price inelastic à increase in DD will lead to an increase in prices to a larger extent à worsens housing bubble

2) There is a problem of housing bubble à unsustainable increase in housing prices à detrimental effects on the economy if it was to burst à unemployment, loss of savings/wealth/assets, recession, worsen investors/consumers' confidence [AD-AS analysis required]

3) There is a need to ensure housing prices remain affordable to most residence à equity/merit good/goods with positive externality

Introduction

- **Scarcity refers to the situation where there are limited resources which cannot satisfy unlimited wants**. As such, there is a need for choices to be made.
- This gives rise to the concept of **opportunity costs, which refers to the next best alternative forgone**. When choices are made, there will be opportunity costs incurred, since there are alternatives forgone.
- Opportunity costs could be represented as implicit and/or explicit costs.
- Implicit costs refer to costs which cannot be expressed in monetary terms such as time wasted. Explicit costs are costs that can represented in monetary terms such as prices of goods.
- In allocating land to be used for construction of public housing, the government would have necessarily made choices and forgo certain

alternatives. Through examining some of the choices forgone, it can shed lights on whether the choice to allocate land for public housing is justified.

- The presence of a housing bubble has garnered concern from the government. The bubble would cause property prices to rise rapidly, pricing it out of affordability for Singaporeans and residents. This suggests that there is a **shortage of housing in the market, since scarce commodity would experience increase in prices.** The act of allocating land to public housing would have meant that there are alternatives forgone.
- These choices could be analysed through the use of **production possibility curves [PPC], which illustrates the maximum amount of 2 goods an economy can produced, assuming that this is within the same time period, using the same level of technology, the same amount of resources and that all resources are fully and efficiently used.**

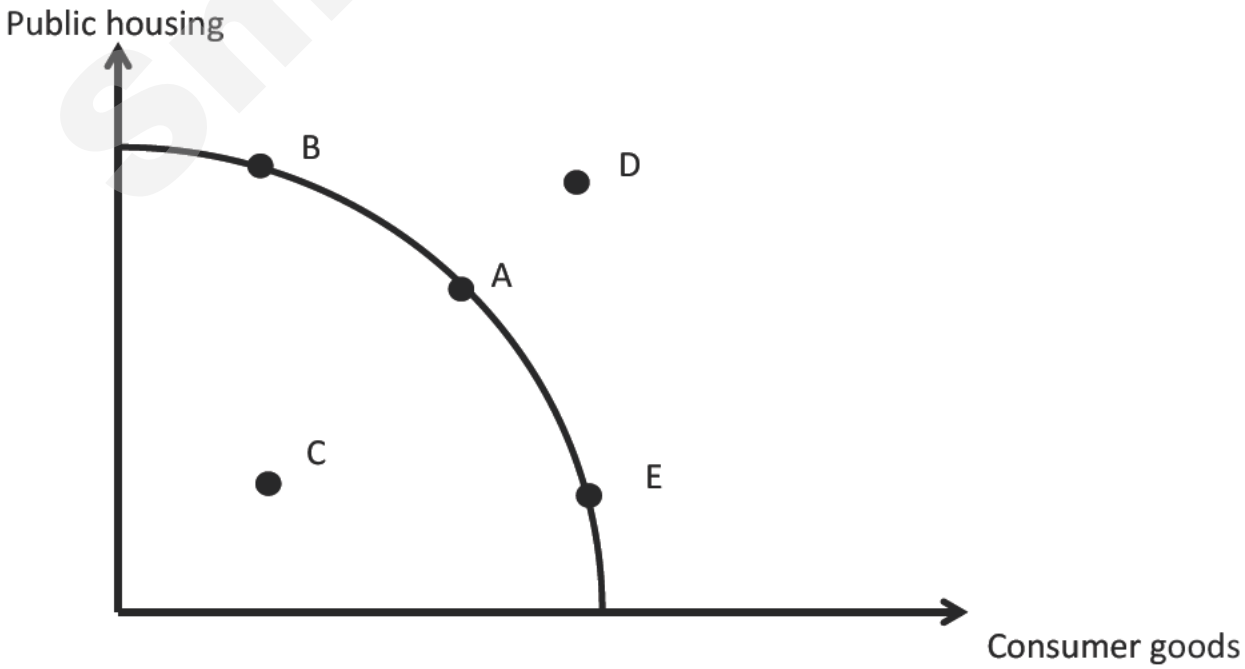
Main body

Thesis → the allocation of land to public housing is justified

1) Consider opportunity costs incurred when resources are fully and efficiently used

- Assuming all resources are fully used and Singapore is currently producing on the PPC at point E.
- As government allocates more land to public housing, changing the production point towards point A on the PPC, the resources remain efficiently used, however, the change in allocation represents opportunity costs → amount of consumer goods have to be given up in order for Singapore to produce more public housing.
- Since resources are not perfectly substitutable, there will be increasing opportunity costs incurred → thus the PPC is concave in shape.
- From E to A, opportunity costs incurred is at a decreasing rate → allocating more land to public housings could be justifiable.

Figure 1: Singapore's PPC between public housing and consumer goods



2) Consider opportunity costs incurred when resources are not fully and efficiently used

- At C, there is underallocation of resources to consumer goods and public housing.
- The economy possess idle resources à allocation of more resources to public housing will not incur opportunity costs.
- Allocating resources towards to public housing allows economy to engage resources more efficiently à production shifts to B
- There is **pareto improvement** in the economy à the increase in public housing is not at the expense of consumer goods from C to B
- Allocation of land towards public housing is justified.

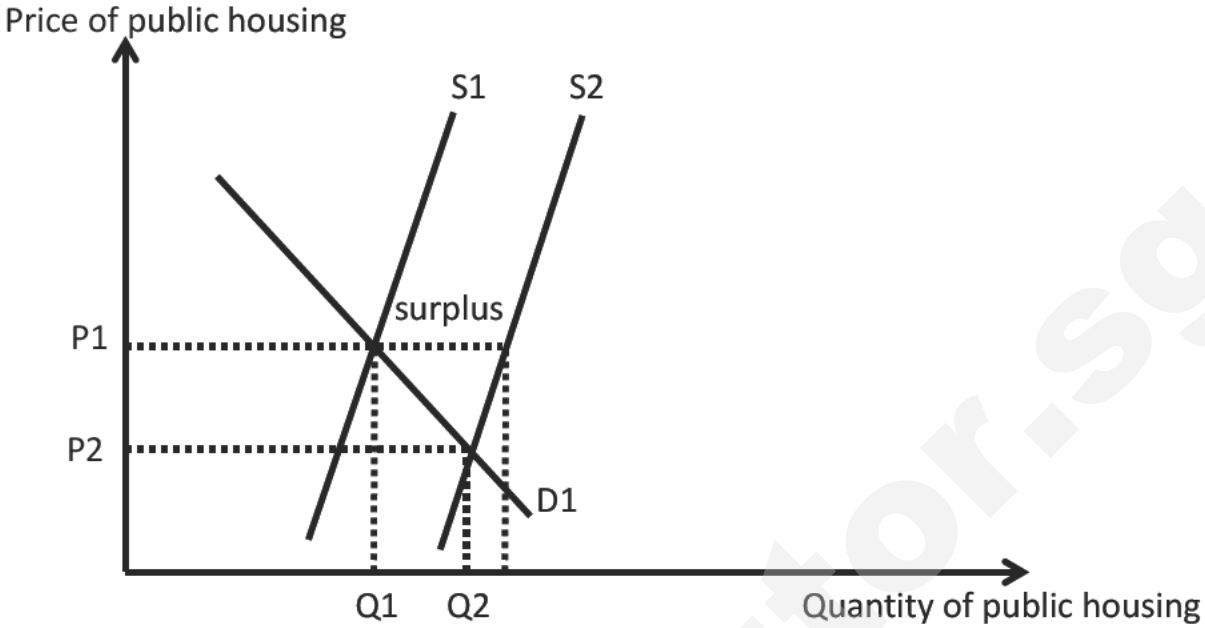
3) Consider opportunity costs incurred when qualilties/quantities of factor inputs or state of technology is improved

- Point D which lies outside the PPC is not attainable due to **scarcity**, Singapore does not possess sufficient resources to attain production at D.
- However, improvement in technology could allow Singapore to attain production at D if the PPC shifts out à **improvement in productive capacity** of the economy
- Similarly, this could be achieved if there are improvement in factor quality/quantity of resources
- These could be the result of
  i) land reclamation à increases factor quantity of land
  ii) improvement in construction techonology à able to build more public housing in given period of time
  iii) increase in labour force à more construction workers available
  iv) through trade à better quality of resources à cement/steel à able to build higher structures
- Thus, allocating more land towards public housing could be justified.

4) Cooling measures for housing bubble

- Singapore has been experiencing a housing bubble à phenomenon whereby the prices of public housing have been driven sharply, partly due to **speculations**. à there is **scarce amount of housing** available for the consumers.
- Allocation of land of land towards public housing would increase the supply of public housing. There is an increase in quantity of factor inputs for public housing.
- As supply increases from S1 to S2 in figure 2, a surplus would be generated at P1. This exerts a downward pressure on price. Quantity demanded would increase and quantity supplied would decrease as price falls. This continues till the market clears with a higher output at Q2 and a lower price at P2.
- The lower price would contribute to affordable prices of public housing and address the shortage experienced. à **allocation of land is justified.**
- **Evaluation**: However, as the supply of housing tends to be price inelastic, since housing requires time for construction, any further increase in demand will only lead to higher increase in price. This would also mean that the increase in supply of public housing would not address the housing bubble in current time period adequately à the moderation of prices may not be significant.
- While there is a need to allocate more land for public housing, this may not be effective in moderating the prices à **allocation of land may not be justified, considering time period.**

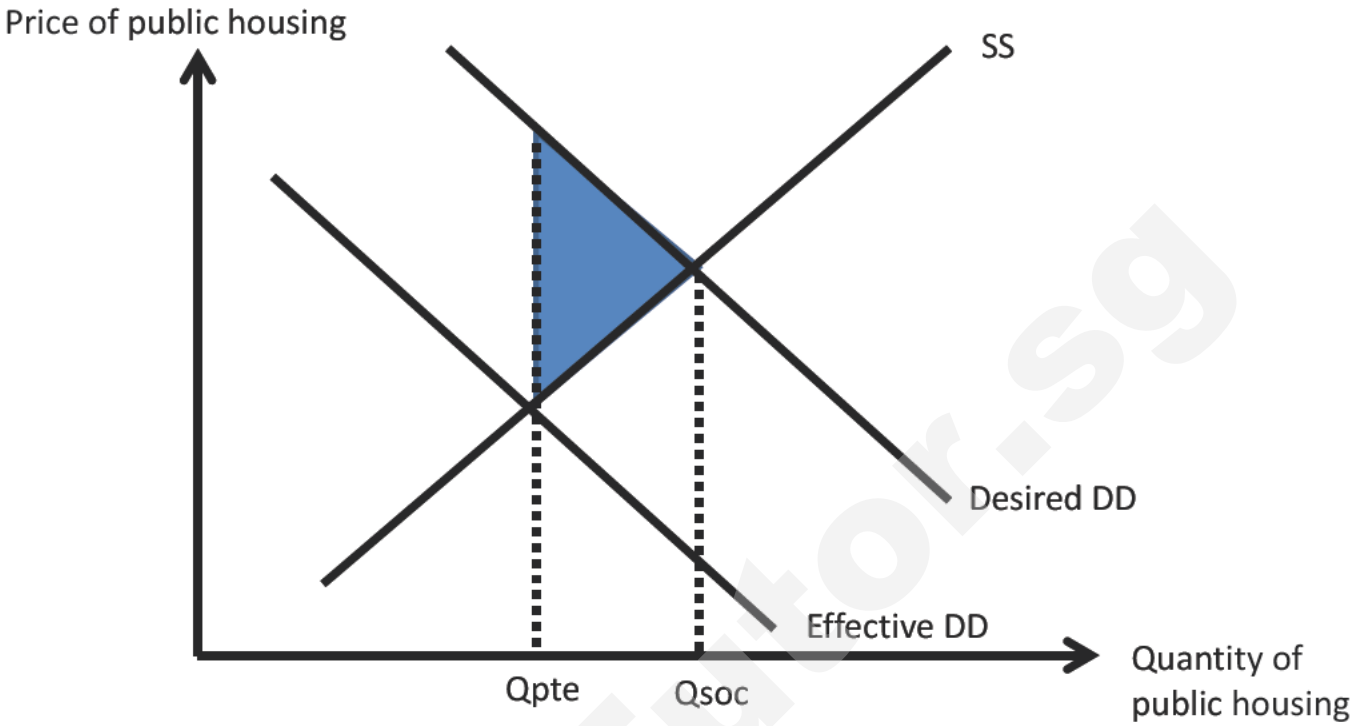
Figure 2: Market for public housing



5) Public housing is considered to be a *merit good* by Singapore government

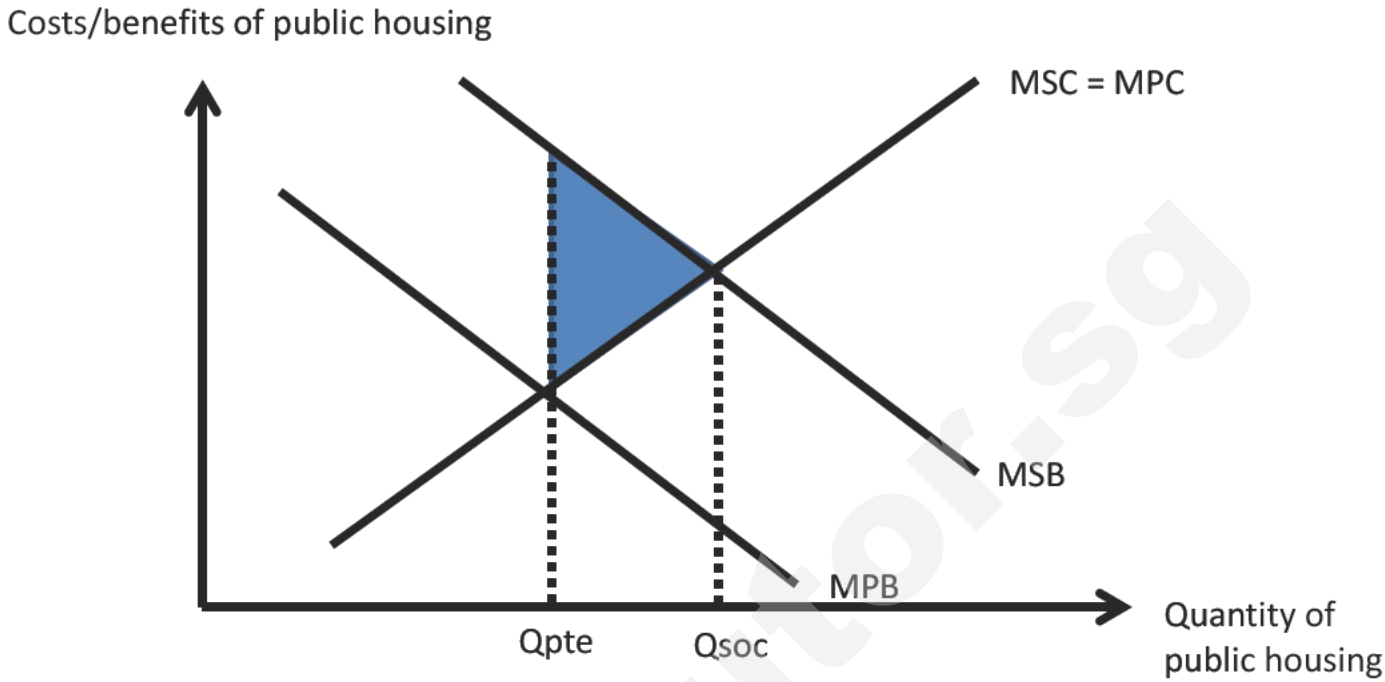
- Public housings are a form of asset investment for Singaporeans, which can be utilized as **retirement collaterals → retirement funds in future.**
- This leads to **underestimation of true benefits** in the consumption of public housing from the government's POV.
- The consumption is currently set at Qpte where effective demand for public housing intersects supply of public housing.
- The government sets desired demand higher and therefore Qsoc is derived from the intersection of desired demand and supply.
- Since Qsoc is greater than Qpte, there is **underconsumption of public housing in the eyes of govt. → insufficient housing produced → housing is in scarce amount**
- This leads to **development of welfare loss** as indicated by shaded region in Figure 3, thus the market fails.
- To address this market failure, the **allocation of land to public housing is justified as government do indeed provide merit goods.** In Singapore, government has provided for other merit goods such as education and healthcare.
- Since **land is scarce in Singapore**, there is a need for government to intervene to ensure the best allocation of resources → maximize the welfare/benefits the economy can enjoy from the use of land
- The allocation of land to public housing would lend to increase in consumption of public housing and therefore correct the market failure.

Figure 3: Underconsumption of Public housing in Singapore



- Ownership of public housing would instil a sense of rootedness for new residents
- Reinforce national identity → **reduce brain drain OR retain the foreign talents SG has attracted to stay on.**
- Racial quota for HDB flats would reinforce racial harmony amongst residents → **Ethnic integration policy**
- Promotes social cohesion → contributes to social security and diversity.
- This gives rise to external benefits of public housing consumption in Singapore → **positive externality in consumption of public housing.**
- In the consumption of public housing, the consumers would only consider their private costs and benefits.
- Private costs include the price of the property and the associated opportunity costs of options forgone in the consuming public housings, such as cars, holidays. Private benefits would include possible revenue from renting of the rooms and having personal space.
- Many consumers tend to disregard the possible external benefits generated like racial unity/national identity. Thus, the consumption would be set at Qpte, where MPB = MPC.
- As such, there will be social and private benefits curves, such that MSB = MPB + MEB

Figure 4: Positive externality in the consumption of public housing



- The social optimal level of consumption is set at Qsoc, where MSC = MSB. There is underconsumption public housing in the market. At Qpte, MSC>MSB, additional units of public housing produced would add more to society's benefits than costs.
- **Welfare loss to society develops** from the underallocation of resources to public housing → **public housing is in scarcity.**
- Allocation of resources to public housing is justified if the **total benefits the society experiences would outweigh the total costs inccurred**

Anti-thesis → allocation of land to public housing is not justified

1) High opportunity costs → Land scarcity

- Refer to figure 1 → **as production shifts from A to B, allocation of land to public housing would incur high opportunity costs**, since Singapore has to give up more units of consumer goods → **imperfect substitutability of resources.**
- Since **land is scarce** and a primary factor input, there has to be efficient allocation of this resource.
- Consider allocation of land for commercial purposes → One Marina
- Opportunity costs of rental of offices, creation of jobs, attracting FDIs → **analyse impact through AD-AS.**
- Allocation of land to public housing would not generate as much tangible returns to the country.
- HDB makes hundreds of millions of losses with each year → factoring land costs and construction and govt subsidy → construction of public housing worsens fiscal position of government in contrast to revenue generating projects like commercial offices → **high opportunity costs incurred for provision of public housing**

2) Provision of other merit goods

- Other merit goods could benefit society à R&D à develop new sectors of growth à lend to export competitiveness à improves resilience to external shock which is crucial in current economic conditions where recessions are occurring with higher frequencies.
- Consider land allocated for One North à Research facility for development of biomedical hub à new area identified as key sector of growth à **opportunity costs** à chance to develop key sector of growth and improve resilience of economy
- Education à another form of merit goods which can contribute to improvement in productive capacity of economy. Furthermore, established education facility could attract better FDI and foreign talents
- Consider land allocation for SUTD à 4th public university in Singapore à to increase proportion of graduates in Singapore à improve factor quality of labour à attract foreign investment à **opportunity costs à expansionary effect on economy**
- Healthcare à merit goods and key sector of growth à medical tourism à FDI to start up medical services in SG à good reputation of high quality medical services in South East Asian region.
- Consider land allocation for Khoo Teck Puat hospital à infrastructure required to cater to increase in population and aging population à establishing more healthcare providers in housing estates. **Opportunity costs of revenue from medical tourism and attracting FDIs**

3) Possibility of overcorrection

- Information lag à As government does not possess all information à likelihood that there are error in the derivation of Qsoc à may have led to **overallocation of scarce resources** to the market of public housing à resulting in further welfare losses and therefore greater inefficiency in the allocation of resources à government failure results à **incurs greater opportunity costs**
- Time lag à the construction of many public housing in current time period may be remedy the shortage experienced. à market of public housing would likely experience greater increase in demand for public housing and therefore higher increase in prices before the supply of public of housing could increase à possibility of surplus of public housing in the future à reinforce bursting of bubble in the future à **incurs greater opportunity costs**
- Implementation lag à HDB is a large government body à bureaucratic red tape which could hinder the administrative process à leads to higher costs of production, more time required for vetting processes etc. à leads to slower response to current shortage in the market à problem of housing bubble would worsen before intervention is applied. à **worsens the opportunity costs incurred.**

<u>Synthesis</u>

Government has to employ cost-benefit analysis in order to allocate land use most efficiently. Furthermore, government has to consider the short and long run implications of the allocation of land. While Singapore has been active in land reclamation, this is neither a feasible nor sustainable option.

<u>Evaluative conclusion</u>

Public housing are sold with a lease of 99 years à govt would be able to re-possess the land and can re-allocate the land for other uses in future à poor planning could lead to wastage of resources in construction and tearing down of buildings.

In lieu of housing bubble à concern could be centered on ensuring prices of public housing remain equitable à primary objective of public housing à consumption of HDB flats even for the low-income à foster Singaporean sense of rootedness.
More importantly à this is an opportunity for the government to demonstrate its resourcefulness in reducing the bubble before it threatens the economy with likelihood of recession and poor investment outlook.
Complementing policies à Regulations in housing market to ensure equity and reduce speculation on housing has been imposed. However, as there are no perfect policies, there remains a need for govt to implement a basket of policies.

Level	**Descriptors**	**Marks**
L3	Elaborated and rigourous explanation detailing the **pros and cons** of allocating land for public housing with **constant references made to the concepts of scarcity, opportunity costs and production possibility curves.**	9-11
L2	Clear explanation as to **why the allocation of land use to public housing is justifiable**, with consideration to alternative land use and other goals of governance. References **to opportunity costs and production possibility curves** are required.	6-8
L1	**Attempt** to explain why provision of public housing is desirable, with some economic analysis on **merit goods/positive externality.** References to **opportunity costs** incurred must be addressed.	1-5
Evaluation	Descriptors	Marks
E2	Reasoned judgement with insights on current economic development and how decisions made by government could be affected by long run and short run objectives.	3-4
E1	Conclusion with stance made, which lacks economic analysis.	1-2

2. Using economic analysis, discuss the effects of an improvement in technology in the computer tablet industry and its related markets. [25]

INTRO

- Improvement in technology affects both demand and supply in the industry. Need to use demand and supply analysis as well as various elasticity concepts to analyse the change. Relevant elasticity concepts that can be used here are price elasticity of demand, price elasticity of supply and cross elasticity of demand.

BODY

1) Demand Factor: There has been a favourable change in tastes and preferences due to the improvement in technology in the computer tablet industry, causing the demand for tablets to increase, ceteris paribus.

There has generally been an improvement in technology in the computer tablet industry where tablets get lighter and more portable. Also, tablets now have a longer battery life as compared to before. This is important to users because they might not

always be able to charge their tablets freely. Furthermore, tablets are now more sensitive to the touch of the user's finger, allowing users to navigate more easily. Technology has also allowed tablets to become more flexible, allowing the surface to twist and turn, according to the user's requirement. These improvements have resulted in a favourable change in tastes and preferences for tablets, causing the demand for tablets to increase and the demand curve shifts to the right, ceteris paribus.

2) Supply Factor: Improvement in technology has caused the supply for tablets to increase, ceteris paribus.

Improvement in technology has allowed tablets to be produced more efficiently. This is because producers have found new ways to produce tablets at a cheaper cost, maintaining the same level of quality. The improvement in technology has caused the cost of production of tablets to fall and profit margins for producers to increase. This raises the supply for tablets and shifts the supply for tablets to the right, ceteris paribus.

3) Price elasticity of Demand: The demand of tablets is price elastic

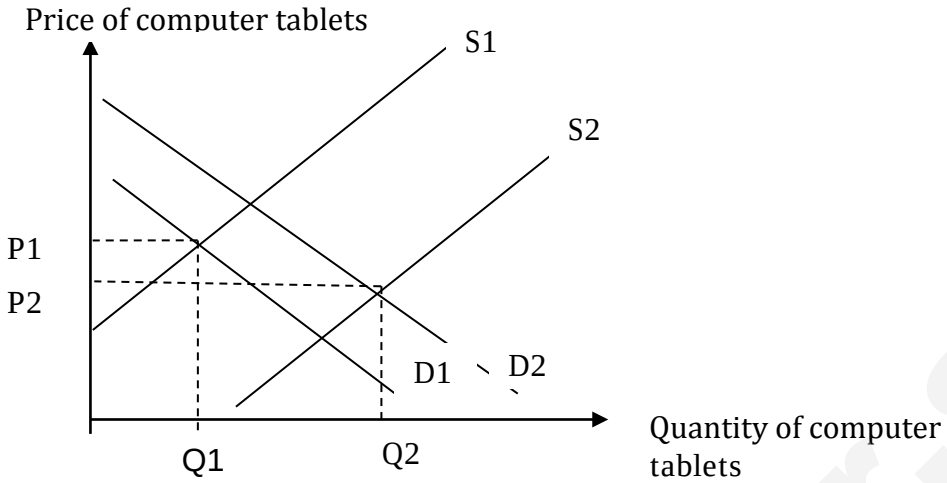
- Since there is a shift in supply, the price elasticity of demand would be relevant. Demand of tablets would be price elastic. Price elasticity of demand is negative and its magnitude is greater than one. This is because tablets have many other close substitutes, for example, notebooks. They are close substitutes because they are both portable and allow users to go online even when they are out. Furthermore, tablets are luxury goods as users usually do not need them to do work, but usually use them for leisure purposes. This contributes to the high price elasticity of demand for tablets.

4) Price elasticity of Supply: The supply of tablets is price elastic

- Since there is a shift in demand, the price elasticity of supply would be relevant. Supply would tend to be more inelastic in the short-run than in the long-run. This is because, in the short-run, computer tablet manufacturers can only increase production by increasing the variable factors of production such as labour. Therefore, when there is an increase in the price, quantity supplied will only increase by less than proportionately. However, in the long run, supply of tablets would be more price elastic. Price elasticity of supply is positive and its magnitude is greater than one. Firms are able to vary all factors of production. For example, instead of relying just on an increase in labour, computer tablet manufacturers can set up more factories to produce more goods.

Furthermore, the price elasticity of supply also depends on the degree of factor substitution. Much of computer tablet production tends to require low-skilled workers who do not require much training. Thus, it would be relatively easily for tablet producers to hire more workers if the price were to increase. Supply of computer tablets would tend to be price elastic in the medium term and the long term.

5) Market Adjustment Process



At the original price, P1, quantity supplied is greater than quantity demanded. There is a surplus. There would be an downward pressure on price. As price falls, quantity supplied falls and quantity demanded increases. This causes the surplus to gradually fall until the market clears and final equilibrium is reached. The equilibrium quantity has increased to Q2 and the equilibrium price has fallen to P2. As demand and supply are both price elastic, the % change in Pe is small relative to the % change in Qe.

6) Relative shifts: The increase in supply is greater than the increase in demand

It has been observed in the real world that prices for tablets have generally been dropping, therefore it is very likely that the increase in supply is greater than the increase in demand. This could be because even though there are many innovations for tablets that are very attractive to users, causing the demand for tablets to increase, the increase in demand is limited because many of these innovations have also been applied to notebooks and even desktops and therefore may not be unique to tablets alone. Furthermore, due to the high level of competition between the different tablet makers such as Apple and Samsung, producers always resort to research and development to find new ways of making the costs of making their tablets lower, so that their products can compete on the international market.

7) Effects of improvement in technology in the tablet market on substitutes

Notebooks are close substitutes to tablets. This means that the cross elasticity of demand for tablets and notebooks would tend to be positive and high. Since price of computer tablets falls, Qd for tablets increases à Since tablets and notebooks are close substitutes à consumers switch from using notebooks to using computer tablets instead à DD for notebooks will fall by m.t.p à Pe and Qe of notebooks drop quite significantly

Evaluation: However, with increasing innovation resulting in a greater amount of product differentiation, it is likely that the cross elasticity of demand between tablets and notebooks will fall. For example, making it easier and more convenient to play games on the tablet will reduce the substitutability between tablets and notebooks. Also, if tablet producers are able to create products which allow users to read without

discomfort, tablets may eventually replace books, a function that notebooks are unlikely to be able to fulfil.

8) Effects of improvement in technology in the tablet market on complements

Internet services are close complements to tablets. This means that the cross elasticity of demand for tablets and notebooks would tend to be negative and high. Since price of computer tablets falls, Qd for tablets increases à Since tablets and internet services are close complements à consumers use more internet services along with their increased usage of tablets à DD for internet services will increase by m.t.p à Pe and Qe of internet services increase quite significantly

Another complement is that of online video games such as those produced by Zynga. It is also a close complement of computer tablets. This is because many users prefer to play these video games on tablets as tablets use touchscreen technology which allows users to simply touch the screens to play the game instead of having to use a mouse which may be more inconvenient. Therefore, it is likely that online video games are a closer complement of computer tablets as compared to notebooks. Therefore, the demand for online video games will increase by m.t.p à Pe and Qe of online video games increases quite significantly.

Evaluation: Between internet services and online video games, it is likely that internet services are a closer complement to tablets than online video games. This is because almost every user with a tablet would require internet services in order to use the basic functions of the tablet. On the other hand, not every tablet user plays video games. Therefore, a fall in the price of tablets would generally cause a greater increase in demand for internet services as compared to online video games, resulting in a larger increase in Pe and Qe for internet services.

CONCLUSION

It is highly likely that the trend towards improvement in technology will continue, resulting in a continued increase in demand and supply for tablets in the industry. However, the relative extent of shifts in demand and supply may not stay the same. For example, in the future, there could be ground-breaking innovations for tablets that could cause demand to increase substantially more than the supply. Or, it is possible that one of the tablet manufacturers gains a strong dominance, and possibly even a monopoly over the tablet market. Such a monopoly may reduce the incentive to engage in further R&D to reduce costs as the competitive element in the industry no longer exists, and therefore limit increases in supply in the tablet market.

Marking Scheme

Level	Descriptors
Level 1 **1 - 5**	· Answers are mostly irrelevant. · Listing of points
6 - 9	· Very little contextualization · Errors and misconceptions shown throughout explanation · Little elaboration on demand and supply factors, mainly listing
Level 2 **10 - 11**	· Must examine the computer tablet market, as well as the market of a complement OR substitute good · Answer shows adequate knowledge of demand and supply forces and how these affect equilibrium price **and/or** equilibrium quantity. · Answer may not be balanced when considering demand and supply factors · Little use or incorrect use of elasticity concepts · Lack of economic analysis and development · Response lacks contextualization · Little analysis of markets
12 - 14	· Must examine the computer tablet market, as well as the market of a complement good and a substitute. · Answer shows adequate knowledge of demand and supply forces and how these affect both equilibrium price **and** equilibrium quantity. · Response considers both demand and supply factors · Some effective use of elasticity concepts · Some economic analysis · Response lacks contextualization · Little analysis of markets
Level 3 **15 – 18**	· Response must have examined both the computer tablet market and at least either substitutes or complements · Answer demonstrates good knowledge of demand and supply forces and how these affect equilibrium price **and** equilibrium quantity, and shows knowledge of market equilibrium · Answer considers both demand and supply factors · Good use of elasticity concepts. Students must have considered **Eab and Ep OR Es** · Good economic analysis · Effective use of diagrams · Good contextualization
19 - 21	· Response must have examined both the computer market as well as both substitutes and complements · Answer demonstrates excellent knowledge of demand and supply forces and how these affect equilibrium price **and** equilibrium quantity, and shows knowledge of market equilibrium · Both demand and supply factors very well-explained · Excellent use of elasticity concepts. Students must have considered Eab and Ep and Es. · Excellent economic analysis

	· Very effective use of diagrams · Very good contextualization

E1 (1-2)	Mainly unexplained judgement.
E2 (3-4)	Judgement based on analysis.

3. **Microsoft invests billions on Research and Development (R & D) which has contributed to a stream of innovations that have transformed business and the homes. To encourage innovation, intellectual property rights are given to innovators for a period of exclusivity to earn a reasonable return on their investment.**

Source: The Straits Times "ASK: NUS ECONOMISTS" 16 Nov 2011

(a) Explain how barriers to entry affect a firm's pricing behaviour and profits earned. [10]

(b) To what extent is Microsoft's market power justified? [15]

Part (a)

Introduction:
The key factors that affect the structure of a market are number of firms in the industry, nature of product, knowledge of the market and the existence of barriers to entry (BTE). BTE are obstacles that prevent entry by potential competitors into the market. BTE play a key role in determining firms' pricing decisions and profits earned in the long run.

Development:

1. Consider market structure with no/weak BTE vs market structure with strong BTE

(a) Market structure with no BTE – e.g. Perfect Competition and Monopolistic 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.

Consider Perfect Competition

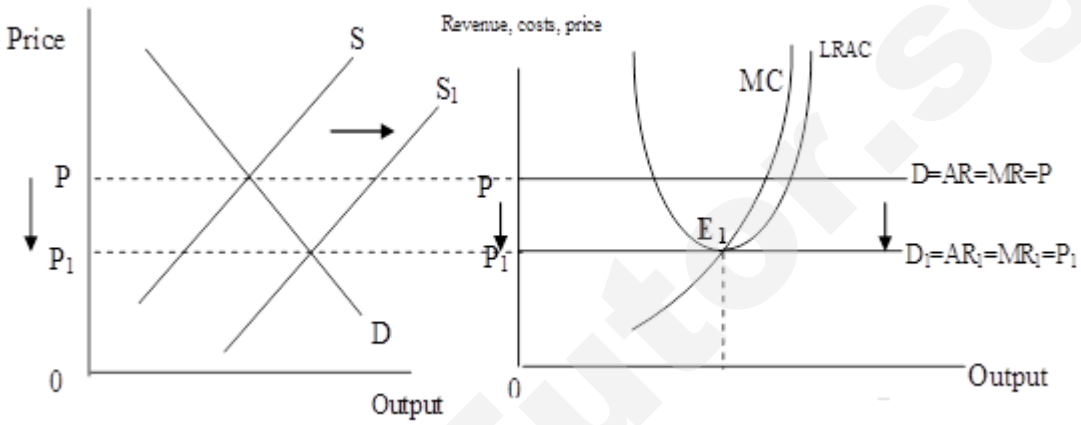
· **In the extreme under perfect competition, where product is homogenous and with the existence of perfect knowledge together with no BTE, firms are price takers in the market. Illustrate with the LR equilibrium adjustment process.**

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

he charges more than the market price, buyers will go elsewhere. The firm may sell any quantity it likes but only at the market price.

<u>Assume the PC firms are making supernormal profits in the short run</u>

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 S1. Consequently, market price will fall from P to P1 and there will be a downward shift of the individual **firm's** demand curve from D to D1 since they are price-takers.

The gradual fall in an individual firm's price will continue until price exactly equals AC at P1 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.

<u>Consider Monopolistic Competition</u>

- For monopolistic competition, where product is slightly differentiated and with no BTE, the firms face a fairly elastic demand curve.
- Monopolistic competitive firms have some market power and can set prices but not high prices as with no BTE, competition will be stiff
- In the long run, similar to PC firms, firms in monopolistic competitive markets can only make normal profits due to freedom of entry as any

supernormal profits earned in the short run will attract entry of new firms which compete away the supernormal profits.

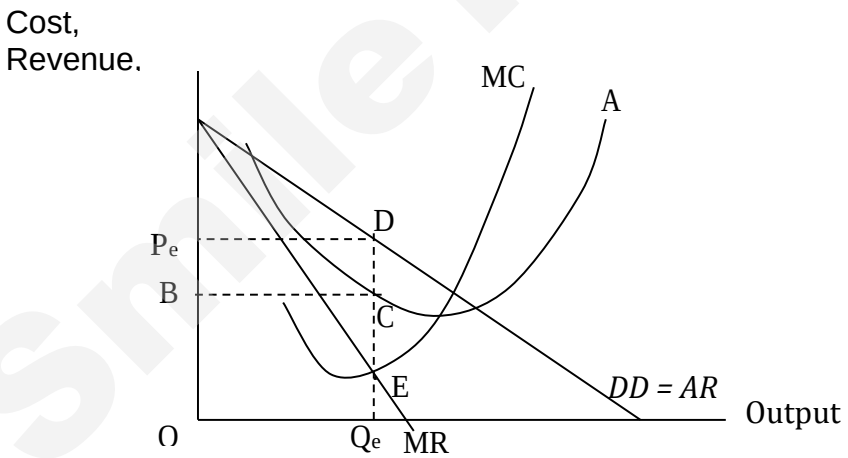
(b) Market structure with strong BTE – e.g. Monopoly & Oligopoly

- With imperfect information, unique product under Monopoly and differentiated/homogeneous product under Oligopoly, firms under these 2 market structures have market power i.e. it is able to set prices which is further enhanced by their high barriers to entry.
- Examples of barriers to entry are large economies of scale in production, network effects and government policies

<u>Consider Monopoly</u>

- 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 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 even in the long run.

Consider Oligopoly

- High BTE can also give rise to a few dominant firms existing in the industry. This gives rise to an oligopoly. In an oligopoly, as each dominant firm has a significant share of the market, they are mutually interdependent in their pricing and output decision-making i.e. each firm has to mindful of the reactions of their rivals to its decision-making. Thus in pricing decision, they could either act in a non-collusive or collusive manner.
- Prices tend to be rigid in an oligopolistic market as it is assumed that rival firms will follow a price decrease and not a price increase (acting in a non-collusive manner). That is, if a firm is to decrease its price, it will lead to a less than proportionate increase in its quantity demanded as the other firms will follow its price decrease. On the other hand, if the firm increases its price, it will lead to a more than proportionate fall in its quantity demanded as the other firms will not follow its price increase.
- Thus oligopolistic firms could practice price leadership (acting in a collusive manner) where the most dominant firm could lead in for e.g. raising prices to its profit-maximising and the other firms will tacitly follow the price increase.
- Due to high BTE, oligopolistic firms are able to earn supernormal profits even in the long run as the high BTE keep out the rival firms from entering the industry to compete away profits.

Note
Students can consider how monopoly or oligopoly firms could practice limit pricing or predatory pricing if they have other aims instead of profit-maximising. Limit pricing prevents firms from coming into the market, whereas firms that use predatory pricing try to drive competitors out of the market.

Conclusion:
Thus BTE is an important factor affecting a firm's pricing decision and in particular to the type of profits it can possibly earn in the long run.

Part (b)

To what extent is Microsoft's market power justified? [15]

Introduction:

Microsoft has high barriers to entry and this enhances its market power i.e. giving it greater ability to alter the market price of its good. When a firm abuses its market power it will result in a less than efficient allocation of resources. In this essay, using the efficiency criteria, we will examine whether Microsoft's market power is justified.

Development:

1. **Define efficiency**
   Efficient allocation of resources refers to a situation whereby resources are allocated in such a way that no one can be made better off without another being made worse off. That is social efficiency or pareto optimality is achieved.

In the narrow sense, efficiency can be defined as economic efficiency which is achieved when there is both productive and allocative efficiency. In a broad sense, efficiency also takes into consideration dynamic efficiency, economies of scale (EOS) and cost-savings, product variety and consumer choice.

2. Consider circumstances where Microsoft's market power may not be justified

(i) <u>Productive and allocative efficiency</u>

Microsoft with substantial market power is a dominant firm in the software market. It is productively efficient from firms' view but productively inefficient from society's viewpoint and is also allocatively inefficient.

<u>Productive efficiency</u>

A profit-maximising firm is necessarily productively efficient since profit maximisation requires the firm to minimise its cost for producing that level of output. In this respect, all firms, regardless of their market structures, are productively efficient.

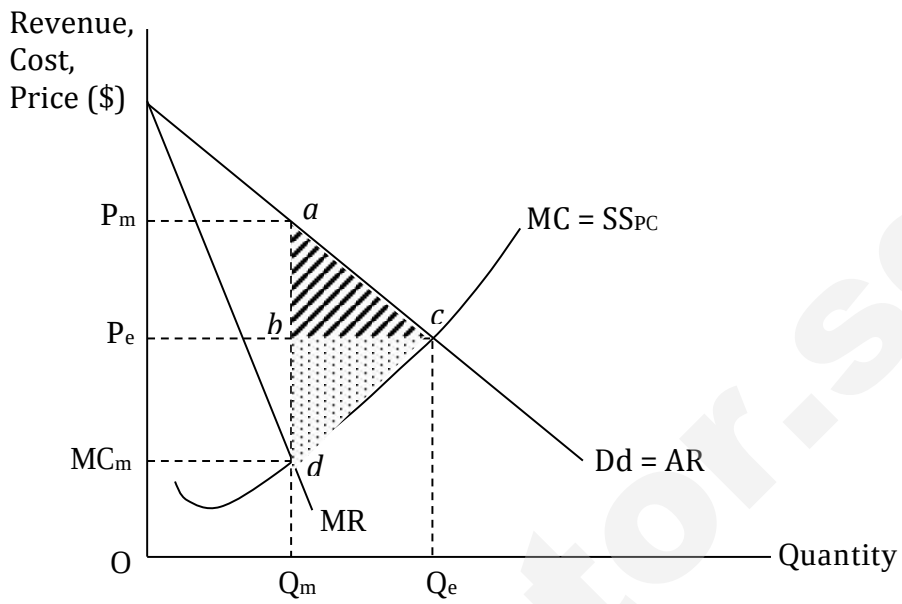
However a profit-maximising firm with market power produces at the falling portion of the LRAC curve. It produces with excess capacity and not fully utilising the given plant size. Hence from society's viewpoint, it is not considered productive efficient.

<u>Allocative inefficiency</u>

Allocative efficiency is achieved when resources are allocated in such a way that the right quantity of every commodity is produced. It is achieved when for each good produced, its marginal cost of production is equal to its price. That is P = MC**.**

However, Microsoft with market power is allocatively inefficient. It produces an output where P > MC.

Figure 3: Existence of market power leading to welfare loss arising from allocative inefficiency



To achieve allocative efficiency, production should take place at the point where P = MC (point c) and the socially efficient level of output is at OQ_e.

However, given its market power, to maximise its profits, Microsoft restricts output to Qm, charging price at Pm. At Qm, P > MC i.e. the value consumers place on the last unit (P_m) exceeds the marginal cost of producing it (MC_m). Comparing OQ_m to OQ_e, it is evident that there is underproduction of the good in this case. The welfare loss i.e. the deadweight loss resulting from this underproduction (or misallocation of resources) is given by the area acd. From the welfare point of view, more should have been produced. In other words, Microsoft fails to achieve allocative efficiency.

3. Consider circumstances where Microsoft's market power may be justified

(ii) <u>Dynamic Efficiency</u>

Market power enhanced through BTE allows Microsoft to earn supernormal profits even in the long run. These supernormal profits earned enable the firm to reinvest it to further improve its products. Given a contestable market, there will be incentive for Microsoft to further improve to keep out its potential rivals. That is, Microsoft will be willing to invest in R & D to improve its product which benefits the consumers.

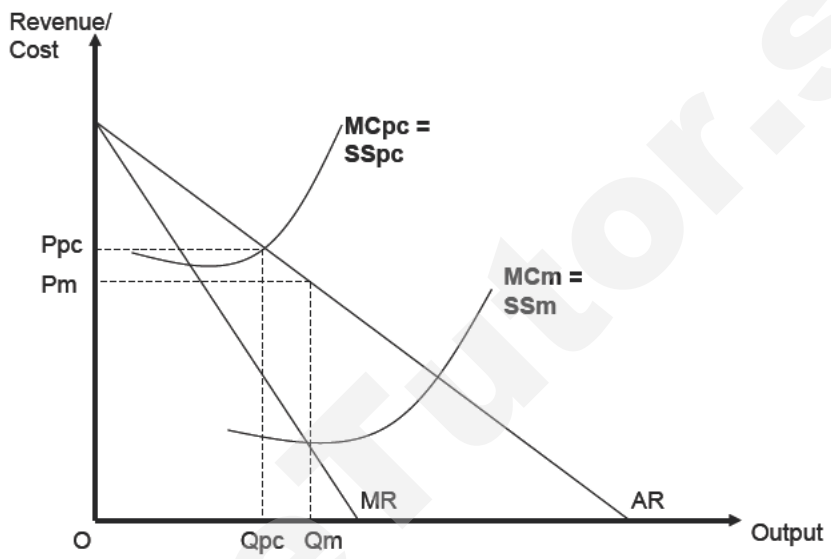
In this context, the market power given to Microsoft to encourage R & D via BTE in the form of intellectual property rights is justifiable as such research required high fixed costs. In addition, this given market power is only short-term in nature as stated in the preamble that the intellectual property rights are given only for a period of exclusivity for the firm to earn a reasonable return on its investment.

Consumers can also enjoy **greater product variety and choices** as firms undertaken innovation to compete with one another.

(iii) <u>Economies of Scale (EOS) and cost savings</u>

Large firms such Microsoft also produces on a large scale and reaps EOS. Software development is characterised by substantial EOS as the fixed costs of producing software, including applications, is very high. By contrast, its marginal costs are very low. Thus to be cost-efficient it needs a large consumer base to sell its products. In addition, to keep out its rival firms, Microsoft will be incentivised to pass on the cost savings to its consumers.

Figure 4: Price and Output under Perfect Competition and Large Firm which reaps



The perfectly competitive industry would produce an output OQpc and charge a price OPpc as given by the intersection of the PC industry's demand and supply (SSpc) curves. In a market where a large firm can reap substantial economies of scale, its marginal cost curve (MCm) lies lower than the MC curve of the perfectly competitive industry (MCpc). The large firm's profit maximising price and output is at OPm and OQm respectively where MCm=MR. This illustrates that large firms such Microsoft can actually produce a larger quantity and charge a lower price as compared to perfectly competitive industries.

Conclusion:

In conclusion, as long as a market is contestable, firms with market power will usually plough back profits earned to improve product so as to keep its rival firms out. This is in particular applicable to industry affected by fast-pace changing technology such as in this context of the IT/software industry. In addition market power that is strengthened through short-term BTE such as intellectual property rights and patents are needed to encourage firms to undertake R & D to benefit the consumers in the long run. In this aspect, Microsoft's market power can be justified.

However, long term absolute market power is often frowned upon as it can lead to inefficiency and society's welfare is undermined. Thus it is also important that the

government put in place anti-trust laws and regulations to prevent the abuse of market power by firms, but one has to be mindful that intervention by the government can at times lead to greater welfare losses than without its intervention as government may not have the necessary information in its decision-making.

Mark Scheme:

Part (a)

Level	Descriptors	Marks
L3	A well-developed and rigorous explanation on how the existence of BTE can affect a firm's pricing behaviour and profits earned.	7-10
L2	An underdeveloped explanation of both (i) no BTE and (ii) high BTE affecting a firm's pricing behaviour and profits earned; lacking in rigour. OR A well-developed explanation of either (i) no BTE or (ii) high BTE affecting a firm's pricing behaviour and profits earned.	5-6
L1	For an answer which shows some knowledge on how the existence of BTE can affect a firm's pricing behaviour and profits earned. Answer contains errors and inaccuracies.	1-4

Part (b)

Level	Descriptors	Marks
L3	A competent response containing well-developed analysis of whether market power can be justified showing both scope and depth in the discussion. Discussion to be centred on efficiency criteria in both narrow and broad sense. Candidates may also include the equity criteria. High L3 (10 -11m): Insightful analysis based on given context. **Note: No reference to productive efficiency => cap at L3 (max 9m)**	9-11
L2	An underdeveloped explanation of the negative and positive effects of market power relating to welfare maximisation. OR A well-developed explanation but mainly one-sided view. OR	6-8

	No reference is made to given context. **Note: No reference to economic efficiency => cap at L2 (max 8m)**	
L1	For an answer which shows some knowledge of the negative and/or positive effects of market power. Answer contains errors and inaccuracies.	1-5
E2	Judgement based on analysis	3-4
E1	Mainly unexplained judgements	1-2

Section B

4. Discuss the significance of the multiplier size, factor endowment and Marshall-Lerner condition in influencing macroeconomic policy decisions in Singapore. [25]

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 polices), International policies (e.g. trade policies).

Main Development:

Analysis of how the 3 characteristics influence decisions regarding macroeconomic policies in Singapore:

i) <u>The multiplier size</u>

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: Multiplier = 1/(1 – 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 it's 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.

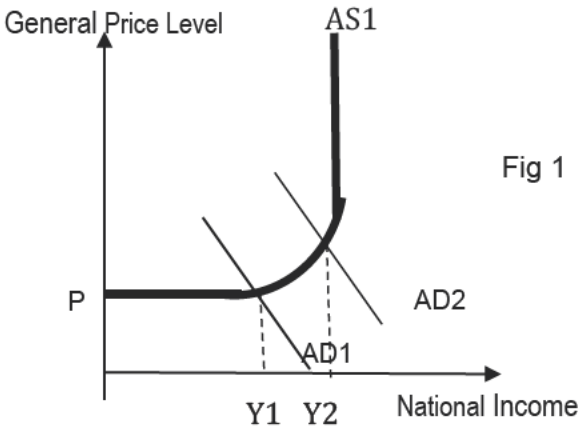


Fig 1

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.

- Given the value of the multiplier (k), policy-makers can **estimate how much to increase government expenditure by to achieve the targeted increase in national income.** A smaller multiplier will imply a smaller increase in national income to a given increase in G. Thus, a small multiplier limits the effectiveness of any demand-management policy that aim to achieve higher real national income through any components of AD.
- 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 36% 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.
- Moreover, 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, increasing G on training will increase AD in the short run as well as increase LRAS in the long run to bring about sustained EG.
- The policy-makers can also predict how much national income will be increased if government expenditures are increased by a certain amount. For example, if the multiplier is 1.5 and government increases its expenditure by $100m. Hence it can be estimated that national income will increase by $150m.

ii) <u>Factor Endowment</u>

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).

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 exports, 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 19 regional and bilateral FTAs with 25 trading partners. FTAs Ò removal of trade restrictions by member countries on S'pore's products Ò á(X-M) & FDI Ò á AD Ò multiple increase in national income & employment via the multiplier effect.
- Due to the lack of factor endowments such as natural resources, e.g. land, raw materials, Singapore is highly dependent on imports. Thus, Singapore adopts a free trade policy. It **does not impose any tariffs or trade restrictions on imports**, except on demerit goods. Due to Singapore's high dependence on imported raw materials, Singapore is also more susceptible to import price push inflation. Hence, Singapore also adopts a **gradual and modest appreciation of the Singdollar.** This reduces the price of imported raw materials, reducing the cost of production à SRAS increases à GPL falls à controls import-price push inflation.
- Another factor endowment Singapore is lacking in is entrepreneurship. Singapore does not have an active entrepreneurship sector. Hence, the Singapore government has implemented supply-side policies to promote entrepreneurship in Singapore. For example, Spring Singapore was set up to nurture a pro-business environment, facilitate the growth of industries and enhance innovation and enterprise capabilities of small and medium enterprises for better access to markets and business opportunities.

iii) <u>Marshall-Lerner Condition</u>

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. $Ep_X + Ep_M > 1$.

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 also help to improve competitiveness of our exports. Occasionally, Singapore also depreciates the Singdollar (i.e. adopts a zero percent appreciation stance) 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 $Ep_X + Ep_M > 1$. Thus, this will cause AD to decrease from AD1 to AD2, resulting in a fall in GPL from P1 to P2 since the Singapore the economy is operating on the intermediate range as shown in Fig 2, hence controlling demand-pull inflationary pressures.

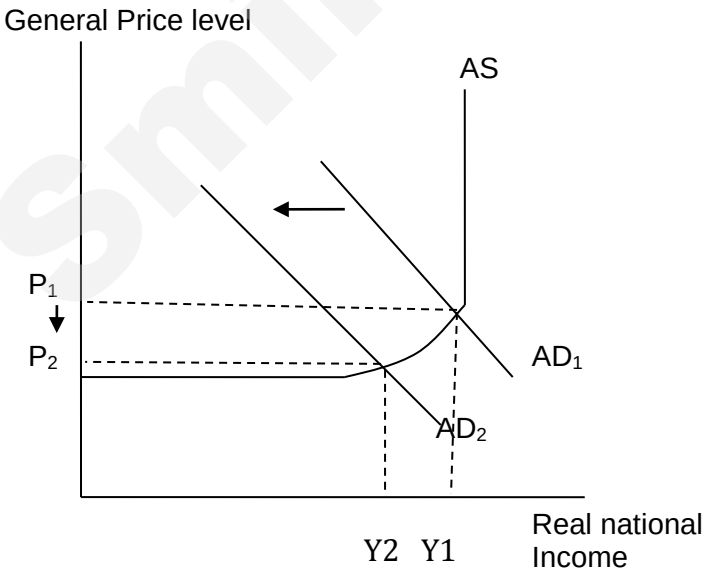


Fig 2

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.**
- Moreover, the sum of price elasticities of demand for exports and imports may be low in the short run due to the fact that time is needed to make adjustments in taste and preferences, source for alternative substitutes or modify existing contracts after waiting for it to expire. International trade is typically contract-based and hence the quantity of exports/imports may not be responsive to price changes in the short run, while contractual obligation holds (i.e. contracts have not expired yet). As a result, Marshall-Lerner condition may not be initially satisfied in the short run. This means that an appreciation of SGD could initially lead to an increase in (X-M) and AD, worsening the demand-pull inflation situation instead. **An appreciation in SGD will only cause (X-M) and AD to fall after a time lapse in the long run when M-L condition is met.** Thus, in the event that demand-pull inflation is a significant cause of prevailing inflation, the government may need to be aware that an appreciation in SGD will only control demand-pull inflation in the long-run when the M-L condition is met, thus **the government may want implement some other policies to deal with the problem in the short-run** such as industry specific measures, e.g. cooling measures for the property market. In January 2013, the govt has increased the buyer's stamp duty & raised the minimum cash downpayment for housing loans for Singaporeans buying their 2nd property.
- 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.

Conclusion:

- Stand: In Singapore, all 3 factors - k size, factor endowment and M-L condition are important considerations in the choice of policy instruments.
- 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.
- Evaluative comment: Of the 3 factors, factor endowment and k size are more significant considerations for Singapore. 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 · shows well-developed discussion on the significance of the multiplier size, factor endowment and Marshall-Lerner condition in influencing decisions regarding macroeconomic policies. · 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.	15-21
L2	For an answer that · attempts to use economic framework (AD/AS diagram) to analyse the effects of the concepts in influencing macroeconomic policy decisions · 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.	10-14
L1	For an answer that · shows some knowledge of multiplier, factor endowment and Marshall-Lerner condition 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.	1-9

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

5. (a) Explain the causes of unemployment in developed and developing nations. [10]

(b) Discuss the view that the pursuit of low unemployment ought to be the central macroeconomic goal of a government. [15]

(a)

Introduction:

- Define unemployment:
  The unemployment level (of labour) refers to the number of people who are actively looking for work, i.e. those who are willing and able to work at the current wage rate but are without a job.

Measurement of unemployment:

- Unemployment rate (%) = $\frac{unemployed}{labourforce}$ X 100%
- State some characteristics of developed (DCs) and developing countries (LDCs):

  Developing countries such as Africa generally have low level of incomes and low standard of living. Its citizens generally lack access to amenities such as safe water, health and education. They also tend to be heavily dependent on sectors such as agriculture.

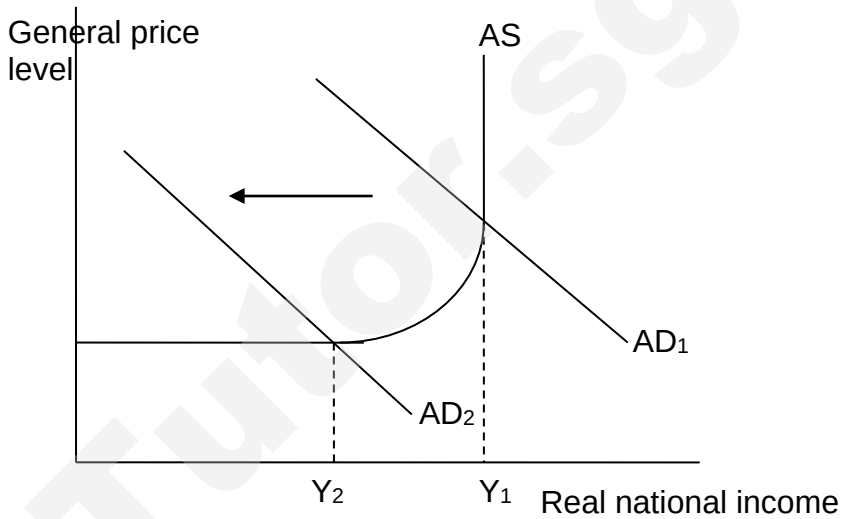
  Developed nations such as United States and UK have high level of income and its citizens enjoy high standard of living.

Main Development:

- State types of unemployment:
  There are various types of unemployment such as cyclical unemployment, structural unemployment, frictional, classical, and seasonal unemployment.

- Identify and elaborate on the types of unemployment prevalent in DCs and LDCs

Note: reference needs to be made as to which type of unemployment exists in developed or developing nations:

Cause of unemployment	**DC**	**LDC**
Cyclical unemployment (It arises because of a fall in internal or external demand. The fall in aggregate demand leads to an accumulation of inventories. Firms responded by reducing their production of goods and services and by retrenching workers.)	· Common in both DC and LDC · Inadequate employment due to fall in AD (due to changes in business cycles, i.e. recession) 	
Structural unemployment (Mismatch between job skills and needs of industry)	· Common in both DC and LDC. · Structural unemployment tends to develop around major changes in an economy, such as DC move from an industrial to a technological-based economy and LDC move from agricultural economy towards greater industrialisation. · Workers who are displaced by the decline of the old economy tend not to be trained in areas suitable for the new economy, so they remain out of jobs. For example, farmers or unskilled workers in LDCs will find it difficult to look for a job in the factories. As for the developed countries, a transition to an IT savvy & knowledge-based economy in an age of globalisation can cause some low-skilled workers (from the low-value-added industries, e.g. assembly-line manufacturing) to be structurally unemployed as these low-value-added jobs migrate from high wage countries to low wage countries. · The inability of unemployed resources to adjust fast enough to flow into industries or occupations for which demand is increasing (sunrise industries), leads to structural unemployment. This occurs due to a mismatch between the unemployed and the available jobs in terms of required skills, location or any other dimension. The problem is exacerbated by occupational and geographical immobility, which make it difficult for people to find alternative jobs.	

Frictional Unemployment (people being temporarily unemployed between jobs, searching for new ones. It is sometimes called search unemployment. New entrants to the job market (such as graduating students) and re-entrants (such as former homemakers) contribute towards frictional unemployment.)	Not a cause of concern due to well-developed information system regarding job opportunities (print, media, Internet job agencies)	· Can be a major problem due to lack of access to information regarding job opportunities (especially those interested in moving from rural to urban areas) and would have to depend on social networks such as friends and relatives to know about job openings.
Classical (real wage) unemployment (Presence of strong trade unions seeking higher wages for their workers which is above the market-clearing level.)	· A major problem in developed countries e.g. US and UK with strong trade unions and labour regulations. Excess supply of labour would result from the high wage rates (above market-clearing level). · *Alternatively, classical unemployment could be caused by government's minimum wage legislation.*	· Generally not a major problem due to lack of protection for labour rights.
Seasonal Unemployment (Unemployment caused by regular & anticipated decline in business activity during a certain time period of the year. Prevalent in agriculture & tourism industries)	· Generally not a major problem.	· Can be a major problem since LDC focus on production of agricultural products such as cotton. · Employment of workers depends on the "seasons", e.g. agricultural planting and harvesting periods require more workers than other periods.

Marking Scheme for (a).

L1	· Listing of unemployment, its types and causes	**1 to 4m**
L2	· Developed explanation of the causes of unemployment	**5 to 6m**
L3	· Well-developed explanation of 3 major causes of unemployment · Able to illustrate these causes with examples from DC and LDC	**7 to 10m**

(b) Discuss the view that the pursuit of low unemployment ought to be the central macroeconomic goal of a government. [15]

Introduction:
· State the 4 major objectives of government policy:
- sustained economic growth
- low unemployment
- low inflation
- healthy balance of payments
· low unemployment is often considered to be achieved when unemployment rate is at 2 – 3%.

Main Development

Thesis:
The pursuit of low unemployment ought to be the central macroeconomic goal of a government:
i) costs of high unemployment
ii) other aims can be achieved at the same time as well

i) 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)

ii) The pursuit of low unemployment also allows the govt to attain other macroeconomic aims, e.g. economic growth:
- To solve cyclical unemployment à govt adopts expansionary demand-management policies, e.g. expansionary FP à á G à á AD à (IPONY) multiple á national income, output and employment via the multiplier effect à actual growth assuming that the economy is at the Keynesian range.
- To solve structural unemployment, govt adopts supply-side policies (i.e. Training grants) à encourage workers to undergo retraining à á productivity and mobility of labour à á AS à potential growth in the LR. Such supply-side policies can also reduce inflation as the á AS also â GPL.

Anti-thesis:
On the other hand, the pursuit of low unemployment should not be the central macroeconomic goal as it may conflict with other macroeconomic aims.

Conflict with Inflation:
To attain low unemployment à govt adopts expansionary demand-management policies, e.g. expansionary FP à á AD à á GPL à dd-pull inflation once the economy has reached the intermediate or classical range.

Conflict with BOP:
Expansionary demand-management policies may also worsen BOP through:
- á NY à á import expenditure.
- á AD à dd-pull inflation if the economy has reached the intermediate or classical range à exports become less price competitive & imports become relatively cheaper à assuming that demand for exports is price elastic, there will be a mtp â quantity demanded of exports. Assuming that imports and domestic goods are close substitutes, there will be a mtp á demand of imports à export revenue â while import expenditure á à (X-M) â à BOT and hence BOP worsens.

Conclusion:

- § Whether low unemployment should be the central goal of a govt depends on the situation that the economy is facing. If an economy is currently experiencing hyperinflation, then low inflation may be a more urgent goal. However, if an economy is currently experiencing a recession and large scale unemployment, then full employment may be a more urgent goal.
- § The government also needs to be mindful of the potential conflicts with other macro-economic objectives. Government needs to weigh the costs and benefits of each policy carefully in their decision-making.

Marking Scheme for (b):

L3	A well-developed and balanced discussion that addresses the importance of low unemployment as well as the ability to recognise the conflicts in policy decisions of government.	9-11
L2	A competent and developed explanation on the negative impacts of high unemployment OR the potential conflicts/why govt should instead focus on other objectives. Answer is one-sided (either thesis OR anti-thesis) but is developed.	6-8
L1	Ability to identify the 4 main macroeconomic objectives of the government. Vague answer which explains briefly why government should focus on keeping unemployment low OR why government should instead focus on other objectives. Answer may contain inaccuracies.	1-5
	Up to 4 additional marks for evaluation	
E2	Reasoned conclusion involves an evaluative assessment based on economic reasoning/analysis.	3-4
E1	Some attempt at arriving at a reasoned conclusion but stand is not supported by reasoning/analysis.	1-2

6. **'With increasing globalisation, Singapore has to invest ahead in the fundamentals that will drive Singapore's economic success and ensure that growth remains inclusive, benefiting all members of society, while encouraging a spirit of self-reliance. The government also has to ensure that resources are allocated efficiently in order to ensure environmental sustainability.'**

Adapted from Ministry of Finance, 1 February 2010

(a) Explain how globalisation may hinder a government in achieving its micro-economic and macro-economic objectives. [10]

(b) With reference to the above statement, discuss the usefulness of the policies adopted by the government to achieve its economic objectives. [15]

a)

Introduction

- **Define globalisation**: Globalisation is defined as the process through which an ***increasingly freer flow of ideas, people, goods, services, and capital*** leads to the integration of economies and societies.

a. free flow of **ideas**
b. free flow of **people**
   - § international movement of labour or migration ***(Link to freer flow of labour)***
c. free flow of **goods and services**
   - § free trade or trade liberalisation ***(Link to freer flow of trade)***
d. free flow of **capital & investment**
   - § emergence of worldwide financial markets and better access to external financing for corporate, national and subnational borrowers result in rapid movements of capital and integration of financial markets ***(Link to freer flow of capital)***
   - § rise and expansion of multi-national corporations (MNCs) within and across countries e.g. Microsoft, Citigroup, IBM etc.

- State government micro-economic goals – economic efficiency and equity
- State government macro-economic goals – low inflation, low unemployment, sustained economic growth and healthy balance of payments.

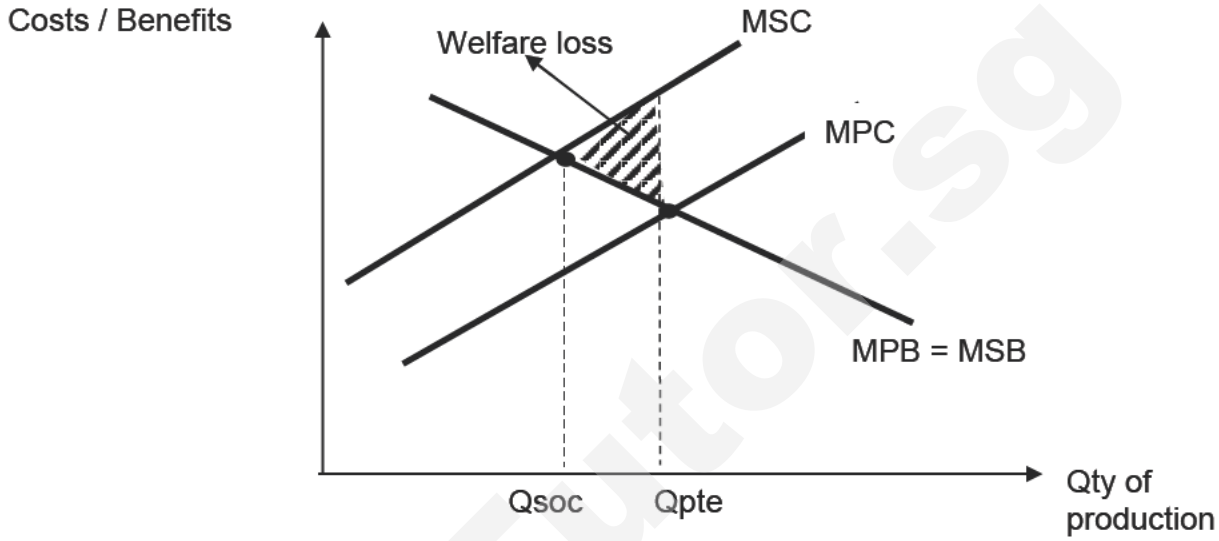
Main Development

1. Explain how globalisation hinders a government from achieving economic efficiency.

- Globalisation gives rise to a freer movement of labor across countries. Such emigration can lead to welfare loss. Emigration has reduced the labour force in many countries including Singapore. Emigration of high-skilled workers leads to a decline in the productivity of those who stay behind. For example, qualified doctors, researchers, and engineers confer positive externalities on the rest of the population, and these are lost when they emigrate resulting in welfare loss to society and economic inefficiency.
- Globalisation facilitates the increase trade among countries. Trade could encourage MNCs to move to countries that have weak pollution controls and export from there. There is often overconsumption of non-renewable energy

by firms for their production processes. This overconsumption of non-renewable energy due to overproduction of goods and services generates negative externalities on third parties for which no compensation is made.

- The effective working of the market mechanism is thus hindered (market has failed) as social efficiency is not achieved. With the presence of negative externalities, the marginal social cost is greater than the marginal private cost, as MSC = MPC + 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 Qsoc where MSC = Marginal Social Benefit (MSB).
- At Qpte, MSC is greater than MSB. An additional unit of production of goods adds more to social cost than to social benefit. As a result, price mechanism overallocates resources to the production activity. Hence, there will be a welfare loss as shown by the shaded area and the market mechanism is hindered in efficiently allocating resources → economic inefficiency.

2. Explain how globalisation hinders a government from achieving equity.

- Increased technology progress due to globalisation rewards the premium on skills and depresses the share of income going to unskilled labour. On the other hand, the lowly-skilled worker faces the risk of losing his job to technology or a low-cost worker in or from another country → widening income gap between skilled and unskilled workers and greater income inequality of workers in booming and declining industries.

3. Explain how globalisation hinders a government from achieving its macro-economic objectives.

Globalisation could result in the <u>risk of falling trade owing to rising competition in the international arena.</u>

- For example, Singapore is squeezed between low cost emerging countries like China and India and high-tech export countries like Japan. With China and India catching up fast, Singapore loses its comparative advantages in low-cost manufactured exports, ceteris paribus → <u>Falling X competitiveness</u> in low-cost manufactured goods

- Globalisation could results in the risk of falling investment owing to rising competition in the international arena. Rising competition for investment world-wide**.** Countries like Singapore face falling Investment (I) as foreign and local firms (especially labour-intensive industries) as such firms relocate to countries with lower cost of production.
- Increased vulnerability to external shocks à Globalisation increases integration of economies with the world and hence increases its vulnerability to external shocks like oil shocks and financial meltdown in US. Countries will be more prone to contagion effects of other countries' economic crisis. These shocks can be transmitted from one country to another through various channels---trade, financial and mechanical spillovers. External shocks could affect an economy through the trade channel à decreases net X.

- Adverse effect on net X and I à fall in AD from AD0 to AD1 à Ipony + k (reverse multiplier) à leading to multiple fall in **actual growth and national income and employment. (internal effects)**
- Falling X competitiveness in low-cost manufactured goods à weakening of the trade a/c à weakening current a/c à **weakening BOP assuming capital & financial a/c remains unchanged (external effects)**

Marking Scheme

Knowledge, Application, Understanding and Analysis		
L3	A well-developed answer that consists of good application of relevant examples to explain how globalisation prevents a government from achieving both its micro-economic and macro-economic objectives. Max of 8m for a well-developed answer that only lacks the discussion on equity as a micro-economic objective.	**7 – 10**
L2	For an answer that uses economic analysis to explain how globalisation prevents a government from achieving both its micro-economic and macro-economic objectives. However, there is some lack in economic depth and rigor or a lack of examples to support the answer. Max of 6 marks for an answer that only focuses only on the macro-economic objectives.	**5 - 6**
L1	For an answer that shows a descriptive knowledge of how globalisation hinders a government from achieving its micro-economic and macro-economic objectives. Max of 4 marks for an answer that only focuses only on the micro-economic objectives.	**1 – 4**

'With increasing globalisation, Singapore has to invest ahead in the fundamentals that will drive Singapore's economic success and ensure that

growth remains inclusive, benefiting all members of society, while encouraging a spirit of self-reliance. The government also has to ensure that resources are allocated efficiently in order to ensure environmental sustainability.'

b) With reference to the above statement, discuss the usefulness of the policies adopted by the government to achieve its economic objectives. [15]

Introduction

The Singapore government has implemented the following policies in order to achieve its economic objectives:

1. Fiscal policy with a supply-side intent à to achieve macro-economic objectives

2. Supply side policy à to reduce income inequality.

3. Micro-economic policies à to enhance the efficient allocation of resources

Main Development

1. Usefulness of Fiscal Policy with a supply-side intent to achieve macro-economic objectives

In order to remain competitive in an increasing globalised world and to prevent globalisation from hindering the economic progress of Singapore, the government must invest ahead, in the fundamentals that will drive Singapore's success: research capabilities, infrastructure and connectivity of a global city and a highly skilled workforce. This calls for the introduction of fiscal policy with a supply-side intent to

a) Increase research and development (R&D)
b) Providing the infrastructure and connectivity of a global city state
c) Increase access to education and training

- **Increase R&D capacity in Singapore**

  - As Singapore moves towards a knowledge-based innovation-driven economy to promote productivity and competitiveness in the global arena, there is a need for Singapore to identify potential strategic research areas in which Singapore can invest to develop new industries for the future.
  - The key drivers of these efforts are:

    a. World-class research-intensive universities – Universities play a prominent role in a knowledge-based, innovation-driven economy by developing the talent for the economy. The presence of world-class research intensive universities will be crucial to achieve and sustain this outcome. In addition, universities will play an increasingly important role in training talent needed for Singapore's areas of comparative advantage.

    b. Mission-oriented public sector research institutions – Public sector R&D activities can help to attract and anchor high value-added knowledge-intensive manufacturing activities of MNCs and Globally Competitive Companies (GCCs), as well as to grow the latter's R&D activities in

Singapore. Through various innovation platforms that are facilitated by the public sector, the government also create opportunities for the local SMEs to collaborate and engage the large enterprises to build business partnerships and network.

- The increase in R&D efforts in Singapore helps to develop the nation's productive capacity, develop niche areas and increase its competitiveness in the global arena.

- **Providing the infrastructure and connectivity of a global city state**

  - To attract MNCs into Singapore, there is a need to enhance physical infrastructure to increase industry collaboration and design innovation. Furthermore, Singapore pride itself as a global city state that provides all the necessary infrastructure provided to attract businesses, innovation and talents.
  - With this "Host to Home" strategy, the Economic Development Board aims to move Singapore from being a host to companies to become a home where business, innovation and talent are nurtured.
  - This strategy adopted by the government has effectively attracted significant amount of FDIs and talents into Singapore, thereby increasing its productive capacity.

- **Continuing Education and Training Masterplan (CET)**

  - The Continuing Education and Training (CET) Masterplan is a comprehensive plan to prepare the Singapore workforce for the future and maintain a competitive advantage for Singapore.
  - For employers – The plan aims to enhance quality and productivity by helping their workers acquire industry-relevant skills and stay ahead of industry developments.
  - For all Singaporeans – The plan will form the fundamentals of a lifelong learning system to help workers find their niches, seize opportunities in new growth areas and remain relevant and employable. CET will enable our workers, including rank-and-file workers and professionals, managers, executives and technicians (PMETs) to remain employable with new and better skills.
  - Emerging and growth industries– to equip Singaporeans with the skills for job opportunities in new growth industries, whether they are preparing for new jobs, switching careers or acquiring new skills.
  - As part of the CET Masterplan, the Government will ramp up the capacity of the CET training infrastructure, establish stronger linkage between CET and pre-employment education institutions, and set up a specialised Institute of Adult Learning to develop the capability of adult educators. The aim is to quadruple the annual training capacity by 2010, from 22,000 to 80,000 workers. The Government will partner leading education and training providers, from both the public and private sectors, to set up quality CET centres for growth industries as well as expand existing CET centres to offer high quality and industry-relevant training courses.

  - CET also looks into providing upgrading opportunities and structured assistance for low income workers so that they will also be able to achieve real and sustainable income growth through:

        - Introduce a broad-based incentive scheme to encourage employers to send their low-wage workers for training and for these workers to commit to training.
        - Develop a structured programme to train and place low-wage workers in better jobs. The programme could be customised to meet the needs of low-wage workers. It should cover basic literacy skills, placement into better jobs (be it with same or different employer), financial assistance to cover opportunity and other costs (e.g. training allowance, completion awards for key milestones), modular classes (to cater to their schedule as many are on rotating shifts with limited leave entitlement), peer support and counselling to provide positive reinforcement and support.
        - To ensure sustainability of our productivity efforts, there should also be a closer linkage between productivity and wage growth to motivate workers, through performance-based.
    - This will increase the quality of our workforce thereby increasing Singapore's productive capacity.

- As a whole, with the increase in government expenditure in the area of R&D, infrastructure and in the education and training of workers, this will lead to an increase in the AD in the short run from AD1 to AD2, ceteris paribus (Illustrate with diagram) à ipony + k à <u>increase in actual growth, and a reduction in demand deficient unemployment.</u>
- On the other hand, the increase in Singapore productive capacity through R&D, education and training of workers and FDIs à increase in LRAS from LRAS1 to LRAS2 (illustrate with diagram) à <u>sustained EG, reduction in structural unemployment and a low rate of inflation.</u>
- There will also be an <u>improvement in Singapore's balance of payments</u>.
    - With increasing export competitiveness, this will lead to an increase in the net exports, ceteris paribus à improvement in the current account.
    - The increase in FDIs will lead to an improvement in the capital account.

- To provide at least 1 well-explained limitation of supply side policies / fiscal policy with supply side intent.
    - Cost of financing G expenditure à could worsen government fiscal position.
    - Long gestation period required

<u>2. Usefulness of Supply Side Policy to achieve lower income inequality</u>

At the same time, the Government must also ensure that growth remains inclusive, benefiting all members of society, while encouraging a spirit of self-reliance. There is a need for the government to reduce income inequality in an environment of intense global competition. The best way to do this is for the Government to provide strong support for low-wage workers through the Workfare Income Supplement (WIS) Scheme.

Workfare Income Supplement Scheme

Globalisation, increased competition and the change in Singapore's comparative advantage have resulted in the lack of relevant skills and hence slower wage growth

for low-wage workers à increasing income inequality between the skilled and unskilled workers.

- The objective of WIS is to supplement the wages and retirement savings of older low-wage workers as well as to encourage them to stay employed.
- In 2010, the WIS Scheme was enhanced by increasing the maximum WIS payment from $2,400 to $2,800, and increasing the qualifying average monthly income ceiling from $1,500 to $1,700 to encourage older low-wage workers to seek and to remain in employment.

- In 2012, the payment frequency of WIS was increased from twice a year to four times a year for employees to help them better meet their short-term needs. WIS was also extended to younger persons with disabilities (PWDs).
- As announced recently at Budget 2013, there will be further enhancements to WIS. Some of the key revisions include the extension of the income cap to $1,900 to benefit more Singaporean workers, higher WIS payouts of up to $3,500, higher proportion of WIS to be paid out in cash and increase in WIS payments to the CPF Medisave and Special Accounts.
- The combined changes to WIS and CPF contribution rates will help to boost the retirement adequacy of lower-income workers as well as raise the take-home pay for the vast majority of WIS recipients.
- The Government will constantly review the WIS to ensure that it is focused, timely and effective in reducing the income inequality in Singapore *thereby ensuring that growth remains inclusive, benefiting all members of society.*

Limitation

- Whilst WIS scheme may enhance the income of the low wage workers, it does not lead them out of their low wage condition.
- Low-wage workers face particularly severe barriers to upgrading themselves. As many low-wage workers depend on casual work to earn a living, their hours tend to be long and irregular, and they face high opportunity costs when they participate in training. Employers are also generally less supportive of training lower-skilled workers.
- Hence, WIS should be complemented with incentives such as the CET to encourage low wage workers to upgrade their skills in order for them to have better jobs that allow them to earn more.

3. Usefulness of micro-economic policies in allocating scarce resources efficiently (correct negative externalities arising from increasing globalisation)

As mentioned in Part (a), the increasing globalisation may lead to the generation of negative externalities on third parties not involved in the production / consumption of the goods and services. Whilst economic competitiveness is important, it should not be at the expense of environmental degradation. Hence, there is a need for government to mitigate or reduce the external cost to society through the use of micro-economic policies to bring about environmental sustainability (which is necessary to sustain Singapore's economic competitiveness).

- Government provision of the infrastructure needed for the development of renewable energy sources
    - The development of renewable energy sources, such as solar and biomass, can help enhance energy resilience and environmental sustainability.

- Based on the Sustainable Singapore Blueprint, Singapore aim to have 5 percent of peak electricity demand supplied from renewable energy sources by 2020.
- Singapore, therefore, needs to continue to support innovation and the infrastructure necessary to develop renewable energy sources as a component of our national energy portfolio.
- This replacement of the use of crude oil and coal for energy needed for production with green energy can help reduce the negative externalities generated due to increasing globalisation taking place.
- Explain 1 limitation of policy:
    - Cost of financing G expenditure à could worsen government fiscal position.

· <u>Education and Campaigns on the importance of using energy more efficiently</u>

- At the same time, there is a lack of awareness and information among households, and even some companies, about their energy use and possible ways to use energy more efficiently.
- Government agencies and non-governmental organisations should continue to work together to raise awareness, educate and provide accurate information to help firms and consumers choose equipment that best meet their needs.
- Significant improvements can be achieved in the long run only if a mindset of energy conservation is inculcated in all firms and households.
- Through education and campaigns, firms and consumers will be more aware of the harms of the overconsumption of energy and hence will reduce their demand of energy to the socially optimal level, thereby reducing welfare loss to society.
- Explain limitation(s) of policy:
    - It takes time for education and campaign to take effect; hence it does not offer immediate solutions to the situation.

· <u>Legislation (eg. GreenMark Incentive Schemes)</u>

- The government has introduced incentives such as GreenMark incentive schemes to encourage energy efficiency in buildings. There are also grants for companies to perform energy audits and build capability for energy conservation and efficiency.
- Explain limitation(s) of policy:
    - High administrative cost involved introducing and implementing the GreenMark energy scheme.

<u>Overall Evaluation</u>

v In view of the nature of the Singapore economy, Singapore has gained much from globalisation. The combination of micro and macro economic policy measures adopted by the government is useful in assisting Singapore to ride on the waves of globalisation to attain the various macro and micro economic goals and reduce any possible trade-offs, despite their limitations. These measures are adopted after taking into account the fact that Singapore cannot isolate herself from the rest of the world due to the characteristics of its economy and thus need to embrace globalisation.

- The Singapore government needs to constantly review the current policies in order to **maximise the potential gains and minimise the potential costs of globalisation** given the global economic outlook.
- In the coming decade, there will be new challenges and opportunities for Singapore and Singapore will have to update her strategies and develop new capabilities through the policies discussed above. Singapore is well placed to succeed in the emerging post-crisis world. The global crisis has reinforced the shift of markets to Asia. There is therefore no lack of opportunities for Singapore in the decade ahead. Therefore Singapore needs to make use of its policies to build deeper capabilities and expertise to make the most of this window for growth. But to sustain growth, the government has to make better and more productive use of our resources, and especially by growing the skills and talents of its people and ensuring a more equitable society for all the live in.

Marking Scheme:

Knowledge, Application, Understanding and Analysis		
L3	For a well-developed analysis of at least 3 policies that can be undertaken to achieve Singapore's economic objectives, supported with relevant real world knowledge or examples. There is reference made to the preamble and limitations of the policies are clearly explained.	**9 - 11**
L2	For an underdeveloped analysis of at least 3 policies that can be	**6 - 8**

	undertaken to achieve Singapore's economic objectives, with some support of real world knowledge or examples. Little reference to preamble and mention of limitations of policies. OR A well-developed analysis of only 2 policies that that can be undertaken to achieve Singapore's economic objectives, supported with relevant real world knowledge or examples. There is reference made to the preamble and limitations of the policies are clearly explained. Max of 8 marks if policies address only the achievement of macroeconomic objectives or only the achievement of microeconomic objectives. Max of 8 marks for answers that has no application to pre-amble.	
L1	The answer shows some theoretical knowledge of policies with no application to pre-amble. Some conceptual errors displayed.	**1 - 5**

Allow up to 4 additional marks for 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**

TEMASEK JUNIOR COLLEGE
Preliminary Examination 2013
General Certificate of Education Advanced Level
Higher 1

ECONOMICS 8819/01

18 September 2013
3 hours

Additional Materials: Answer Paper, Cover Sheet

READ THESE INSTRUCTIONS FIRST

Do not turn over until you are told to do so.

Write your name and CG 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 staples, paper clips, highlighters, glue or correction fluid.

Section A
Answer **all** questions.

Section B
Answer **one** question.

Begin each question on a separate sheet of answer paper.
Fasten your work for Section B and the Cover Sheet together.
Hand in your answer 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 **8** printed pages

Section A

Answer **all** questions in this section.

Question 1

Tourism Barometer of Singapore

Table 1: Visitor Arrivals into Singapore by Country of Residence

Country	2008	2009	2010	2011
TOTAL	10,116.1	9,682.7	11,641.7	13,171.3
ASEAN	3,571.4	3,684.8	4,821.8	5,414.3
Japan	571.0	490.0	529.0	656.4
Hong Kong	278.1	294.4	387.6	464.4
China	1,078.7	936.7	1,171.5	1,577.5
United Kingdom	492.9	469.8	461.8	442.6

Source: Yearbook of Statistics Singapore, 2012

Extract 1: Singapore Tourism 2015 – Vision, Targets and Initiatives

By 2015, Singapore aims to be a destination of choice, a powerful tourism hub attracting visitors, business, and talents from across the world by 2015. The Singapore Tourism Board (STB) has identified three key areas of focus:

(a) strengthening Singapore position as a Leading Convention & Exhibition City in Asia with a strong and dynamic business environment.

(b) developing Singapore as a leading Asian leisure destination by providing an enriching experience that is Uniquely Singapore.

(c) establishing Singapore as the Services centre of Asia – a place where visitors come to enjoy high end quality services such as healthcare services.

Table 2: STB's targets for 2015

Indicator	2004	2015 Target
Tourism Receipts	S$10 billion	$30 billion
Visitors Arrivals	8 million	17 million
Tourism Employment	150 000	250 000

Source: Adapted from https://app.stb.gov.sg

Extract 2: Should there be a lower F1 levy on hotel room rates?

Economists agree that Singapore must promote tourism and other services to counter a decline in some manufacturing industries, particularly the mainstay electronics sector. Tourism is seen as favourable in employing large numbers of low-skilled workers who have lost industrial jobs.

The inaugural Singapore F1 Grand Prix in 2008 was the only night race in the world. It costs $150 million to organise, with the Singapore government footing 60 per cent of the bill. Hotel room rates typically rise sharply for the F1 period (especially at trackside hotels) due to significant demand for rooms as well as the imposition of a special F1 tax on hotels to defray some of the costs.

The tourism and hospitality sector would also need to focus its efforts on developing a skilled tourism workforce to fill the additional jobs created in the tourism industry. Efforts must not be spared in raising service standards because Singapore faces stiff competition as other countries in the region are also attempting to develop their own tourism sectors. In situations such as a global recession, sports tourism and other lifestyle industries would probably be the first few to experience the impact. Unforeseen events like the SARS epidemic would affect global tourism as people reduce their probability of being infected by staying home.

Source: Adapted from The Business Times, May 15, 2010

Extract 3: Singapore has reaped benefits from F1 race?

Singapore's Minister of State for Trade and Industry, Mr. S. Iswaran, who is spearheading the government's involvement in the F1 project, says F1 is needed to boost Singapore's tourism industry which accounts for 3 to 4 per cent of gross domestic product. The event would not only give a strong boost to the tourism sector, but also generate broader economic spin-offs. The Formula 1 race is expected to generate a total of S$100 million in tourism receipts as well as bring Singapore closer to its goal of being a vibrant global city that is abuzz with high quality entertainment and events. The race has given Singapore good international exposure and it continues to enjoy strong support locally and internationally. The event also provided a networking platform for businesses with many taking up hospitality suites to host partners and clients at the race. For example, in 2010 the Singapore Exchange organised a conference at the sidelines of the race to bring together potential investors in the Asian motorsports industry.

However F1 will not get an A1 for environmental friendliness, given its high petrol consumption and the amount of carbon emissions. Then there is the pre-F1 construction mess as well as the noise pollution during the race. At full throttle, each car's noise level is louder than thunder. The F1 race is unpopular among some locals as road closures near the circuit cause jams. Even those outside the circuit vicinity can be frustrated by the traffic snarls because of the spillover effects. Those who are unhappy include some retailers in the Central Business District (CBD) who were affected by the detours enforced when F1 is in town, but even some of those in town say business doesn't spike up noticeably during this period.

Source: Adapted from various sources

Extract 4: Medical Tourism in Singapore

Thailand, India, Malaysia and Singapore have dominated the Asian medical tourism industry in recent years. Singapore's medical tourism is fast developing steadily to be on the major location for medical tourism in Asia because we are competing on skills and beneficial outcomes rather than merely on costs, said Health Minister, Mr. Khaw Boon Wan. Today Singapore attracts more than 200 000 patients every year to receive medical services from Singapore hospitals and clinics. This figure is estimated to increase to about 1 million medical tourists to Singapore by end of 2012.

Demand for health care in Singapore – which spends about 4 per cent of gross domestic product on health care – is being driven by an aging population, rising affluence as well as increasing awareness of healthcare standards.

Singapore started implementing a medical tourism scheme, the 'elective hospitalisation overseas option', on 1st March 2010 where patients who want to use Medisave to pay for private care abroad, will be able to do so at 12 hospitals and medical centres in Malaysia. The facilities, owned by two Singapore health-care groups, offer care which could cost as little as half what it does here. This scheme gives Singaporeans more choices especially for those who want to seek cheaper but good quality treatment from private hospitals overseas.

Source: Adapted from various sources

Questions

(a)	**(i)**	Compare the trends in visitor arrivals in Table 1 between 2008 and 2011.	**[3]**
	(ii)	Explain the possible reasons for the above trends.	**[4]**
(b)		With a relevant diagram, explain the burden borne by the trackside hotels and their guests as a result of the special F1 tax on hotel accommodation.	**[4]**
(c)		Discuss the possible measures to manage the market failures generated by the Singapore F1 race.	**[8]**
(d)		Explain the economic rationale behind the 'elective hospitalization overseas option' as mentioned in extract 4.	**[3]**
(e)		Discuss the impact of promoting sports and medical tourism on the Singapore economy.	**[8]**

[Total: 30]

Question 2

Global Imbalances in Trade and Growth

Extract 5: Demand at Home Aids China Growth

Chinese growth data suggest a nation that has long relied on exports is getting more help from domestic demand—a potential positive for the global economy as Europe grapples with its debt crisis and U.S. growth sputters. China's domestic demand is partially making up for softening appetite for China's exports. That could leave China in a better position to weather moderate drops in exports, which have hit its economy hard in the past. It could also mean that China will remain a crucial support for global growth, as its rising consumption feeds demand for raw materials and other goods from around the world.

So far this year, growth in China's imports of goods and services has exceeded export growth. This shows that the contribution to the global recovery from China's economy is growing. China's status as the world's top exporter has long been both a strength and an occasional source of weakness. China's economic growth dipped below 7% in the fourth quarter of 2008 and the first quarter of 2009, during the worst of the global financial crisis, sparking worries in a country where growth of 8% or more is generally considered necessary to insure stability among the nation's rapidly urbanizing population. Since then, China's policy makers have renewed efforts to promote domestic consumption and have made progress in rebalancing the economy away from exports.

Source: Adapted from The Wall Street Journal, 19 October 2011

Extract 6: America's latest anti-China bill tackles a problem already being solved

Public support for free trade in US has been withering for a decade, tracking the decline in middle-class American manufacturing jobs due in part to cheap Chinese imports. America's resentment of China has grown as its economy sputters while China's has galloped ahead. Barack Obama has pinned his hopes for recovery on a doubling of exports, a goal that China's many barriers to trade, from discriminatory government procurement to the undervalued yuan, impede. However, the rules of the World Trade Organisation (WTO) generally do not recognise undervalued currencies as an illegal subsidy. The odds are that if America imposed tariffs on China, China could successfully bring a complaint against America at the WTO.

It has been argued that a flexible yuan could be in the interests of both China and its trading partners. It would hasten the reorientation of China's economy from exports to consumer spending, give its central bank more freedom to fight inflation, and divert demand to depressed Europe and America, catalysing an essential rebalancing of the global economy.

Since June last year the yuan has appreciated 7% against the dollar. The rise in China's relative costs has been even greater given its higher inflation rate. With stimulative fiscal and monetary policy bolstering domestic demand, China's current-account surplus has shrunk by two-thirds, from 10% of GDP in 2007. Meanwhile America's trade deficit has narrowed, and manufacturing employment has stopped falling. All this means the yuan is far less undervalued than it was a few years ago—if at all.

Source: Adapted from The Economist, 15 October 2011

Extract 7: EU and China: Trade Flows and Tension

The 27-member EU bloc is China's biggest trade partner, and China is the EU's second-biggest trade partner behind the US, and is its largest source of imports, from machinery to clothes and shoes.

The EU's bilateral trade deficit with China reached €168.8bn in 2010. That gap has prompted EU anti-dumping actions that have angered Beijing, and also fuelled persistent EU complaints that China maintains unfair barriers against European goods and services. The EU has also joined the US in complaining that China's yuan currency is undervalued, giving Chinese goods an unfair advantage and distorting trade flows. China says that EU anti-dumping measures amount to protectionist barriers against trade.

Source: Daily Telegraph, 24 June 2011

Extract 8: Germany rejects targeting of trade surplus

Export champion Germany said that trade surpluses should not be targeted in the same way as deficits. Like the G-20, the European Union is trying to even out trade flows, claiming large surpluses by some eurozone nations helped fuel bubbles in deficit countries and contributed to the debt crisis that has crippled the region over the past year.

The EU says surplus countries like Germany should boost internal demand which would raise exports from other countries. At the same time, many economists argue that German banks invested the huge capital surpluses amassed by savers and export companies in overheating economies such as Ireland or Spain, leaving the lenders with dangerous exposures to now-struggling countries.

But Germany, which like China has been exporting much more than it has been importing in recent years, rejects any claims that its strong export policies are fueling dangerous imbalances. German Finance Minister Wolfgang Schaeuble said that Germany's surplus was "not an obstacle to growth in other countries. Instead we are to some degree assuming the function of a locomotive for the euro area." Germany argues that rather than punishing countries with strong economies by trying to reduce surpluses, weaker states should make their economies more competitive -- something it is currently trying to achieve in the 17-country eurozone with a so-called "pact for competitiveness."

Source: Bloomberg Businessweek, 15 February 2011

Figure 1: China current account balance (% GDP)

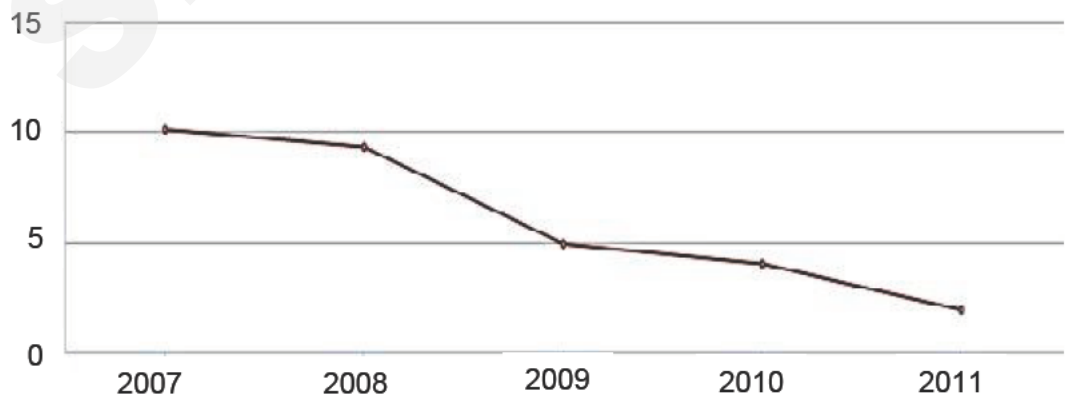
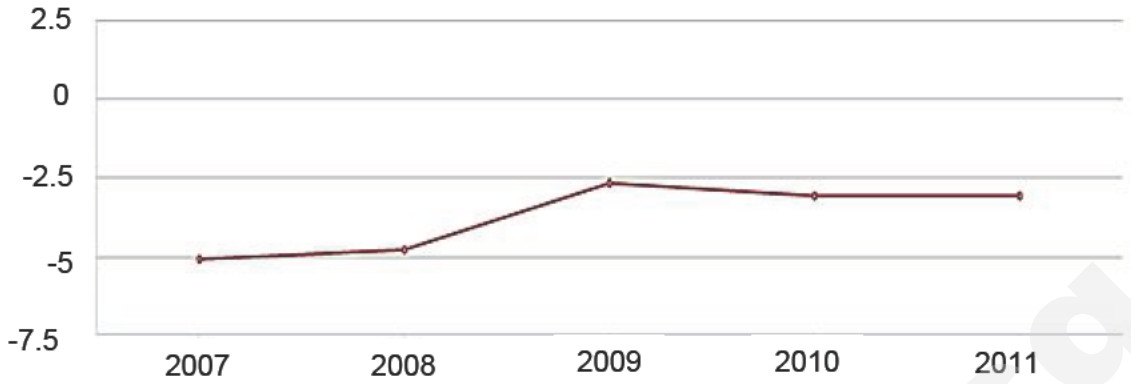


Figure 2: US current account balance (% GDP)



Source of Figure 1 and 2: World Development Indicators

Table 3: Growth in China's real GDP: % change per annum

2007	2008	2009	2010	2011
14.2	9.6	9.2	10.4	9.3

Source: World Economic Outlook

Questions

(a) (i) Compare the current account balances of China and the US from 2007 to 2011. [2]

(ii) How might China's current account balance show that the "yuan is far less undervalued than it was a few years ago"? [3]

(iii) With reference to Figure 1 and Table 3, explain how far the data might show that China has made progress in rebalancing the economy away from exports. [5]

(b) Explain the impact of trade surpluses on present and future living standards. [4]

(c) Discuss whether Germany's trade surpluses hamper or promote growth in the other EU countries. [8]

(d) According to Extract 5, the rebalancing of China's economy away from exports towards domestic consumption will benefit China and its trading partners. Assess the policies that China could implement to rebalance its economy. [8]

[Total: 30]

Section B

Answer **one** question from this section.

3 **(a)** Explain with examples, the difference between public and merit goods. [10]

(b) Discuss the view that the Singapore government should only intervene in the provision of public goods. [15]

4 **(a)** Explain the relationship between inflation and the exchange rate. [10]

(b) Discuss the view that managing the exchange rate is the most important macroeconomic stabilisation policy in Singapore. [15]

CSQ1

(a) (i) Compare the trends in visitor arrivals in Table 1 between 2008 and 2011 [3]

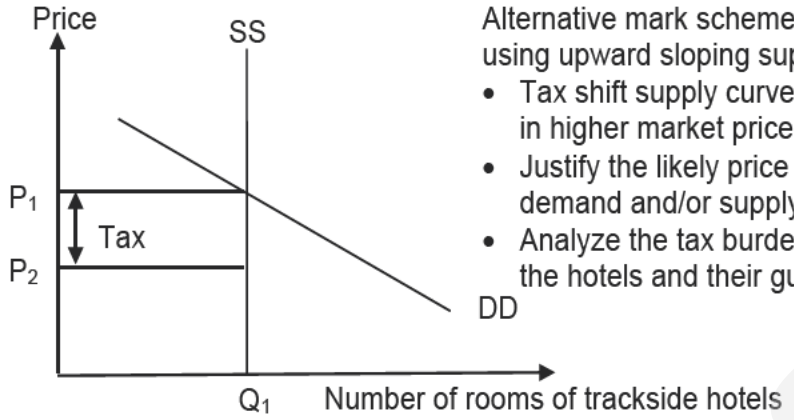
- Overall, there is an increasing trend in visitor arrivals [1] with the exception of the United Kingdom where the number of visitors showed a decreasing trend. [1]
- In 2009, visitor arrivals fell for all countries except ASEAN & Hong Kong. [1]

(ii) Explain the possible reasons for the above trends. [4]

- The rise in total visitor arrivals could be due to the efforts of the Singapore Tourism Board in promoting Singapore's tourism industry as it aims to raise tourist arrivals from 8 million in 2004 to 14 million in 2015 (table 2) [1]
- The fall in UK visitor arrivals could be due to the Eurozone debt crisis which would have reduced the income of UK residents, thus reducing their demand for overseas leisure travel. [1]
- The Global Economic Crisis in 2009 had caused economic downturns in many countries thus explaining the overall fall in tourist arrivals for that year [1]
- The Global Economic Crisis in 2009 might not have affected ASEAN & Hong Kong much, hence explaining why tourist arrivals from these areas continued to rise [1]

(b) With a relevant diagram, explain the burden borne by the trackside hotels and their guests as a result of the special F1 tax on hotel accommodation. [4]

- As the number of rooms from trackside hotels is fixed at Q_1 in the short run, the supply of such rooms is perfectly price inelastic [1]
- The market price P_1, which is the price that a hotel guest pays, is determined by the intersection of the market demand curve DD and market supply curve SS [1]
- If the F1 tax that is equal to P_1P_2 per room is imposed, the hotel receives only P_2 per room as it has to pay the tax of P_1P_2 per room to the government [1]
- These trackside hotels therefore bear the full burden of F1 tax [1]



Alternative mark scheme for analysis using upward sloping supply curve

- Tax shift supply curve up resulting in higher market price [1]
- Justify the likely price elasticity of demand and/or supply [1]
- Analyze the tax burden borne by the hotels and their guests [1]

(Max 3m)

(c) Discuss the possible measures to manage the market failures generated by the Singapore F1 race **[8]**

Introduction

- Market failure refers to the situation where the free market fails to achieve an outcome that maximizes society's welfare.
- Negative externalities refer to the adverse effects imposed on 3rd parties who are not directly involved in the production and consumption of the good.

Traffic congestion

- The F1 race creates negative externalities as the detours of traffic away from the race circuit causes traffic congestion in other nearby areas (extract 3)
- One possible measure is for the government to raise public awareness by pre-informing the public of the road closures so that people can avoid driving on these nearby roads where jams are likely.
- The frequency of public buses and trains can also be increased to shorten the waiting times for people who need to travel to the affected areas
- Since the event is well publicised, most people are likely to take the initiative to look for such transport information if they plan to travel to these affected areas
- Hence this measures should be quite effective in reducing the potential traffic congestion

Loss of revenue of affected retailers

- Another externality created by the F1 race is the loss of revenue by the retailers located in the race vicinity as many shoppers avoid these areas due to the traffic diversion and also due to the noise generated by the race (extract 3)
- A possible measure is to compensate the affected retailers e.g. using cash grants, rebates on profit taxes, rental rebates etc
- However as different retailers are affected to different extents, it difficult to

determine the fair amount of compensation for each individual retailer

- Any effort to provide a fair compensation would entail substantial administrative costs e.g. the affected retailers have to submit evidence to show how much their earnings have fallen and the government needs to verify their authenticity

Conclusion

- The externality of arising from traffic congestion is probably much easier to manage than the externality arising from the loss in revenue of retailers.

L1: Recognise the relevant types of market failure and suitable measures [1]
L2: Explain the market failures generated from the F1 race [2-4]
L3: Assess the measures to manage such market failures [5-8]

(d) Explain the economic rationale behind the 'elective hospitalisation overseas option' as mentioned in extract 4. [3]

- Healthcare is a merit good which the government believes will be under-consumed if left to the free market because some individuals are unable to factor in the full private benefits of consumption [1].
- By allowing Singaporeans to also make use of their Medisave in selected Malaysian hospital where healthcare costs are lower, this should further increase the consumption of healthcare and bring it closer to social optimal levels [2]

Other possible reasons

- Malaysia has a comparative advantage in providing healthcare services. Removing barriers that inhibit Singaporeans form importing healthcare services from Malaysia enables resources in Singapore to be channelled to other higher valued added activities. Such specialisation according to comparative advantage should increase Singapore's overall consumption possibilities.
- Since healthcare service are cheaper in Malaysia, allowing Singaporeans to use their Medisave to finance such spending in Malaysia makes healthcare more affordable, especially for the lower income, thus resulting in a more equitable outcome.

(e) Discuss the impact of promoting sports and medical tourism on the Singapore economy **[8]**

Introduction

- Promoting sports and medical tourism has both positive and adverse effects on the Singapore economy
- The answer thus aims to explore these benefits and costs as mentioned in the case before assessing the overall impact of promoting such forms of tourism

Benefits of promoting sports and medical tourism

- Prevents structural unemployment.
  - Extract 2 mentions that Singapore needs to promote tourism (and also other services) to counter a decline in certain manufacturing industries
  - Table 2 shows that tourism is targeted to generate 250,0000 jobs by 2015
  - Promoting tourism is beneficial as it generates a large number of low-skilled jobs, hence creating employment opportunities for low skilled workers who have lost their jobs in other declining industries

- Increases both short and long run growth
  - Extract 2 mentions that the race costs $150 million to organise with government paying for 60% of the bill, which means higher government spending
  - Extract 3 mentions that the race is expected to generate a total of S$100 million in tourism receipts, which means a boost in consumption and exports of services
  - Extract 3 also mentions that the race provides a networking platform for businesses, which could lead to higher investments
  - Extract 4 mentions that Singapore currently attracts over 200 000 medical tourists, whose spending would boost consumption & exports of medical services
  - Higher government spending, consumption, investments and exports would collectively boost the Singapore economy by raising AD, output & employment
  - In addition, higher investments would also increase capital accumulation and hence raise Singapore's productive capacity and potential (or long run) growth

- Improves Singapore's terms of trade
  - STB plans to establish Singapore as a services centre for high-end service like healthcare (extract 1) where Singapore will compete on skills and beneficial outcomes rather than costs (extract 4)
  - This should cause foreign demand for Singapore's healthcare services to become more price inelastic
  - The F1 race attracts high-end tourists as evident by them willing to pay higher room rates especially for trackside hotels during the race period (extract 2)

- The F1 race also helps Singapore to create an image of a “vibrant global city that is abuzz with high quality entertainment and events”, thus giving Singapore “good international exposure” (extract 3)
- The F1 race thus makes foreign demand for Singapore as a tourist destination more price inelastic
- By making the demand for Singapore as a sports and medical tourist destination more price inelastic, this enables Singapore to charge higher prices for its exports of such services, which results in an improvement in its terms of trade

Costs of promoting sports and medical tourism

- Increase macroeconomic risk (extract 2)
  - In a global recession or in an event like SARs , sports (and medical) tourism are likely to be the first few to be adversely impacted (extract 2)
  - Promoting sports and medical tourism increases Singapore risks of being adversely affected by both external and internal economic shocks

- Negative externalities (extract 3)
  - The F1 race is environmentally unfriendly, due to the high petrol consumption and high amount of carbon emissions
  - The noise pollution during the race is very bad as “at full throttle, each car’s noise level is louder than thunder”
  - The road closures cause traffic jams on roads within the circuit vicinity
  - Retailers in the race affected areas suffer from a loss in business as locals tend to avoid shopping in the race vicinity during the race periods

- Singaporeans are crowded out of domestic healthcare (extract 4)
  - The influx of medical tourists has increased the demand and thus prices of medical services in Singapore
  - Locals are thus being price out of the domestic healthcare market, thus forcing them to seek cheaper alternatives in neighbouring countries

Conclusion

- Promoting sports and medical tourism brings substantial broad-based macroeconomic benefits to the country while the costs though severe, are more narrowly focused and microeconomic in nature
- Hence I would argue Singapore is likely to benefit more than it suffers from promoting sports and medical tourism
- Nevertheless, to be fair, the government should try to compensate the adversely affect parties as best as it can.

L1: Identify possible benefits & costs of promoting sports & medical tourism [1]
L2: Explain these benefits and costs [2-5]
L3: Analyze these benefits & costs with relevant case material [6-9]
E: Assess the overall impact of promoting sports & medical tourism on Singapore [+1]

CSQ2

(a) (i) Compare China's and US current account balance from 2007 to 2011. **[2]**

- China has been experiencing current account surpluses while US has been experiencing current account deficits. [1]
- From 2007 to 2011, China's current account surplus worsened, while US current account deficit generally improved. [1]

(ii) How might China's current account balance show that the "yuan is far less undervalued than it was a few years ago"? **[3]**

- From figure 1, China's current account surplus worsened from 10% of GDP in 2007 to around 2.5% of GDP in 2011, likely due to a worsening in balance of trade. [1]
- This can be attributed to a revaluation of the yuan (hence a less undervalued yuan) which has appreciated 7% against the US dollar from June 2010 to October 2011 (extract 2) [1]
- A revalued yuan will increase the price of China's exports and lower the price of imports, resulting in worsening balance of trade assuming the Marshall-Lerner condition holds [1].

(iii) With reference to Figure 1 and Table 3, explain how far the data might show that China has made progress in rebalancing the economy away from exports. **[5]**

- China's current account surplus worsened from 2007 to 2011, 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 2011, with GDP growth rate even increasing in 2010. This suggests that China's growth could have been supported by domestic consumption instead of exports. [3]
- However, there is a lack of data to show whether overall consumption has indeed risen in China. China's growth could have been due to a rise in investment or government spending instead of a rise in domestic consumption. In this case, no rebalancing of the economy would have taken place. [2]

(b) Explain the impact of trade surpluses on present and future living standards. **[4]**

- A trade surplus means that the country earns more than enough from its exports to pay for its imports. Its present material living standards is lower than what it could have been if were to spend all its export earnings on buying imports of consumption goods
- However a trade surplus also means that the excess export earnings is then used to purchase foreign assets. Hence future inflows of interests, rents, dividends and profits into the current account should rise, hence raising future income and material livings standards

[2 marks awarded for each well-explained impact on present and future living standards respectively.]

(c) Discuss whether Germany's trade surpluses promote or hamper growth in the other EU countries. [8]

Introduction

- Germany has been experiencing trade surpluses, while the other member countries in the EU have been experiencing trade deficits
- The EU claims that such trade imbalances are harming the growth of these member countries and thus Germany should find ways to reduce its trade surplus, which is a view that Germany disagrees with.
- The answer thus aims to analyse and discuss the impact of Germany's surplus on the growth of other countries in the EU.

Germany's surplus promotes growth in the other EU countries

- A rising trade surplus and hence net exports causes Germany to experience faster growth in AD, output, income and employment
- Rising incomes generate higher demand for imports from other EU countries, thus boosting their exports to Germany
- Furthermore, Germany's trade surpluses enable it to lend to other EU countries for investment e.g. extract 4 mentions that German banks have invested "the huge capital surpluses amassed by savers and export companies" in other European economies.
- Higher exports and investment thus boost AD while higher investments raises capital accumulation which boosts AS, thus generating higher economic growth in these EU countries
- Hence the trade surpluses of Germany are able to promote growth in the other EU countries.

Germany's surplus hampers growth in the other EU countries

- Much of Germany's rising trade surpluses could have instead come from the trade deficits of these other EU countries
- This has an adverse impact on the net exports, AD, output, income and employment of these EU countries
- Hence, Germany's trade surplus could hamper the growth of the other EU countries.

- Instead of being channelled to productive investments, the capital outflows from Germany, a result of its trade surpluses have instead "helped fuel bubbles in deficit countries" (extract 4).
- Should these asset bubbles burst, this will bring about a reduction in wealth in these economies, thus causing their consumption and AD to fall, hence triggering an economic downturn.
- Germany's rising surplus has arguably increased the risk of

macroeconomic instability in these deficit EU countries, thus hampering their growth.

Conclusion

- Given that EU has experienced large overall trade deficit of €168.8bn in 2010 with China (extract 3), this suggest that their deficits are likely to have come more from trade with China than with Germany
- Germany's trade surplus thus seems to have more likely boosted rather than curbed the growth of these EU countries
- Hence, much of the economic troubles faced in these EU countries are more likely due to their own lack of savings, fiscal imprudence and a lack of competitiveness and productivity.

L1	Recognise possible benefits and costs of Germany' s trade surplus on other EU countries	1
L2	Explain how Germany's trade surplus could promote the growth of other EU countries	2-4
L3	Analyse how Germany's trade surplus could hamper the growth of other EU countries	5-7
E	Evaluate whether Germany's trade surplus had overall promoted or hampered the growth of other EU countries	+1

(d) **According to Extract 1, the rebalancing of China's economy away from exports towards domestic consumption will benefit China and its trading partners. Assess the policies that China could implement to rebalance its economy.** **[8]**

Introduction

- China's export-orientation has made her vulnerable to external demand shocks. Hence rebalancing away from exports to domestic consumption reduces her vulnerability to such shocks and benefits her trading partners by raising imports from these countries
- The answer thus aims to explain the policies which can be used to curb exports and boost consumption of domestically produced goods before analysing and assessing their limitations

Policies that China could implement to rebalance its economy

- Revaluing raises export prices hence reducing the volume of exports

- Protectionism
  - Reduces imports thus causing Chinese consumers to switch to domestically produced goods.
  - Beggar-thy-neighbour effects & retaliation curbs China's exports and facilitates further rebalancing

- Demand-management policies
  - Expansionary monetary policy involves lowering interest rates to boost consumption by reducing the cost of borrowing and/or the returns to savings
  - Expansionary fiscal policy involves lowering direct (personal income) to increase disposable income and hence consumption
  - Fiscal policy also involves raising public spending and/or reducing corporate taxes to boost investments, while monetary policy involves lowering interest rates to boost investments. These injections raise induced consumption via the multiplier effect
  - Fiscal policy involves running budget deficit which raises the demand for loanable funds. This causes interest rates, capital inflows, the exchange rate to rise and hence curbs exports

- Supply-side policies
  - Subsidies/grants to firms producing import-substitutes encourage investment and innovation to produce better quality goods. This should cause consumers to switch away from spending on imports to spending on domestically produced import substitutes
  - Redistributing incomes to the rural poor should raise overall consumption as the poor tends to have higher marginal propensity to consume than the rich
  - Improving social safety nets e.g. healthcare, old age and unemployment benefits reduces the need for households to save, therefore encourages current consumption.

Limitations of policies

- Revaluing the Yuan
  - Layoffs in export oriented sectors result in demand-deficient unemployment. Structural unemployment arises if these workers lack the skills to take up jobs in expanding sectors
  - Imports become cheaper, causing Chinese consumers to switch away from domestically produced goods towards imports

- Beggar-thy-neighbour and retaliation effects are unpredictable, so if they are larger than expected, this leads to a large decline in exports which can trigger an economic downturn

- Expansionary demand policies may cause China's households to mainly spend on imports rather than on domestically produced goods, especially if domestically produced goods are of low quality

- Expansionary monetary policy
  - Hot money outflows causes the exchange rate to depreciate, which boosts exports, which works against rebalancing
  - Instead of raising consumption on domestically produced goods, lower interest rates may result in investments in export oriented sectors and also fuel potentially destabilising asset bubbles

- Expansionary fiscal policy
  - Due to lack of social security support, China has high MPS and hence high MPW, which means a small multiplier. This means that induced consumption may not rise significantly

- Subsidies and grants for innovation and R&D may not yield results in the short-term as it takes a long time for such policies to bear fruit

- Redistributing income and developing social security nets may take a long time to devise and implement given that China is such a large, complex and diverse country.

L1	Identify possible policies to facilitate China's rebalancing	1
L2	Explain the policies that facilitate China's rebalancing	2-5
L3	Analyse the limitations of these policies	6-8

3. Some economists argue that the government achieves the most efficient outcome if they only intervene in the provision of public goods. Discuss this statement with relation to Singapore. [25]

(a) Explain with examples, the difference between public and merit goods. [10]

Public goods

- Public goods are goods which are non-excludable and non-rival in consumption
- Non-excludability means that once the good is produced, the good becomes available for all to consume regardless of whether one has paid for it
- Since people can consume the good without paying, a free-rider problem arises because people become unwilling to pay for the good even though they benefit from it
- Profit maximizing producers are thus unable charge a price for supplying the good, so the good will not be produced by the free market
- Non-rivalry means that once the good is produced, the quality and quantity of the good does not diminish with consumption
- There is no extra cost incurred in supplying the good to an additional consumer, hence the marginal cost of supplying the good is zero
- When marginal costs is zero, the socially optimal level of consumption occurs when the price of the good is also zero i.e. when the good is supplied for free
- Since profit maximizing producers are unable to charge for producing the good and the socially optimal price of the good is zero, the government needs to pay the full costs of producing the good i.e. full government provision is necessary and is allocatively efficient
- An example of a public good is street lighting. Once a street light is turned on, anyone in the vicinity can enjoy the light even if he has not paid for it (non-excludable).
- The brightness of the light also remains the same even when the number of people around the vicinity of the light increases (non-rival)

Merit goods

- Merit goods refer to goods where some people tend to underestimate the full private benefits of consuming such goods
- Education is a merit good because some individuals may not be able to foresee the benefits in terms of higher pay and career prospects which only come much later in the future

Difference between public and merit good

- A merit good is not a public but a private good as it is fully excludable and rival in consumption
- For example, education excludable as a student can be deprived of attending school if he or his parents does not pay the school fees
- Education is also rival in consumption because the time spent by the teacher to help the student learn means less time and attention for other students.
- Unlike, public goods where there is complete market failure, a merit good experiences only partial market failure because the good will still be produced if left entirely to the free market, although it is likely to be under-produced
- In terms of government intervention the government need to finance the entire costs of producing a public good, whereas the government only needs to partially subsidize the production of merit goods for allocative efficiency to be achieved

L1	Define public goods and merit goods	1-2
L2	Explain what are public and merit goods	3-6
L3	Analyse the difference between public and merit goods	7-10

(b) Discuss the view that the Singapore government should only intervene in the provision of public goods. [15]

Introduction

- Since part (a) already explains the need for government provision of public goods the answer to this part focuses on analysing other possible reasons for government intervention
- The essay then proceeds to assess whether the best outcome for society would be achieved if the Singapore government were to limit its intervention to only providing public goods.

Positive externalities

- Positive externalities refer to external benefits enjoyed by 3rd parties arising from the production or consumption of a good
- 3rd parties refer to people who are not directly involved in the production or consumption of a good
- Education generates positive externalities as it not only improves the productivity and income of the educated person, it also improves the productivity and income or those whom he works with
- Positive externalities causes the marginal social benefit (MSB) to exceed the marginal private benefit (MPB) by the marginal external benefit (MEB)
- Assuming that no other market failures exists, the marginal social costs (MSC) is equal to the marginal private costs (MPC)
- The private outcome Qp occurs when MPB = MPC while the social outcome occurs at Qs, where MSB = MSC
- Between Qp & Qs, MSB>MSC so there is potential welfare to generated if output were to be raised
- If the government gives a subsidy per unit that is equal the MEB, MPC is shifted down to MPC' such that the new private outcome Qp' where MPC' = MPB coincides the social outcome of Qs
- (Illustrate with relevant externality diagram)
- Thus government intervention is able to bring about an efficient allocation of resources
- In Singapore, the government intervenes in education by heavily subsidising and directly providing all levels education. Primary and secondary education is also made compulsory by law

Demerit goods

- Demerit goods refer to goods where some people may underestimate the full private costs of consuming such goods
- Cigarettes are demerit goods because tobacco addiction causes some smokers to ignore the adverse health effects caused by smoking.
- This causes actual MPC (which is also the MSC) to exceed the perceived MPC
- Assuming that no other market failures exists, MSB= MPC
- The private outcome Qp occurs when perceived MPC = MPB while the social outcome Qs occurs when actual MPB = MSB = MSC
- Between Qp & Qs, MSC>MSB so there is negative welfare generated
- If the government imposes a tax per unit such that the perceived MPC shifts up until it coincides with the actual MPC, the allocatively efficient output level of Qs can be achieved
- Singapore imposed very heavy cigarettes to deter smoking. In addition, the purchase and consumption of cigarettes by under-aged individuals are also made illegal because children and teenagers are more likely to underestimate the full costs of consumption

Other market failures

- Negative externalities refer to external benefits enjoyed third parties arising from the production or consumption of a good.
- Cigarette smoking generate negative externalities because of the adverse health effects imposed on people who happen to be near those who are smoking
- Since negative externalities result in overconsumption of the good, policies like output taxes also apply. In addition Singapore also bans smoking in most public areas.

- A firm with market power is able to exploit consumers by restricting output and charging prices that are higher than marginal costs in order to maximise profits
- Market power thus results allocative inefficiency as deadweight losses are generated because output is restricted to a level that is less than socially optimum
- When barriers to entry are high, price setting firms are able to make long run super-normal profits thus leading to inequitable outcomes
- In Singapore, natural monopolies like public transport and telecommunications are tightly regulated with price controls while utilities (PUB) is nationalised

(Analysis on imperfect information, factor immobility and even macroeconomic policies are also relevant as long as efficiency concepts with relevant Singapore examples are brought in)

Conclusion

- Due to imperfect information, governments sometimes intervene excessively, which may worsen rather than improve outcomes, hence resulting in government failure.
- Government failure is also more likely when policy decisions are based on political rather than economic considerations
- The potential for government failure explains why some economist argue that government intervention should only to be limited to public goods, since any intervention to produce public good can only improve outcomes given that there is total market failure
- Nevertheless, the possibility of government failure does not mean that the likelihood of it occurring is high if the government is sufficiently competent
- Singapore's government does intervene in many areas and many of such interventions though imperfect have arguably produced better outcomes compared to a purely free market situation
- Hence I would disagree that the Singapore government should only limit its intervention to the provision of public goods

L1	Identify other types of market failure	1
L2	Explain the other types of market failure	2-6
L3	Analyse with examples how such market failures are managed in Singapore	7-11
E	Assess the validity of the view	+4

4(a) Explain the relationship between inflation and the exchange rate? [10]

Question Interpretation

- How does inflation affect the exchange rate?
- How does exchange rate affect inflation?

Introduction

- Inflation occurs when there is a rise in the general price level of goods and services.
- Inflation is a problem when the rise in general price level is sustained and inordinately high
- The exchange rate refers to the rate at which one currency can be exchanged for another

Impact of high domestic inflation on the exchange rate

- High domestic inflation relative to foreign inflation
  - Exports becomes relatively less competitive in the global markets à fall in export volume à fall in demand for domestic currency in foreign exchange (FOREX) market
  - Imports becomes relatively cheaper à rise in volume of imports à rise in supply of domestic currency in FOREX market
  - A fall in demand and a rise in supply of the domestic currency in the FOREX market à exchange rate will depreciate assuming flexible exchange rates.

Impact of a depreciating exchange rate on domestic inflation

- Exports become cheaper in foreign currency and imports more expensive in domestic currency à rise in volume of exports and fall in volume of imports à rise in net exports
- If the economy is already operating near or at full employment, an increase in net exports would cause AD to move up along the upward sloping/vertical portion of the AS curve, which leads to demand pull-inflation
- Higher prices of imported inputs and imported consumption goods shifts the AS curve upwards, thus leading to imported cost-push inflation. The more import dependent the country is, the greater the extent of such inflation.

Possibility of an Inflationary cycle

- Since domestic inflation can cause a depreciation of the currency, which can in turn cause further domestic cost push and/or demand inflation, this can result in an inflationary cycle

Other possible effects (optional)

- Since high domestic inflation initially worsens net exports the resulting depreciation which improves net exports will at best restore it to the initially state rather than result in an overall net improvement.
- With a fixed exchange rate or a managed float, the central bank will/may intervene in the FOREX market to prevent the exchange rate from depreciating. The resulting BOP deficit reduces the country's money supply, which then lowers AD and thus dampens domestic inflation.
- The central bank may react to higher inflation by raising interest rates which may attract hot money inflows and cause the exchange rate to appreciate instead

L1	Define inflation and exchange rate	1
L2	Explain the impact of high inflation on the exchange rate	2-5
L3	Analyse the impact of exchange rate on inflation	6-10

(b) Discuss the view that managing the exchange rate is the most important macroeconomic stabilization policy in Singapore. [15]

Question interpretation

- What is macroeconomic stabilization?
- How does exchange rate management help stabilize the Singapore economy?
- How can other policies also help to stabilize the Singapore economy?
- Is exchange rate management the most important macro stabilization policy for Singapore?

Introduction

- Macroeconomic stabilization refer to efforts to reduce the fluctuations in a country's inflation, output and employment
- The essay aims to analyze and assess the use of exchange rate, fiscal and supply side policies to achieve macroeconomic stability in Singapore.

Why does Singapore manage its exchange rate?

- Singapore is highly dependent on exports as it has a small domestic market, and also highly dependent on imports as it lacks natural resources. A sudden appreciation of S$ will hurt its exports while a sudden depreciation of S$ will hurt its imports. Thus Singapore prefers to manage its exchange rate over interest rates to maintain macroeconomic stability
- Being a financial center, Singapore allows free capital mobility. Hence by choosing to manage the exchange rate, Singapore loses its control over its domestic money supply and interest rates and therefore does not have any domestic oriented monetary policy.
- The primary aim of Singapore's exchange rate policy is to achieve price stability. By allowing the S$ to appreciate, the cost of imported necessities like food and fuel are reduced and this directly reduces production costs and cost of living in Singapore. It also helps reduce net exports and hence AD, thus curbing demand pull inflation.
- In general, MAS does not devalue the S$ to boost exports as the gain in export competitiveness is limited given that much of Singapore's exports is made up of imported inputs. Hence the marginal gains in export competiveness arising from a currency devaluation is not worth the tradeoff in terms of a likely surge in imported inflation
- However, in times of world-wide recession, MAS employs a a zero-appreciation policy, i.e. keep the exchange rate at existing levels so that export and AD would not be unnecessarily dampened by an appreciating currency

What other policies does Singapore employ to stabilize her economy?

- Singapore is vulnerable to external shock such as global recession and oil crisis which has an adverse impact on output and employment in the economy.
- Singapore does not rely on expansionary fiscal policy to fight a recession as Singapore has a small fiscal multiplier due to a high marginal propensity to save (caused by high rates of compulsory CPF savings) and a high marginal propensity import (caused by Singapore's lack of natural resources).
- With a small multiplier, a very large budget deficit is required to close even a small deflationary gap hence fiscal policy is very costly in terms of government debt and is not very effective.
- Instead, Singapore uses supply-side policies to fight recession. Such policies include reducing property taxes, rentals of government owned industrial properties, utility charges and other government related fees and charges
- Singapore also reduces wages, either through CPF cuts or through wage subsidies, as in the recent 2009 global financial crisis, as lower wages give the incentive for firms keep their workers
- These measures help to reduce overall production costs, thus shifting the AS curve downwards in the short run, thereby raising real output and employment.

- Lowering costs also helps firms to better manage their cashflow, thus minimising business failures & hence layoffs, which enables Singapore to preserve its productive capacity so that the country can respond better to rising demand when the global economy recovers

Evaluation/Conclusion

- Singapore has generally experienced strong real economic growth with very low inflation rates which is evidence of the effectiveness and suitability of Singapore's exchange rate policy in maintaining macroeconomic stability over the years.
- Singapore has also always rebounded quickly after a major recession, which is evidence of the effectiveness and usefulness of its supply side measures.
- Hence given that both exchange rate management and supply side policies have been effective in helping Singapore fight inflation and unemployment respectively, I would argue that both policies are equally important macroeconomic stabilisation policies.

L1	Recognise the meaning of macroeconomic stabilisation and possible policies	1
L2	Explain why Singapore chooses to manage its exchange rate	2-6
L3	Analyse other policies that Singapore uses for macroeconomic stabilisation	7-11
E	Discuss whether exchange rate is the most important macroeconomic stabilisation policy in Singapore	+4

TEMASEK JUNIOR COLLEGE
Preliminary Examination 2013
General Certificate of Education Advanced Level
Higher 2

ECONOMICS 9732/01

Paper 1 **Wednesday 18 September 2013**
2 hours 15 minutes

Additional Materials: Answer Paper, Cover Page

READ THESE INSTRUCTIONS FIRST

Do not turn over until you are told to do so.

Write your name and CG 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 staples, paper clips, highlighters, glue or correction fluid.

Answer **all** questions.

Begin each question on a separate sheet of answer paper.
Fasten your work for Question 1 and the COVER PAGE together.
At the end of the examination, hand in your answer 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 **9** printed pages and **1** blank page.

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[Turn Over

Answer **all** questions.

Question 1

Issues in urban transportation

Table 1: Motor Vehicle Registration

	2010	2011	2012
Cars Registered	61018	47885	47555
Cars Deregistered	40707	36980	34349

Table 2: Annual Average Quota Premium of COE

COE prices	2010 ($)	2011 ($)	2012 ($)
Cat A	30405	48206	63898
Cat B	39834	64938	84431
Cat E	41424	66067	86001

Table 3: Average Daily Ridership (thousands)

	2010	2011	2012
MRT	2069	2295	2525
Bus	3199	3385	3481
Taxi	912	933	967

Source: Singapore Land Transport statistics, 2010-2012

Extract 1: COE \SEE-OH-EE\, acronym for Certificate of entitlement

A tool to manage vehicle population growth in Singapore. Ownership of this certificate is a pre-requisite to owning a vehicle in Singapore.

The bidding process for the COE takes place twice every month where buyers can bid in five different categories:

a) Category A – Cars (1,600cc & below)
b) Category B – Cars (1,601cc & above)
c) Category C – Goods Vehicles and Buses
d) Category D – Motorcycles
e) Category E – Open*

COE prices are determined by the interaction of demand and supply. Demand is affected by factors such as economic performance or new vehicle launched. The supply of COEs is based on the allowed vehicle growth based on the vehicle population at the end of the previous year and the replacement of vehicles deregistered over the past 6 months. Since 1990, the vehicle growth rate has been set at 3% and was lowered to 1.5% in 2009 and then to 1% per annum in August 2012, in view of the slowing road growth. This will subsequently be further reduced to 0.5% per annum from February 2013 to January 2015.

Source: http://www.gov.sg, accessed 15 July 2013

*Open COEs can be used for any vehicle type, but the majority of them end up being used for bigger cars.

Extract 2: Luxury car boom

Last year, the government cut the number of certificates of entitlement (COEs) for new cars by 40 per cent compared to the year before. Against a backdrop of limited COEs and widening income disparity, and fuelled by a low interest rate environment, sales of luxury cars have boomed. Sales of Rolls-Royces more than trebled from 10 to 37 units, closely followed by Ferrari, which more than doubled its sales volume from 32 to 69 units. At the other end of the market, Proton sales fell by almost 40 per cent from 413 to 256 units, while Chery sales fell by more than half from 309 to 139 units. The story was similar among the luxury makes. BMW increased sales by almost 20 per cent from 3,926 to 4,708 units, neck-and-neck with Mercedes-Benz, which increased sales by 18 per cent from 3,997 to 4,705 units. By contrast, the sales of traditional mainstream market leader Toyota, slumped by over 60 per cent from 17,555 to 6,927 units. Traditional number two Honda suffered an even sharper drop – by almost two-thirds, from 9,584 to 3,272 units.

The annual COE revenue of around $2 billion, like all tax revenues, goes towards benefitting society at large. But soaring COE rates also exert a hefty social cost – they serve to widen the gap between the haves and the have-nots. For example, upmarket marques are flourishing at the expense of mass-market brands because of the soaring COEs, as the big-car buyers and sellers of premium cars simply have fatter margins to bid. The foray of luxury makes into the small car category has also exacerbated the decline of mainstream cars. Over time, this will lead to a proliferation of big and branded cars on the road and a diminishing population of other vehicles.

Source: The Straits Times, 3 February 2011

Extract 3: People drive more when COE prices rise

Like many other cities, Singapore faces the challenge of managing traffic congestion. Since 1975, the Government has addressed the problem in two ways – pricing road usage and limiting vehicle population. From 1990, the Government has explicitly limited the number of new car registration to a monthly quota for Certificates of Entitlement (COEs) and yet the roads are still so crowded. Whether taxing the purchase of new vehicles (through the Additional Registration Fee or ARF) or directly limiting new vehicles (through the COE), both are very crude ways of regulating the essential problem of traffic congestion. Just consider people who live and work in suburban areas. They may cause little congestion, yet they must pay the same ARF and COE. Moreover, research has shown that the ARF and COE systems have caused new car buyers to drive more. As the price to pay for a COE is considered a sunk cost, car owners who have incurred larger sunk costs increased their driving. This would be bad for traffic.

Source: The Straits Times, 2 August 2012

Extract 4: Different approaches to public transport provision

Travelling is part and parcel of modern urban living – people travel for work, education, recreation and many other reasons. For those who do not own motor vehicles, public transport could be their main means of travel. Because of its economic and social importance, public transport is considered an essential service in most cities, much like electricity, water and telecommunication. Hence, ensuring effective and efficient provision of public transport services is a priority of most governments.

The public transport industry structure is such that a much larger proportion of public transport costs comes from expenditure on infrastructure, for example, bus interchanges, rail stations and tracks, and operating assets, such as trains and buses. The other relatively smaller cost component is the costs of operations and equipment maintenance. This disproportion between fixed and variable cost played a major influence for governments in deciding on how to manage public transport.

In Singapore, the government develops the public transport infrastructure and purchases the rail operating assets which it leases to the private operators to operate and maintain. Operators pay licence charges for rights to operate public transport services. They retain revenues from fares and pay for the operating costs without government subsidies. The government then regulates prices and service levels to ensure affordability and minimum service standards. There are two multi-modal operators providing rail and bus services in Singapore, each with its own distinct area of responsibility. The presence of two operators allows for benchmark comparison, and gives the authorities a better idea of reasonable costs and service levels.

Different cities have adopted different approaches to public transport provision, from those that are largely market oriented to others with strong government intervention, each with their pros and cons. The appropriate approach would ideally be fiscally sustainable, and be provided by efficient and financially viable operators. There could be trade-offs between the different objectives and governments have to strike a balance between public service and economic efficiency. As with other policies, there may not be a one-size-fits-all model as contexts and imperatives differ among cities, but Singapore has adopted a middle ground approach which seems to work reasonably well.

Source: LTA Journeys, November 2011

Questions

(a) **(i)** Compare the changes in numbers of cars registered and deregistered from 2010 to 2012. [2]

(ii) With reference to the data, account for the changes observed. [2]

(iii) What does the data suggest about the strength of the relationships between Category A cars and the different modes of public transport? [2]

(b) Explain why despite rising COE prices, the market for luxury cars has boomed while the market for mainstream cars has declined. [6]

(c) Assess the cut in COE quota as a means of managing 'the essential problem of traffic congestion'. [8]

(d) Discuss how far the 'trade-offs between different objectives' has influenced the way public transport is managed in Singapore. [10]

[Total: 30]

Question 2

Global Imbalances in Trade and Growth

Extract 5: Demand at Home Aids China Growth

Chinese growth data suggest a nation that has long relied on exports is getting more help from domestic demand—a potential positive for the global economy as Europe grapples with its debt crisis and U.S. growth sputters. China's domestic demand is partially making up for softening appetite for China's exports. That could leave China in a better position to weather moderate drops in exports, which have hit its economy hard in the past. It could also mean that China will remain a crucial support for global growth, as its rising consumption feeds demand for raw materials and other goods from around the world.

So far this year, growth in China's imports of goods and services has exceeded export growth. This shows that the contribution to the global recovery from China's economy is growing. China's status as the world's top exporter has long been both a strength and an occasional source of weakness. China's economic growth dipped below 7% in the fourth quarter of 2008 and the first quarter of 2009, during the worst of the global financial crisis, sparking worries in a country where growth of 8% or more is generally considered necessary to insure stability among the nation's rapidly urbanizing population. Since then, China's policy makers have renewed efforts to promote domestic consumption and have made progress in rebalancing the economy away from exports.

Source: Adapted from *The Wall Street Journal*, 19 October 2011

Extract 6: America's latest anti-China bill tackles a problem already being solved

Public support for free trade in US has been withering for a decade, tracking the decline in middle-class American manufacturing jobs due in part to cheap Chinese imports. America's resentment of China has grown as its economy sputters while China's has galloped ahead. Barack Obama has pinned his hopes for recovery on a doubling of exports, a goal that China's many barriers to trade, from discriminatory government procurement to the undervalued Yuan, impede. However, the rules of the World Trade Organisation (WTO) generally do not recognise undervalued currencies as an illegal subsidy. The odds are that if America imposed tariffs on China, China could successfully bring a complaint against America at the WTO.

It has been argued that a flexible Yuan could be in the interests of both China and its trading partners. It would hasten the reorientation of China's economy from exports to consumer spending, give its central bank more freedom to fight inflation, and divert demand to depressed Europe and America, catalysing an essential rebalancing of the global economy.

Since June last year the Yuan has appreciated 7% against the dollar. The rise in China's relative costs has been even greater given its higher inflation rate. With stimulative fiscal and monetary policy bolstering domestic demand, China's current-account surplus has shrunk by two-thirds, from 10% of GDP in 2007. Meanwhile America's trade deficit has narrowed, and manufacturing employment has stopped falling. All this means the Yuan is far less undervalued than it was a few years ago—if at all.

Source: Adapted from *The Economist*, 15 October 2011

Extract 7: EU and China: Trade Flows and Tension

The 27-member EU bloc is China's biggest trade partner, and China is the EU's second-biggest trade partner behind the US, and is its largest source of imports, from machinery to clothes and shoes.

The EU's bilateral trade deficit with China reached €168.8bn in 2010. That gap has prompted EU anti-dumping actions that have angered Beijing, and also fuelled persistent EU complaints that China maintains unfair barriers against European goods and services. The EU has also joined the US in complaining that China's Yuan currency is undervalued, giving Chinese goods an unfair advantage and distorting trade flows. China says that EU anti-dumping measures amount to protectionist barriers against trade.

Source: *Daily Telegraph*, 24 June 2011

Extract 8: Germany rejects targeting of trade surplus

Export champion Germany said that trade surpluses should not be targeted in the same way as deficits. Like the G-20, the European Union is trying to even out trade flows, claiming large surpluses by some eurozone nations helped fuel bubbles in deficit countries and contributed to the debt crisis that has crippled the region over the past year.

The EU says surplus countries like Germany should boost internal demand which would raise exports from other countries. At the same time, many economists argue that German banks invested the huge capital surpluses amassed by savers and export companies in overheating economies such as Ireland or Spain, leaving the lenders with dangerous exposures to now-struggling countries.

But Germany, which like China has been exporting much more than it has been importing in recent years, rejects any claims that its strong export policies are fueling dangerous imbalances. German Finance Minister Wolfgang Schaeuble said that Germany's surplus was "not an obstacle to growth in other countries. Instead we are to some degree assuming the function of a locomotive for the euro area." Germany argues that rather than punishing countries with strong economies by trying to reduce surpluses, weaker states should make their economies more competitive -- something it is currently trying to achieve in the 17-country eurozone with a so-called "pact for competitiveness."

Source: *Bloomberg Businessweek*, 15 February 2011

Figure 1: China current account balance (% GDP)

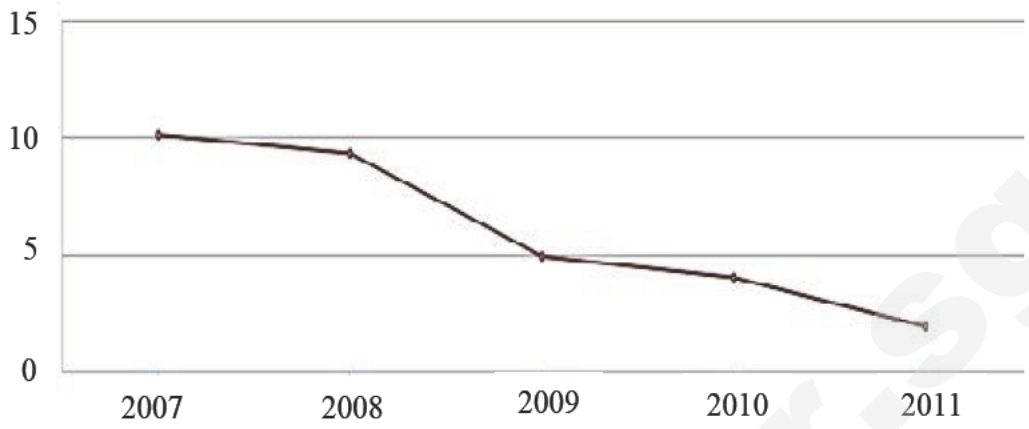
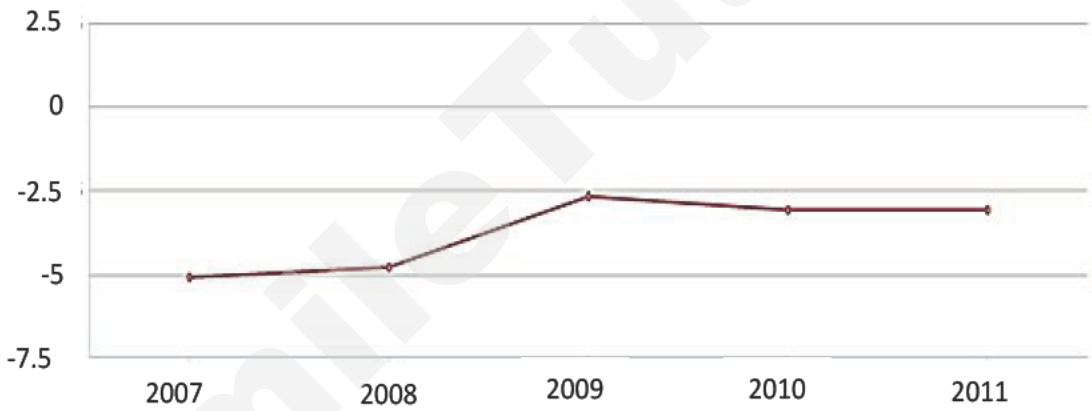


Figure 2: US current account balance (% GDP)



Source of Figure 1 and 2: World Development Indicators

Table 4: Growth in China's real GDP: % change per annum

2007	2008	2009	2010	2011
14.2	9.6	9.2	10.4	9.3

Source: World Economic Outlook

Questions

(a) **(i)** Compare the current account balances of China and the US from 2007 to 2011. [2]

(ii) How might China's current account balance show that the "Yuan is far less undervalued than it was a few years ago"? [2]

(iii) With reference to Figure 1 and Table 4, explain how far the data might show that China has made progress in rebalancing the economy away from exports. [4]

(b) Explain the impact of trade surpluses on present and future living standards. [4]

(c) Discuss the view expressed by the German Finance Minister that Germany's surplus was "not an obstacle to growth in other countries" but functions as a "locomotive for the euro area". [8]

(d) According to Extract 5, the rebalancing of China's economy away from exports towards domestic consumption will benefit China and its trading partners. Assess the policies that China could implement to rebalance its economy. [10]

[Total: 30]

TEMASEK JUNIOR COLLEGE
Preliminary Examination 2013
General Certificate of Education Advanced Level
Higher 2

ECONOMICS 9732/02

Paper 2: Essay Questions

Tuesday 24 September 2013
2 hours 15 minutes

Additional Materials: Answer Paper, Cover Page

READ THESE INSTRUCTIONS FIRST

Do not turn over until you are told to do so.

Write your name and CG 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 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 each question on a separate sheet of answer paper.
At the end of the examination, hand in your answer 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.

[Turn Over]

Answer three questions in total.

Section A

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

1 Smartphone usage is predicted to overtake computer usage in the near future. This is due to advances in smartphone technology, greater affluence and, in some cases, addictive behavior.

Assess the impact these would have on the sales volume of different models of smartphones in Singapore. [25]

2 **(a)** Explain with diagrams how airlines and small clothing retailers engage in price discrimination and why are they able to do so. [12]

(b) Discuss the extent to which these firms aim to maximise profits according to traditional economic theory. [13]

3 Some economists argue that the government achieves the most efficient outcome if they only intervene in the provision of public goods. Discuss this statement with reference to Singapore. [25]

Section B

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

4 **(a)** Using the multiplier, explain how deficit spending can help combat a recession. [10]

(b) Fiscal debt can adversely impact the economy and should be avoided at all cost. Discuss. [15]

5 **(a)** Explain whether bad news about inflation means good news for the exchange rate? [10]

(b) Discuss the view that managing the exchange rate is the most important macroeconomic stabilisation policy in Singapore. [15]

6 Emerging economies tend to suffer from declining terms of trade, while smaller emerging economies tend to experience greater costs and enjoy fewer benefits from globalisation compared to larger emerging countries. Discuss [25]

Suggested Answers

(a)(i) Compare the changes in the numbers of cars registered and deregistered from 2010 to 2012. [2]

- Both number of cars registered and deregistered fell. [1]
- Cars registered fell greater (22%) than cars deregistered (15.6%) [1]

(ii) With reference to the data, account for the changes observed. [2]

- Extract 1 mentioned that the vehicle growth rate was reduced in 2009 and in August 2012, which would have resulted in less COEs being issued. This would have caused a decline in new cars registered as new cars can only be purchased with a new COE [1]
- With less new cars available, current car owners would have keep their existing cars for longer periods, thus leading to a fall in the amount of deregistered cars. [1]
- A fall in the amount of deregistered cars would then result in less COEs being issued in the next 6 months, hence causing a further reduction in cars registered [1]
  (Max 2m)

(iii) What does the data suggest about the strength of the relationships between Category A cars and the different modes of public transport? [2]

- Rising COE prices means new cars became increasingly expensive. As cars and public transport are substitutes, this causes people to switch over to public transport, thus raising the demand and hence the ridership for MRT, bus and taxi. [1]
- Table 2 shows Cat A COE prices and hence new car prices increasing by about 110% from 2010 to 2011. The rise in MRT, bus and taxi ridership by 22%, 8.8% and 6% respectively over the same time period indicates that MRT is the strongest substitute to small cars, followed by buses and then taxis. [1]
- Given that the percentage change in ridership is less than the percentage change in Cat A COE prices, the cross elasticity figures are all inelastic, suggesting that all public transport modes are perceived to be poor substitutes to private transport [1]

(Max of 2m. The 2nd bulleted point must be in the answer to score the first mark. The 2nd mark can be earned from either the 1st or 3rd bulleted point)

b) Explain why despite rising COE prices, the market for luxury cars boomed while the market for mainstream cars declined. [6]

- Higher COE prices would have caused the price of all cars to increase hence reducing the quantity demanded
- Luxury cars are more likely bought by the rich while mainstream cars are more likely bought by people of average income. Thus the demand for luxury cars could be more price inelastic than the demand for mainstream cars because the price of a luxury car (despite being higher than a comparable mainstream car) could form a relatively smaller proportion of their likely customers as compared to a mainstream car
- Hence an equivalent rise in COE prices would reduce the quantity demand for luxury cars to a lesser extent than that of mainstream cars

(Other reasons for explaining the difference in price elasticity of demand e.g. degree of necessity and availability of close substitutes are also acceptable)

- Extract 2 mentions of a widening income disparity so the income of the rich could have increased faster than the income of the average household so the demand for luxury cars could have risen faster than the demand for mainstream cars
- For luxury cars, the impact of higher incomes could have exceeded the impact of higher car prices hence resulting in more such cars being sold
- For mainstream cars, the impact of higher incomes could have been less the impact of higher car prices hence resulting in less such cars being sold

(Other reasons why the demand for luxury cars increased faster than mainstream cars that mentioned in the extract, e.g. low interest rates and luxury car retailers having fatter margins to outbid mainstream car retailers, are also acceptable)

L1: Recognise the impact of rising COE prices on the quantity demand for cars (1)
L2: Explain how rising COE prices and other factors could have affected the market for luxury and mainstream cars (2-4)
L3: Analyse the combined effect of rising COE prices and other factors on the market for luxury and mainstream cars (5-6)

(c) Assess the cut in COE quota as a means of managing the 'essential problem of traffic congestion'. [8]

<u>Introduction</u>

- The decision to buy a car involves a person weighing the private benefits of owning and using a car, e.g. prestige, comfort, convenience, against the private cost, e.g. cost of purchasing the car and the cost related maintenance, fuel & parking
- He does not factor in the costs he imposes on society in terms of his contribution to traffic congestion when he drives on busy stretch of road

<u>Using car quotas to manage the market failure caused by traffic congestion</u>

- Traffic congestion can be analysed via the concept of negative externalities, which refer to the cost imposed on 3rd parties arising from the production or consumption of a good
- Assuming that there are no positive externalities generated, the demand for new cars is equal to the marginal private benefit MPB which is also the marginal social benefit (MSB)
- As traffic congestions imposes costs on 3rd parties e.g. firms find their workers and goods being late as a result traffic jams, the marginal social costs (MSC) of supplying a new car exceeds the marginal private costs (MPC) by the marginal external costs (MEC)
- The social outcome Qs occurs at where MSC = MSB, which exceeds the private outcome of Qp, where MPC = MPB
- Setting a COE quota at Qs results in the socially optimal level of new cars sold

Cutting the COE quota to better manage traffic congestion

- Extract 1 mentions of 'slowing road growth' which means a higher likelihood of traffic congestion assuming the same rate of vehicle population growth
- A higher chance of congestion means that MEC rises, hence causing MSC to exceed the MPC by a larger extent
- The new socially optimal amount of new car sales is now lower than before so reducing the COE quota enables this new social outcome to be achieved

  (Alternatively, the analysis can be done based on how car usage causes negative externalities. Reducing the COE quota thus lowers the growth in car population and hence the demand for driving on a particular stretch of congested road. This should then lower the extent of over-consumption for that particular stretch of road)

Limitations of cutting the COE quota as a means of fighting traffic congestion

- Extract 3 mentions that people who live and work in suburban areas do not cause much congestion but must still pay for the same COE. Since car quotas penalises ownership rather than the usage, the policy is crude and arguably unfair.
- Cutting the COE quota causes car prices to rise, which according to extract 3 results in new car buyers driving more in order to spread out the higher sunk cost, thus possibly causing even more congestion.
- Higher COE prices makes cars less affordable for lower income households, which according to extract 3 exacerbates inequality and damages social cohesion
- A more efficient a fairer alternative would be to raise ERP charges so that the usage of congested roads is targeted directly

L1: Describe how cutting the COEs quota reduces traffic congestion [1-2]
L2: Explain how cutting the COE quota can be allocatively efficient [3-5]
L3: Discuss the limitations of cutting COE quotas as a means of managing traffic congestion [6-8]

(d) Discuss how far the 'trade-offs between different objectives' has influenced the way public transport is managed in Singapore. [10]

Introduction

- The market for public transport is likely to be a natural monopoly due to the high start-up costs required to set up the transport network e.g. the high cost of building infrastructure like bus interchanges, rail stations & tracks (extract 4)
- According to extract 4, there is trade-off between public service (i.e. allocative efficiency as this is more likely to be achieved with a government supplier as it aims to maximise society's welfare) and economic efficiency (i.e. productive efficiency as this is more likely to be achieved with a private supplier as it aims to minimize costs to maximise profits)
- The answer thus aims to first explain this trade-off before discussing how far this trade-off has influenced Singapore's public transport policies

Trade-off between allocative and productive efficiency

- In a natural monopoly, one firm can supply the market at a lower cost than two or more smaller firms. Multiple firms also lead to wasteful duplication of fixed costs. Hence it is best for society that the entire market is supplied by only one firm
- An unregulated private monopolist will exploit its market power by charging very high prices to maximise profits, although it is likely to be more productive efficient than a government producer as the profit motive gives it the incentive to minimise costs
- Conversely , a government supplier will probably charge less and produce more as it aims to maximise society's welfare, although its tends to be productive inefficient because it lacks the profit motive and hence the incentive to minimise costs
- There is therefore a trade-off between allocative efficiency which is more likely to occur with a government producer, and productive efficiency which is more likely to occur with a private producer

Singapore's middle ground approach – privatisation with regulation

- Public transport is privatised so that there is incentive to be productive efficient
- The cost of building infrastructure and acquiring transport vehicles are fully paid for by the government (extract 4) from its current budget. Hence private operators only need to cover operating costs (i.e. marginal costs). This enables MC pricing (which is allocatively efficient) to be imposed without the need to subsidise train fares
- (Note: In reality, operating costs still includes some fixed costs e.g. rental of office building. So it in addition to variable costs e.g. fuel costs for trains, wages of train drivers, maintenance costs of trains etc, it also has to cover these fixed costs as well)
- By issuing licences, private operators have to meet the minimum service standards set by the government or they could risk losing their licence
- While the government allows for 2 public transport operators, they do not really compete directly with each other as they each serve different routes. However, having 2 operators does enable the government to benchmark the costs and service quality of one operator with the other, so that it has additional information to regulate more effectively.

Conclusion

- With both privatisation and regulation of public transport, this shows that the Singapore government is keenly aware of the trade-off between allocative and productive efficiency which has largely influenced the public transport policy in Singapore
- Taking a "middle ground approach" shows that the government is actively trying to achieve the right balance between these trade-offs
- Arguably this has produced better results as compared to relying purely on direct public provision or an unregulated free market

L1: Identify possible trade-offs associated with managing public transport [1]
L2: Explain with economic theory, why such trade-offs exist [2-5]
L3: Discuss how far these trade-offs has influenced the way the public transport is managed in Singapore [6-10]

Suggested Answers

(a) (i) Compare China's and US current account balance from 2007 to 2011. **[2]**

- China has been experiencing current account surpluses while US has been experiencing current account deficits. [1]
- From 2007 to 2011, China's current account surplus worsened, while US current account deficit generally improved. [1]

(ii) How might China's current account balance show that the "yuan is far less undervalued than it was a few years ago"? **[2]**

- From figure 1, China's current account surplus worsened from 10% of GDP in 2007 to around 2.5% of GDP in 2011, likely due to a worsening in balance of trade. [1]

OR

- This can be attributed to a revaluation of the yuan (hence a less undervalued yuan) which has appreciated 7% against the US dollar from June 2010 to October 2011 (extract 2) [1]
- A revalued yuan will increase the price of China's exports and lower the price of imports, resulting in worsening balance of trade assuming the Marshall-Lerner condition holds [1].

(Max 2m)

(iii) With reference to Figure 1 and Table 3, explain how far the data might show that China has made progress in rebalancing the economy away from exports. **[4]**

- China's current account surplus worsened from 2007 to 2011, 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 2011, with GDP growth rate even increasing in 2010. This suggests that China's growth could have been supported by domestic consumption instead of exports. [2]
- However, there is a lack of data to show whether overall consumption has indeed risen in China. China's growth could have been due to a rise in investment or government spending instead of a rise in domestic consumption. In this case, no rebalancing of the economy would have taken place. [2]

(b) Explain the impact of trade surpluses on present and future living standards. **[4]**

- A trade surplus means that the country earns more than enough from its exports to pay for its imports. Its present material living standards is lower than what it could have been if were to spend all its export earnings on buying imports of consumption goods
  (Note: the assumption is that the country is producing at full employment, and hence more goods produced for export would mean less goods produced for the domestic market)

- However a trade surplus also means that the excess export earnings is then used to purchase foreign assets. Hence future inflows of

interests, rents, dividends and profits into the current account should rise, hence raising future income and material living standards
(Note: the assumption made here is that the country has a flexible exchange rate system)

[2 marks awarded for each well-explained impact on present and future living standards respectively.]

(c) Discuss the view expressed by the German Finance Minister that Germany's surplus was "not an obstacle to growth in other countries" but functions as a "locomotive for the euro area". **[8]**

Introduction

- Germany has been experiencing trade surpluses, while the other member countries in the EU have been experiencing trade deficits
- The EU claims that such trade imbalances harm the growth of these member countries and thus Germany should find ways to reduce its trade surplus, which is a view that Germany disagrees with.
- The answer thus aims to first explain Germany's view before analysing the validity of the EU's view.

Thesis: Germany's surplus is "not an obstacle to growth" but a "locomotive for the euro area"

- A rising trade surplus and hence net exports causes Germany to experience faster growth in AD, output, income and employment
- Rising incomes generate higher demand for imports from other EU countries, thus boosting their exports to Germany
- Furthermore, Germany's trade surpluses resulted in "huge capital surpluses amassed by savers and export companies" (extract 8), of which some would have flowed into the other EU economies.
- While most of these funds were probably portfolio investments (hot money) which would have no direct impact on physical investments, some of these funds could be foreign direct investments (FDI) which would directly boost investments in these EU countries
- Higher exports and investment thus boost AD while higher investments raises capital accumulation which boosts AS, thus generating higher economic growth in these EU countries
- Hence the trade surpluses of Germany acts as a locomotive for the euro area

Anti-thesis: Germany's surplus is "an obstacle to growth" and not a "locomotive for the euro area"

- Much of Germany's rising trade surpluses could have instead come from the trade deficits of these other EU countries
- This has an adverse impact on the net exports, AD, output, income and employment of these EU countries
- Hence, rather than being a locomotive for growth, Germany's trade surplus instead acts as an obstacle to growth

- Instead of being channelled to productive investments, the capital outflows from Germany, a result of its trade surpluses have instead

"helped fuel bubbles in deficit countries" (extract 4).

- Should these asset bubbles burst, this will bring about a reduction in wealth in these economies, thus causing their consumption and AD to fall, hence triggering an economic downturn.
- Germany's rising surplus has arguably increased the risk of macroeconomic instability in these deficit EU countries

Conclusion

- Given that EU has experienced large overall trade deficit of €168.8bn in 2010 with China (extract 3), this suggest that their deficits are likely to have come more from trade with China than with Germany
- Germany's trade surplus thus seems to have more likely boosted rather than curbed the growth of these EU countries
- Hence, much of the economic troubles faced in these EU countries are more likely due to their own lack of savings, fiscal imprudence and a lack of competitiveness and productivity.

L1	Recognise possible benefits and costs of Germany' s trade surplus on other EU countries	1
L2	Explain how Germany's trade surplus could benefit other EU countries	2-4
L3	Analyse how Germany's trade surplus could harm the other EU countries	5-7
E	Evaluate whether Germany's trade surplus had overall benefitted or harmed other EU countries	+1

(d) **According to Extract 5, the rebalancing of China's economy away from exports towards domestic consumption will benefit China and its trading partners. Assess the policies that China could implement to rebalance its economy.** **[10]**

Introduction

- China's export-orientation has made her vulnerable to external demand shocks. Hence rebalancing away from exports to domestic consumption reduces her vulnerability to such shocks and benefits her trading partners by raising imports from these countries **(this is just meant for the introduction so there are no marks for this)**
- The answer thus aims to explain the policies which can be used to curb exports and boost consumption of domestically produced goods before analysing and assessing their limitations

Policies that China could implement to rebalance its economy

- Revaluing raises export prices hence reducing the volume of exports

- Protectionism
  - Reduces imports thus causing Chinese consumers to switch to domestically produced goods.
  - Beggar-thy-neighbour effects & retaliation curbs China's exports and facilitates further rebalancing

- Demand-management policies
  - Expansionary monetary policy involves lowering interest rates to boost consumption by reducing the cost of borrowing and/or the returns to savings
  - Expansionary fiscal policy involves lowering direct (personal income) to increase disposable income and hence consumption
  - Fiscal policy also involves raising public spending and/or reducing corporate taxes to boost investments, while monetary policy involves lowering interest rates to boost investments. These injections raise induced consumption via the multiplier effect
  - Fiscal policy involves running budget deficit which raises the demand for loanable funds. This causes interest rates, capital inflows, the exchange rate to rise and hence curbs exports

- Supply-side policies
  - Subsidies/grants to firms producing import-substitutes encourage investment and innovation to produce better quality goods. This should cause consumers to switch away from spending on imports to spending on domestically produced import substitutes
  - Redistributing incomes to the rural poor should raise overall consumption as the poor tends to have higher marginal propensity to consume than the rich
  - Improving social safety nets e.g. healthcare, old age and unemployment benefits reduces the need for households to save, therefore encourages current consumption.

Limitations of policies

- Revaluing the Yuan
  - Layoffs in export oriented sectors result in demand-deficient unemployment. Structural unemployment arises if these workers lack the skills to take up jobs in expanding sectors
  - Imports become cheaper, causing Chinese consumers to switch away from domestically produced goods towards imports

- Beggar-thy-neighbour and retaliation effects are unpredictable, so if they are larger than expected, this leads to a large decline in exports which can trigger an economic downturn

- Expansionary demand policies may cause China's households to mainly spend on imports rather than on domestically produced goods, especially if domestically produced goods are of low quality

- Expansionary monetary policy
  - Hot money outflows causes the exchange rate to depreciate, which boosts exports, which works against rebalancing
  - Instead of raising consumption on domestically produced goods, lower interest rates may result in investments in export oriented sectors and also fuel potentially destabilising asset bubbles

- Expansionary fiscal policy
  - Due to lack of social security support, China has high MPS and hence high MPW, which means a small multiplier. This means that induced consumption may not rise significantly

- Subsidies and grants for innovation and R&D may not yield results in the short-term as it takes a long time for such policies to bear fruit

- Redistributing income and developing social security nets may take a long time to devise and implement given that China is such a large, complex and diverse country.

Conclusion

- Expansionary fiscal and monetary policies and protectionism are short-term measures as the use of such measures will eventually be constrained by government debt, potential inflation and trade disputes

- For rebalancing to be sustained, moving to a free floating currency, redistributing income and developing social safety nets are probably more important in the long-term

L1	Identify possible policies to facilitate China's rebalancing	1
L2	Explain the policies that facilitate China's rebalancing	2-5
L3	Analyse the limitations of these policies	6-8
E	Assess the overall effectiveness of these policies	+2

1. **Smartphone usage is predicted to overtake computer usage in the near future. This is due to advances in smartphone technology, greater affluence and, in some cases, addictive behavior.**

   Assess the impact these would have on the sales volume of different models of smartphones in Singapore. [25]

Question interpretation

- How to classify different models of smartphones?
- How do the mentioned events affect the demand and supply of smartphones?
- How do the elasticities of demand and supply differ for different models of smartphones?
- How do such differences in elasticities affect sales volume?

Introduction

- The smartphone market can be segmented into higher-end and lower-end models
- The essay aims to first explore how advances in smartphone technology, greater affluence and addictive behavior affect the demand, supply and hence sales volume of smartphones
- The essay then analyzes how demand and supply elasticities differ depending on the model of smartphones before assessing the likely overall impact on sales volume

Impact of the events on the demand, supply and sales volume of smartphones

- Advances in technology lowers production costs, which should increase the supply of smart phones. It also improves product quality e.g. better screen resolution, improved operating systems, better cameras, etc. hence raising demand.
- Assuming that smart phones are normal goods, greater affluence should increase the purchasing power of consumers, thus raising the demand for such devices
- Finally people who are addicted to their smart phones to play games or to engage in social networking etc are more likely to upgrade their smart phones so as to better facilitate their addiction, thus raising the demand for such devices
- An increase in demand and supply of smart phones results in an increase in the market equilibrium quantity i.e. sales volume rises.

Impact of price elasticity of demand on the sales volume of different models of smartphones

- Price elasticity of demand measures the responsiveness of the quantity demanded of a product to a change in its price. It is measured by taking the percentage change in quantity demanded over the percentage change in price
- Higher-end smartphones are more expensive than lower-end models so the price of the former is likely to take a larger proportion of income than the latter
- Hence the demand for higher-end smartphones is likely to be more price elastic than the demand for lower end models
- For a given shift in supply due to technology advances, the quantity demanded and hence sales volume of higher-end smartphones is likely to rise more than that of lower-end smartphones (illustrate with diagram)

Impact of income elasticity of demand on the sales volume of different models of smartphones

- Income elasticity of demand measures the responsiveness of demand for a good to a change in income levels and is measured by taking the percentage change in demand over the percentage change in income
- Income elasticities differ for smartphones because consumers tend to switch from cheaper lower-end models to more expensive higher-end modes when their income rises.
- Hence higher quality but more expensive models (e.g. Samsung Galaxy S series) are likely to normal-luxuries with high positive income elasticities while cheaper lower quality models (e.g. Samsung Galaxy Ace series) are likely to be normal-necessities with positive but low income elasticities. It is even possible that some of the more basic models could even be inferior goods where the income elasticity is negative
- For a given rise in income, the demand & sales volume for higher-end models tends to rise more than the demand & sales volume of lower-end models. The demand and sales volume for the cheapest, most basic smartphone models might even fall. (Illustrate with diagram)

Impact of price elasticity of supply on the sales volume of different models of smartphones

- Price elasticity of demand measures the responsiveness of the quantity supplied of a good to a change its price and is measured by taking the percentage change in quantity supplied over the percentage in price
- As the smartphone market is advancing so rapidly, particularly for the higher-end models, mobile retailers tend to keep more stock up such models compared to lower end models.
- With greater availability of stocks, the supply of higher end models is likely to be more price elastic than the supply of lower-end models.
- For a given rise in demand caused by technology advances, rising affluence and greater addiction, the higher price elastic of supply for higher-end models should result in a greater rise in sales volumes of such models compared to lower-end models (illustrate with diagram)

Conclusion

- Given that the income and price elasticities of demand and supply of higher-end smart phones are likely to be larger than that of lower-end models, the events mentioned are likely to cause overall sales volume of the former to rise much more than that of the latter
- In fact given that Singapore is a rich developed country with one of the highest smartphone penetration rates in the world, lower-end smart phones could even be considered as inferior goods so that there is a strong possibility that the demand and sales volume of such models might actually decrease.

L1	Recognize the impact of the mentioned events on the market for smartphone	1-3
L2	Explain and illustrate how the mentioned events will affect the overall market demand, supply and sales volume of smartphones	4-10
L3	Analyze with examples how demand and supply elasticities differ for different models of smartphones and the resulting impact on sales volumes	11-21
E	Assess the likely overall change in sales volume of smartphones in the Singapore context	+4

2 (a) Explain with diagrams how airlines and small clothing retailers engage in price discrimination and why are they able to do so. [12]

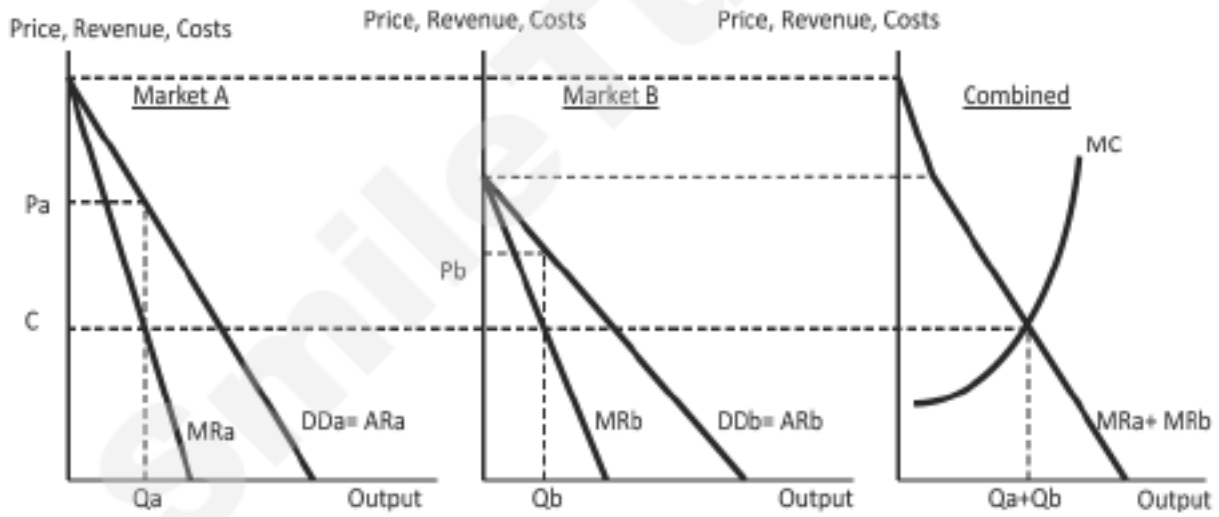
Introduction

- Price discrimination occurs when a firm charges different prices for the same product to different buyers, for reasons not associated with differences in costs.
- Airlines and small clothing retailers are likely to engage in 3rd degree price discrimination
- The essay aims to explain how firms engage in third degree price discrimination and the conditions present in the airline and clothing retail that enable such price discrimination to occur

3rd Degree Price Discrimination

- Third degree price discrimination refers to the situation where buyers are segmented into two or more different markets, and different prices are charged for each market. The more inelastic the demand, the higher the price charged.
- In the following diagram, suppose a price-setting firm has only one plant as represented by the MC curve, but two separate markets of A and B. The firm derives the combined MR of the two markets (MRa + MRb) by taking the horizontal summation of the individual market MR curves.

Figure 1: Third Degree Price Discrimination



- Total output of Qa + Qb is determined where MC = MRa + MRb. The MC of the last unit produced is C which is extrapolated back to the individual markets to cut MRa and MRb individually to obtain Qa and Qb respectively. Finally, prices charged are Pa and Pb for market A and market B respectively.
- The combined market output Qa + Qb is the sum of the individual market outputs of Qa and Qb. As the DDa is steeper(more inelastic) than DDb, the price Pa is also correspondingly higher than Pb.
- If the firm were to charge only one price for both markets, this price will be between Pa and Pb. The firms earns higher profits by engaging in price discrimination that from charging a single price for both markets

Conditions for Price Discrimination

- First, the firm must be a price setter. The pricing power of an oligopolistic airline arises largely from its large market share while the pricing power of a small monopolistic competitive clothing retailer arises from product differentiation.

- Second, different buyers must have different price elasticities of demand where lower prices are charged for buyers whose demand is more elastic. For example, airlines often charge a lower price for buyers who buy their tickets in advance while clothing retailers can create loyalty schemes which offer membership discounts to identify customers who are more price-sensitive.
- Third, the firm must be able to segment the market, i.e. identify and separate the buyers. Air ticket purchases can be segmented by the date and time of purchase, while price sensitive clothing buyers can be identified by their membership cards.
- Fourth, there should be limited seepage (i.e. resale) between buyers. If not, buyers will unwilling to buy from the firm at a higher price because the good can be easily purchased at a lower price from the black market. Seepage of air tickets is not possible for air tickets as each ticket is tied to the name and passport number of the actual passenger. While resale of clothing is a definite possibility, a black market is unlikely as clothing items are generally not very expensive so the profit that can be earned from re-selling clothes is often too low to justify the effort.

Conclusion

- In conclusion, airlines and clothing retailers can and often do engage in price discrimination in order to increase their profits

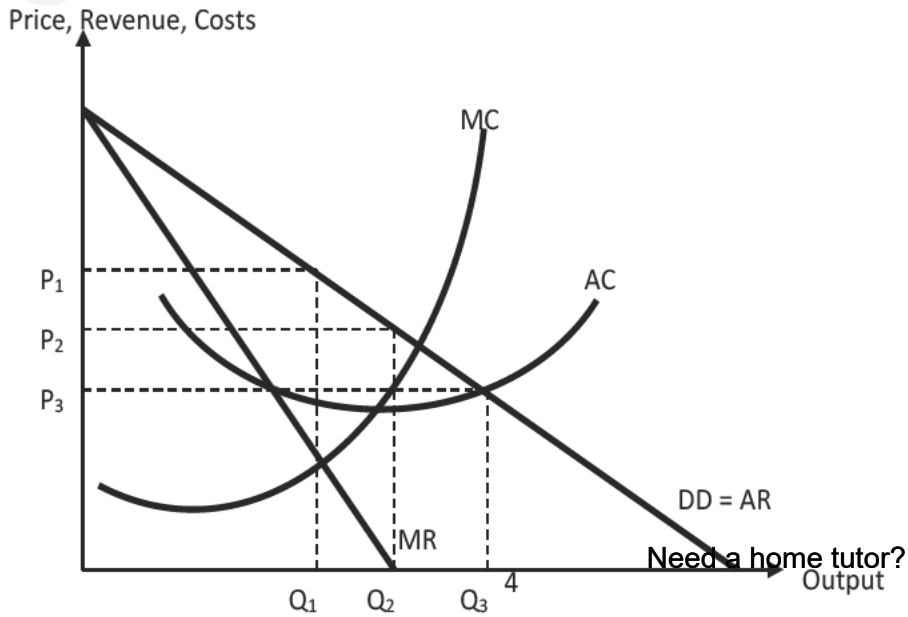
L1	Define price discrimination & 3rd degree price discrimination.	1-2
L2	Explain with diagrams how a firm engages in 3rd degree price discrimination	3-6
L3	Analyse why airlines and small clothing retailers are able to engage in price discrimination	7-12

2 (b) Discuss the extent to which these firms aim to maximise profits according to traditional economic theory. [13]

Introduction

- Standard economic modelling of a firm's behaviour assumes the objective of short run profit maximisation, where the firm determines its output and price by equating marginal cost (MC) with marginal revenue (MR.)
- This answer first explains how a price setter sets its price based on this condition before examining the extent to such behaviour exists in the real world.

Thesis: Firms aim to maximize short run profits as according to traditional theory



- A price setting firm has a downward sloping demand curve DD which is also its average revenue (AR) curve. Its marginal revenue MR curve will be twice as steep as it's demand curve
- The profit maximising output Q1 is determined by the point where MC = MR and the price will be on the corresponding point on the demand curve P1.
- Below output Q1, MC < MR, so the firm will produce more as each additional unit generates additional profits. Above output Q1 MC > MR, so the firm does not produce those units as each additional unit generates losses

<u>Anti-Thesis: Firms do not aim to maximize short run profits or are unable to do so</u>

- The shareholders of firm are often not the managers who run it, especially for bigger, publicly-listed firms.
- There is a separation between ownership and management where managers may aim to maximise revenue or output as their performance and prestige is tied to such indicators.
- However they must still earn a reasonable profit to be able to satisfy the shareholders so they engage in profit satisficing rather than profit maximising

- If the manager aims to maximise revenue, it produces Q2 where MR=0 and charge P2. Since P2 > AC, supernormal profits are still earned so the shareholders will likely be satisfied.
- If the manager instead aims to maximise output, then the highest possible output and lowest possible price will be Q3 and P3 where AC = AR. Here the firm earns only normal profits, so it is just sufficient to keep shareholders invested in the firm.
- If the shareholders require more than normal profit to be satisfied, then output will have to be correspondingly lower than Q3 and price higher than P3.

- Another view is that 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 pricing power and profits.
- The same arguments can be also applied to growth maximisation, where extra costs are incurred in extensive advertising, product development and investments.
- 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.

- As information is imperfect in the real world, it may not be possible to accurately estimate marginal costs and marginal revenue so firms often rely on simpler "rule of thumb" pricing models like 'cost plus pricing'
- This involve estimating the average cost and attaching a mark-up to determine the price, such that P = AC + m. If sales are good, the mark-up can be maintained or raised but if sales are bad, the mark-up is reduced.

Conclusion/ Evaluation

- Airlines are likely to be large firms that are run by professional managers, while small clothing retailers are more likely to be managed by their owners
- Capturing market share and expanding capacity are also more meaningful for oligopolistic airlines than for monopolistic competitive clothing firms
- Hence I would argue that that traditional theory of short run profit maximisation may apply more to small clothing retailers than to airlines
- Nevertheless, imperfect information applies equally to both markets so both types of firms are quite like to employ simpler 'rule of thumb' pricing models rather than equate MC with MR

L1	Recognise the meaning of traditional economic theory	1
L2	Explain how a price setting firm in theory maximises short run profits	2-3
L3	Analyse why firms may not maximise short run profits	4-9
E	Discuss the extent to which airlines and small clothing retailers aim to maximise profits according to traditional economic theory.	+4

3. Some economists argue that the government achieves the most efficient outcome if they only intervene in the provision of public goods. Discuss this statement with relation to Singapore. [25]

Question interpretation

- Question postulates that government intervention should be limited to the provision of public goods. Students are invited to first explain the need for government intervention in the provision of public goods before discussing whether intervention in Singapore should be limited this area

Introduction

- Governments intervene in the economy for various microeconomic and macroeconomic reasons
- One of the key reasons is the existence of public goods
- This essay first explains the need for government provision of public goods before analysing other reasons why government intervention may also be warranted.
- The answer then proceeds to assess whether the best outcome is achieved when governments limit their intervention only to the provision of public goods.

Thesis: efficiency is achieved when the government intervenes in the provision of public goods

- Public goods are goods which are non-excludable and non-rival in consumption

- Non-excludability means that once the good is produced, the good becomes available for all to consume regardless of whether one has paid for it
- Since people can consume the good without paying, a free-rider problem arises because people become unwilling to pay for the good even though they benefit from it
- Profit maximizing producers are thus unable charge a price for supplying the good, so the good will not be produced by the free market

- Non-rivalry means that once the good is produced, the quality and quantity of the good does not diminish with consumption
- There is no extra cost incurred in supplying the good to an additional consumer, hence the marginal cost of supplying the good is zero
- When marginal costs is zero, the socially optimal level of consumption occurs when the price of the good is also zero i.e. when the good is supplied for free

- Since profit maximizing producers are unable to charge for producing the good and the socially optimal price of the good is zero, the government needs to pay the full costs of producing the good i.e. full government provision is necessary and is allocatively efficient

- An example of a public good is street lighting. Once a street light is turned on, anyone in the vicinity can enjoy the light even if he has not paid for it (non-excludable).
- The brightness of the light also remains the same even when the number of people around the vicinity of the light increases (non-rival)
- Other examples of public goods include national defence and law and order.

<u>Anti-Thesis: efficiency is also achieved when the government intervenes to correct other forms of market failure</u>

Positive externalities

- Positive externalities refer to external benefits enjoyed by 3rd parties arising from the production or consumption of a good
- 3rd parties refer to people who are not directly involved in the production or consumption of a good
- Education generates positive externalities as it not only improves the productivity and income of the educated person, it also improves the productivity and income or those whom he works with
- Positive externalities causes the marginal social benefit (MSB) to exceed the marginal private benefit (MPB) by the marginal external benefit (MEB)
- Assuming that no other market failures exists, the marginal social costs (MSC) is equal to the marginal private costs (MPC)
- The private outcome Qp occurs when MPB = MPC while the social outcome occurs at Qs, where MSB = MSC
- Between Qp & Qs, MSB>MSC so there is potential welfare to generated if output were to be raised
- If the government gives a subsidy per unit that is equal the MEB, MPC is shifted down to MPC' such that the new private outcome Qp' where MPC' = MPB coincides the social outcome of Qs
- (Illustrate with relevant externality diagram)
- Thus government intervention is able to bring about an efficient allocation of resources
- In Singapore, the government intervenes in education by heavily subsidising and directly providing all levels education. Primary and secondary education is also made compulsory by law

Demerit goods

- Demerit goods refer to goods where some people may underestimate the full private costs of consuming such goods
- Cigarettes are demerit goods because tobacco addiction causes some smokers to ignore the adverse health effects caused by smoking.
- This causes actual MPC (which is also the MSC) to exceed the perceived MPC
- Assuming that no other market failures exists, MSB= MPC
- The private outcome Qp occurs when perceived MPC = MPB while the social outcome Qs occurs when actual MPB = MSB = MSC
- Between Qp & Qs, MSC>MSB so there is negative welfare generated
- If the government imposes a tax per unit such that the perceived MPC shifts up until it coincides with the actual MPC, the allocatively efficient output level of Qs can be achieved
- Singapore imposed very heavy cigarettes to deter smoking. In addition, the purchase and consumption of cigarettes by under-aged individuals are also made illegal because children and teenagers are more likely to underestimate the full costs of consumption

Other market failures

- Merit goods refer to goods where some people tend to underestimate the full private benefits of consuming such goods
- Education is also a merit good because some individuals may not be able to foresee the benefits in terms of higher pay and career prospects which only come much later in the future
- Since merit goods result in under consumption, the policies to manage such a market failure is similar to that of positive externalities

- Negative externalities refer to external benefits enjoyed third parties arising from the production or consumption of a good.

- Cigarette smoking generate negative externalities because of the adverse health effects imposed on people who happen to be near those who are smoking
- Since negative externalities result in overconsumption of the good, policies like output taxes also apply. In addition Singapore also bans smoking in most public areas.

- A firm with market power is able to exploit consumers by restricting output and charging prices that are higher than marginal costs in order to maximise profits
- Market power thus results allocative inefficiency as deadweight losses are generated because output is restricted to a level that is less than socially optimum
- When barriers to entry are high, price setting firms are able to make long run super-normal profits thus leading to inequitable outcomes
- In Singapore, natural monopolies like public transport and telecommunications are tightly regulated with price controls while utilities (PUB) is nationalised

(Analysis on imperfect information, factor immobility and even macroeconomic policies are also relevant as long as efficiency concepts with relevant Singapore examples are brought in)

Conclusion

- Due to imperfect information, governments sometimes intervene excessively, which may worsen rather than improve outcomes, hence resulting in government failure.
- Government failure is also more likely when policy decisions are based on political rather than economic considerations
- The potential for government failure explains why some economist argue that government intervention should only to be limited to public goods, since any intervention to produce public good can only improve outcomes given that there is total market failure
- Nevertheless, the possibility of government failure does not mean that the likelihood of it occurring is high if the government is sufficiently competent
- Singapore's government does intervene in many areas and many of such interventions though imperfect have arguably produced better outcomes compared to a purely free market situation
- Hence I would disagree that the Singapore government will achieve the most efficient outcome if it only limits its intervention to the provision of public goods

L1	Define public goods and recognise that there are other types of market failure	1-3
L2	Explain why government provision is necessary for public goods	4 -10
L3	Analyse other types market failures and related policies in the Singapore context	11-21
E	Assess the validity of the statement in the Singapore context	+4

4(a) Using the multiplier, explain how deficit spending can help combat a recession. [10]

Introduction

- Recognise: deficit spending refers to expansionary fiscal policy (G > T, and hence a deficit), and a recession means a fall in real national income
- Thesis statement: through the multiplier process, the government is able to use expansionary fiscal policy to stimulate aggregate expenditure in order to raise national income

Body:

A rise in government expenditure would trigger multiple rounds of spending in the economy. This can be done either through an increase in Government Expenditure (G) or reduction in taxes (T). A simultaneous rise in G and reduction in T would have an expansionary effect on the economy.

- The multiplier is defined as the change in national income for a given change in injection
- Any rise in spending by one person causes the income of another to also rise, which then induces the other person to consume more. When a person receives additional income, he only spends part of it on domestically produced goods while the rest of his income is either taxed, saved or spent on imports.
- This process can be illustrated numerically:
  - Marginal propensity to consume (MPC) is defined as the change in consumption on domestically produced goods given a change in income.
  - The multiplier is given by:

$$k = \frac{1}{1 - MPC}$$

    where 'k' is the multiplier and MPC is the marginal propensity to consume out of national income on domestically produced goods. Income that is not spent on domestically produced output must either be channelled out through taxation, savings and import expenditure. Therefore, 1 - MPC = MPS + MPT + MPM, where MPS, MPT, MPM refer to the marginal propensities to save, tax and import respectively.
  - Given that Marginal Propensity to Withdraw (MPW) = MPS + MPT + MPM, the multiplier can also be calculated using the formula:

$$k = \frac{1}{MPW}$$

  - Assuming that MPC = 0.8 and the government initially injects $100m into the economy, induced consumption and hence national income rises by (0.8 x $100m) = $80m
  - This $80m rise in income causes induced consumption (induced consumption refers to the change in consumption caused by a given change in income) and income to rise by another (0.8 x $80m) = $64m, with the remaining $16m being either saved, taxed or spent on imports. The $64m that is spent on domestically produced goods would in turn induces consumption and income to rise again by another (0.8 x $64m) = $51.2m. Again $12.8m would be channelled out through savings, taxation and import expenditure.
  - As the amount of induced consumption is progressively smaller than the previous induced consumption, the multiplier process must eventually come to at end. The process will end when the sum of the withdrawals is equal to the initial injection.

Through the multiplier process, deficit spending can increase national income and help close the deflationary gap.

- Deficit spending would induce consumption to rise and hence stimulate the economy to increase output. At the end of the process, national income would have increased many times more than the initial injection and the total amount of national income generated would be:

$$\Delta NY = \Delta G \times k$$

$$\Delta NY = \$100m(5)$$

$$\Delta NY = \$500m$$

- Therefore, with an increase of $500m to the national income, the government would be able to combat the recession, as illustrated by Figure 1.
- Suppose that initially the economy was at equilibrium e_1, with AE_1 and Y_1 being the corresponding AE function and national income level. Given that Y_f is the full employment income level, the horizontal difference between Y_1 and Y_f is the output gap (recession). Deficit spending will cause G to increase by $100m and AE function to shift up from AE_1 to AE_f. This will cause the equilibrium to move from e_1 to e_2, and national income to increase from Y_1 and Y_f. Assuming that $Y_f - Y_1$ = $500m, and that k = 5 (as specified by the numerical example), the injection of $100m by the government will then close the output gap and restore the economy back to full employment income level.

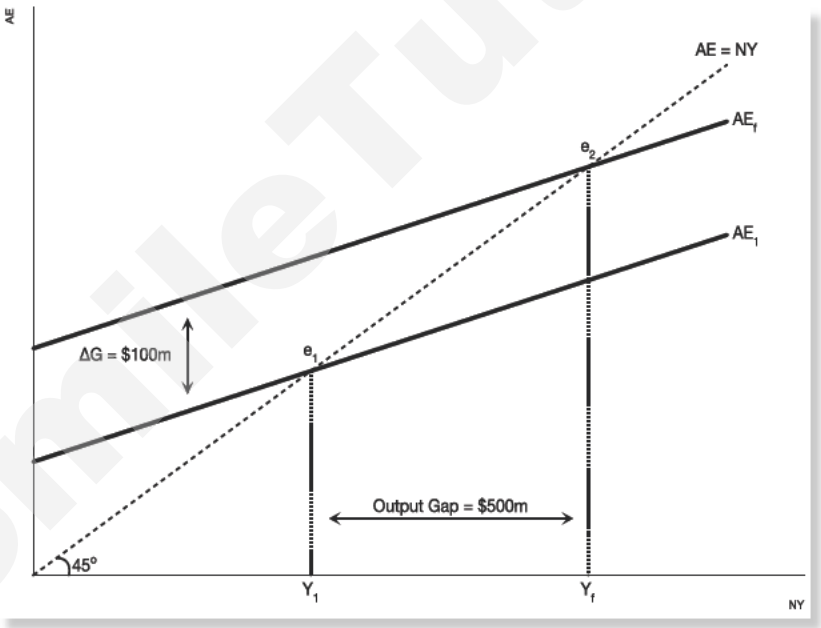


Figure 1: Closing the Deflationary Gap

Conclusion:

- Expansionary fiscal policy helps to close the inflationary gap by stimulating rounds of spending through the multiplier process and raising national income level to the full employment income level.

L1	Define the multiplier, deficit spending or recession	1
L2	Explain how expansionary fiscal policy can combat a recession	2-3
L3	Analyse how the multiplier process raises the effectiveness of expansionary fiscal policy	4-10

(b) Fiscal debt can adversely impact the economy and should be avoided at all cost. Discuss. [15]

Introduction

- Background information: level of debt globally, countries that are facing debt problems, a brief outline of the problems a fiscal debt can cause
- Recognise: fiscal debt arises when deficit spending is financed by borrowing (either through domestic or foreign sources)
- Thesis statement: while debt can be particularly detrimental to the immediate and long term health of the economy, the composition of the debt matters and some debt might in fact be beneficial to the economy in the long run

Body

Thesis: A sustained and deep fiscal debt could be detrimental to society and the economy

- When the government finances its excessive expenditures through borrowing (incurring debt), it might sacrifice future welfare for current expenditure
  - When a government engages in deficit spending, the expenditure is incurred in the present time period. For example when a government disburses unemployment benefits when unemployment rates rises, the unemployed receive the transfers at the time of the disbursement.
  - However, if the government does not have sufficient tax revenue to finance the increase in expenditure and resorts to borrowing (e.g., issuing bonds to the public), then the debt would have to be paid back in the future. So depending on the terms of borrowing, the longer the term, the later the government has to repay the debt.
  - Therefore, since the government has to repay the debt at a future time period, it must necessarily mean that they would have to raise taxes or cut expenditure in the future (especially since they are running a fiscal deficit in the current time period) to repay the debt when it is due. When taxes are raised, cost will increase and this might have further implications on the macro-economy. For example, when the government raises future corporate taxes, this would encourage firms to relocate their operations to a location of lower cost, and could potentially lead to a stifled economic growth and even unemployment in the future. Future standards of living would necessarily decrease.
  - Similarly, when government cuts expenditure, an area of the economy would suffer its negative impact. For example, when government cuts future spending on education, this might have long-term impacts on the employment of teachers, infrastructural investments in education and ultimately the capacity of the economy might shrink overtime. Again, future standards of living might decline.
  - Therefore, when deficit is financed through debt, there is a danger that governments are exchanging future welfare for current expenditure.

- When the government finances its excessive expenditures through borrowing, this raises the danger of it slipping into a debt trap. This might result in a default on its debt, sovereign bankruptcy and immense economic uncertainty.
  - A debt trap refers to a situation in which a debt is difficult or impossible to repay because the high interest payments prevent the borrower from repaying the principal (original amount of money borrowed).
  - A debt trap can develop when interest rates are raised and hence the interest payments are higher given the higher rates of borrowing. This could be caused by rating agencies downgrading the credit ratings of the government bonds (usually in reaction to high debt-GDP ratios). As the credit ratings of the government's bonds declines, it becomes progressively harder for the government to attract investors to buy government bonds, and hence might increase the interest rates on their bonds to attract investors. With interest rates rising, it might potentially lead to a

vicious cycle of increasing debt (as interest repayment increases) and increasing borrowing to finance the compounding debt. This phenomenon can be witnessed in the United States and EU countries like Portugal, Italy, Greece and Spain.

- When a government falls into a debt trap, the risk of the government defaulting on the debt is increased and might even lead the a declaration of bankruptcy by the government (like what happened to Iceland in 2008). This introduces an immense amount of uncertainty and risk into the economy and might lead to a sharp decline in economic performance and standard of living in the country.
- When risks are higher, businesses are more cautious and might resort to relocation to mitigate their exposure to such macroeconomic risks. A result of this action would be the gradual decline of growth and competitiveness of the economy, and its eventual impact on employment and GDP.
- Furthermore, when a country declares bankruptcy and requests for aid and funding from the International Monetary Fund, such aid often come with strict fiscal conditions and in many cases a severe austerity requirement. This can result in a sharp decline in key government expenditures and can negatively impact the welfare of the nation.

Anti-thesis: Debt is not necessarily bad as it could lead to some benefits.

- However, depending on the size of the debt, a debt might not always lead to a debt trap and its associated risks
  - While a debt trap is an important danger that governments need to avoid, it might be applicable for severe debt levels that are sustained over long periods of time. For example, the US has been consistently in a debt position since the 1920s till the present time, and has till current date amassed about $17 trillion worth of debt.
  - When debt levels are relatively small, debt-GDP ratio of between 1% and 5%, these are comparatively manageable as long as the government ensure that the economy grows at a rate faster than the debt ratio, the government could technically repay the debt with relative ease.

- Furthermore, if the composition of the fiscal deficit is largely made up of government investments rather than transfers, the debt might in fact lead to future improvement of growth rates and thereby mitigating some of the harmful effects of debt
  - Government investments include investments in public infrastructure and other forms of capital investments by the government. This would add to the accumulation of capital stock in the country and the accruement of investment capital can lead to the increase in quantity, and even quality, of capital in the country and thereby leading to long-run growth of the economy.
  - Moreover, some transfers might be beneficial for the economy as well. Transfers and expenditure on education and technological subsidies might reap dividends in the future for the economy. Expenditure on education and technological subsidies might improve the quality and quantity of capital and labour in the economy, and like the previous point, raise long-run growth for the economy. Furthermore, expenditure on education can help ease labour immobility and can better help the economy cope with structural changes. This may result in a more flexible, competitive and adaptable economy, and might even create an attractive environment for businesses to grow. This will definitely have positive impacts on actual growth.
  - However, if the composition is predominately on transfers like agricultural subsidies and social security, these expenditures, unlike the previous points, rarely reap future benefits and might even have no impact on the long-run trajectory of the economy. Similarly, if the government is expanding a large part of its budget on interest payments (e.g., the US and its unsustainable debt levels), these would have very little impact on the growth rate of the economy and have no explicit benefit (neither in the future or the present) to the economy.

- Lastly, the source of the financing matters as domestically funded debt would retain the debt repayment within the geographical boundaries of the economy while foreign funded debt would result in future outflow of income from the economy
    - When debt is financed through domestic borrowing, the debt would be repaid in the future to domestic lenders and in that sense the government's spending is retained within the geographical boundaries of the economy. Domestic lenders would reap the dividend of their investment in government debt. This could further translate into increased consumption and hence some positive impact on the actual growth of the economy.
    - However, when the debt is predominantly financed through foreign channels (e.g., US government bonds being held by Chinese financial institutions), the debt would be repaid in the future to foreign lenders and the government's spending would be disbursed out of the economy. In essence, foreign lenders would reap the dividends of their investment in the government's debt and this would have very limited impact on the growth of the domestic economy.

<u>Conclusion</u>

- Context matters when it comes to debt and part of whether debt is an important consideration to the government would depend on the policy options the government has to manage the debt. For PIIGS economies (that function within the EU), one important constraint that they are faced with is the fact that they cannot implement independent monetary and exchange rate policies to help manage the debt (for e.g., selling off foreign reserves or print money to finance the debt), and hence for such economies, debt would matter a lot more as channels to finance their debt is limited.
- Also, the prevailing economic circumstances would matter greatly as to whether the debt issue is an important consideration or not. For an economy that is facing inflationary pressures and large BOP surpluses, generally the government would be able to raise taxes and decrease government expenditure with more ease and hence finance the debt by accruing budget surpluses. Also, with an overheating economy, consumer and business confidence is generally healthy, and therefore it is easier to raise income taxes and corporate taxes, hence allowing the government to capitalise on the favourable economic circumstances.
- Most economists would agree that growth is the panacea to improve fiscal deficit in the long run, and when the government can afford to, should not resort to indiscriminate imposition of austerity measures (which is necessarily contractionary in nature). Therefore, rather than resorting to stopgap measures like cutting educational subsidies and investments on public infrastructures, government might need to impose unpopular measures to reduce expenditure on agricultural price supports and certain social security measures. With growth (e.g., due to public investments and education subsidies), tax revenue increases and expenditure on social security reduces, and this could eventually improve the trajectory of fiscal debt.
- Ultimately, when determining the impact and significance of debt, it is important to bear in mind that while debt can be particularly detrimental to the immediate and long term health of the economy, the composition of the debt matter and some debt might in fact be beneficial to the economy in the long run. Moreover, the severity of debt can also be amplified or reduced given different contexts and circumstances. Hence even though fiscal debt could potentially adversely impact the economy, it should not be avoided at all cost.

L1	Identifies debt and recognise that debt is detrimental to the economy	1 – 2
L2	Explains why debt could be detrimental to the economy	3 – 6
L3	Analyse how debt might not be detrimental to the economy	7 – 11
E	Evaluate other factors that might affect the impact of the debt on the economy	+ 4

5(a) Explain whether bad news about inflation means good news for the exchange rate? [10]

Question Interpretation

- What is meant by "bad news about inflation"?
- How does bad news about inflation impact the exchange rate?
- Is this impact on the exchange rate considered as good or bad news for an economy?

Introduction

- Inflation occurs when there is a rise in the general price level of goods and services.
- Inflation is a problem when the rise in general price level is sustained and inordinately high
- The exchange rate refers to the rate at which one currency can be exchanged for another
- The essay aims to first explain why high inflation is bad and how does it affect the exchange rate before analyzing whether the resulting exchange rate movement is good or bad for an economy.

When is inflation bad news?

- Mild inflation or a low inflation rate of 1% to 3% is generally considered good for the economy as it stimulates production and investment.
- Hence, "bad news about inflation" refers to a situation where inflation rates are higher than expected as this can lead to undesirable effects
- For example, high inflation rates create uncertainty among firms as it causes them to worry about whether costs will rise faster than revenue, thus causing profits to fall. This discourages investment & capital accumulation and hence hampers long run growth.

Impact of high inflation on the exchange rate

- High domestic inflation means that domestic inflation likely to exceed foreign inflation
  - Exports becomes relatively less competitive in the global markets à fall in export volume à fall in demand for domestic currency in foreign exchange (FOREX) market
  - Imports becomes relatively cheaper à rise in volume of imports à rise in supply of domestic currency in FOREX market
  - A fall in demand and a rise in supply of the domestic currency in the FOREX market à exchange rate will depreciate assuming flexible exchange rates.

Impact of a depreciating exchange rate on the economy

Good news

- If the economy is operating below full employment, a depreciation in the exchange rate raises net exports, AD, real output and employment
- Assuming the Marshal Lerner condition holds, i.e. the sum of the absolute values of the price elasticities of demand for exports and imports is greater than one, a depreciation in the exchange rate leads to an improvement in the balance of trade and hence the current account

Bad news

- Higher prices of imported inputs and imported consumption goods, shifts the AS curve upwards, thus leading to imported cost-push inflation. The more import dependent the country is, the greater the extent of such inflation.
- If the economy is already operating near or at full employment, an increase in net exports would cause AD to move up along the upward sloping/vertical portion of the AS curve, which leads to demand pull-inflation

- In this case, a fall in the internal value of the currency (domestic inflation) causes a fall in its external value, which then causes a further fall in the internal value (more domestic inflation), so an inflationary cycle develops

Other possible effects (optional)

- Since high domestic inflation initially worsens net exports, the balance of trade and the current account, the resulting depreciation which improves these variables will at best only restore them to the initially state rather than result in an overall net improvement.
- With fixed exchange rates or a managed float, the central bank will/may intervene in the FOREX market to prevent the exchange rate from depreciating.
- The central bank may react to higher inflation by raising interest rates which may attract hot money inflows and cause the exchange rate to appreciate instead

Conclusion

- While a high inflation rate is generally always bad news, the impact of the likely depreciation of the exchange rate can be good or bad news, depending on the state of the economy, the extent of import dependence and whether the Marshal Lerner condition holds for the country

L1	Recognise how inflation can affect the exchange rate	1
L2	Explain why high inflation is bad and how does it affect the exchange rate	2-5
L3	Analyse whether the resulting change in the exchange rate is good or bad	6-10

(b) Discuss the view that managing the exchange rate is the most important macroeconomic stabilization policy in Singapore. [15]

Question interpretation

- What is macroeconomic stabilization?
- How does exchange rate management help stabilize the Singapore economy?
- How can other policies also help to stabilize the Singapore economy?
- Is exchange rate management the most important macro stabilization policy for Singapore?

Introduction

- Macroeconomic stabilization refer to efforts to reduce the fluctuations in a country's inflation, output and employment
- The essay aims to analyze and assess the use of exchange rate, fiscal and supply side policies to achieve macroeconomic stability in Singapore.

Why does Singapore manage its exchange rate?

- Singapore is highly dependent on exports as it has a small domestic market, and also highly dependent on imports as it lacks natural resources. A sudden appreciation of S$ will hurt its exports while a sudden depreciation of S$ will hurt its imports. Thus Singapore prefers to manage its exchange rate over interest rates to maintain macroeconomic stability
- Being a financial center, Singapore allows free capital mobility. Hence by choosing to manage the exchange rate, Singapore loses its control over its domestic money supply and interest rates and therefore does not have any domestic oriented monetary policy.
- The primary aim of Singapore's exchange rate policy is to achieve price stability. By allowing the S$ to appreciate, the cost of imported necessities like food and fuel are reduced and this directly

reduces production costs and cost of living in Singapore. It also helps reduce net exports and hence AD, thus curbing demand pull inflation.

- In general, MAS does not devalue the S$ to boost exports as the gain in export competitiveness is limited given that much of Singapore's exports is made up of imported inputs. Hence the marginal gains in export competiveness arising from a currency devaluation is not worth the tradeoff in terms of a likely surge in imported inflation
- However, in times of world-wide recession, MAS employs a a zero-appreciation policy, i.e. keep the exchange rate at existing levels so that export and AD would not be unnecessarily dampened by an appreciating currency

What other policies does Singapore employ to stabilize her economy?

- Singapore is vulnerable to external shock such as global recession and oil crisis which has an adverse impact on output and employment in the economy.
- Singapore does not rely on expansionary fiscal policy to fight a recession as Singapore has a small fiscal multiplier due to a high marginal propensity to save (caused by high rates of compulsory CPF savings) and a high marginal propensity import (caused by Singapore's lack of natural resources).
- With a small multiplier, a very large budget deficit is required to close even a small deflationary gap hence fiscal policy is very costly in terms of government debt and is not very effective.
- Instead, Singapore uses supply-side policies to fight recession. Such policies include reducing property taxes, rentals of government owned industrial properties, utility charges and other government related fees and charges
- Singapore also reduces wages, either through CPF cuts or through wage subsidies, as in the recent 2009 global financial crisis, as lower wages give the incentive for firms keep their workers
- These measures help to reduce overall production costs, thus shifting the AS curve downwards in the short run, thereby raising real output and employment.
- Lowering costs also helps firms to better manage their cashflow, thus minimising business failures & hence layoffs, which enables Singapore to preserve its productive capacity so that the country can respond better to rising demand when the global economy recovers

Evaluation/Conclusion

- Singapore has generally experienced strong real economic growth with very low inflation rates which is evidence of the effectiveness and suitability of Singapore's exchange rate policy in maintaining macroeconomic stability over the years.
- Singapore has also always rebounded quickly after a major recession, which is evidence of the effectiveness and usefulness of its supply side measures.
- Hence given that both exchange rate management and supply side policies have been effective in helping Singapore fight inflation and unemployment respectively, I would argue that both policies are equally important macroeconomic stabilisation policies.

L1	Recognise the meaning of macroeconomic stabilisation and possible policies	1
L2	Explain why Singapore chooses to manage its exchange rate	2-6
L3	Analyse other policies that Singapore uses for macroeconomic stabilisation	7-11
E	Discuss whether exchange rate is the most important macroeconomic stabilisation policy in Singapore [+4]	+4

6. **Emerging economies tend to suffer from declining terms of trade, while smaller emerging economies tend to experience greater costs and enjoy fewer benefits from globalization compared to larger emerging countries. Discuss. (25m)**

Question Interpretation

- Explain why emerging economies might suffer declining terms of trade
- Analyse why they may not suffer and why terms or trade may not decline
- Analyse the costs and benefits of globalisation for emerging economies
- Evaluate whether smaller emerging economies suffer more and benefit less from globalisation than larger emerging economies

Introduction

- Emerging economies refer to **economies** which are **industrializing rapidly** and have experienced strong and sustained economic growth.
- **Characteristics** of such economies include high savings rates, emphasis on education, dependence on export driven growth strategies and significant shifts in the labour force away from agriculture towards manufacturing and services.
- However, the labour force in emerging economies is still relatively low-skilled so they still possess comparative advantage in lower value-added production
- **Terms of trade** refer to the quantity of imports that can be obtained for a given quantity of exports and is measured by the **ratio of export prices to import prices**
- **Globalization** refers to the increased integration and interdependence of countries arising from increased trade and factor mobility
- The essay aims to first analyse whether developing countries suffer from declining terms of trade, before assessing whether globalization confers more costs and fewer benefits on smaller emerging economies than on larger ones

Emerging economies tend to suffer from declining terms of trade

- When countries specialise and trade according to **comparative advantage**, emerging economies are likely to still **export** labour intensive **agricultural** goods and **import** capital, skill and technology intensive **manufactured** goods.
- However as agricultural goods tend to have **lower income elasticities** of demand than manufactured goods, **rising global incomes** mean that the demand for agricultural goods tends to **rise slower** than the demand for manufactured goods.
- This causes emerging economies to suffer from **declining terms of trade** as the prices of agricultural exports **rise slower** than the prices of manufactured imports

Terms of trade of emerging economies could have improved

- In recent years, rapid economic growth in emerging economies with **very large populations** i.e. China & India have caused global demand and hence prices of some agricultural products to **rise even faster** than that of manufactured products
- Besides agriculture, emerging countries also have comparative advantage in **labour intensive manufacturing**, e.g. sewing of apparels and assembly of electronic products. Such manufactured products tend to have **high income elasticities.**
- As comparative advantage is not static, sufficient investments in both physical and human capital enables developing countries to **move up** the **value chain** and produce more capital, skill and technology intensive goods with **higher income elasticities**

Emerging economies could have benefitted from declining terms of trade

- When the terms of trade worsens due to falling export prices caused by **rising supply**, a country experiences rising export volumes, which can be beneficial
  - Higher **exports volumes** means higher AD, real output and employment if the economy is below full employment
  - If the demand is price elastic, **export revenue rises,** hence improving the balance of trade, current account and balance of payments
- If the worsening in the terms of trade arises from a **depreciating exchange rate**, the country's balance of trade, current account and **balance of payments improves** if the **Marshall-Lerner condition holds** i.e. the sum of the absolute values of the price elasticities of demand for exports and imports is greater than one

Benefits and costs of trade

- The **removal of trade barriers** raises the demand for a country's exports. Assuming sufficient spare capacity, this boosts AD, real output and employment and also improves the balance of payments. With a small domestic market, a small country is likely to benefit more as it tends to be more dependent on exports to drive its economy
- A small country is also likely to be **more import dependent** due to a **lack of natural resources**. Hence trade should benefit smaller countries more than larger ones.
- Trade allows foreign imports to compete with domestic firms, thus **reducing their market power**. This results in **lower prices, better product quality and a greater product variety** for consumers. As a small country is more likely to be dominated by a few firms, it is likely to benefit more from such increases in foreign competition than a larger country
- Trade also tends to hasten structural change resulting in **structural unemployment**. With a smaller physical land area, **geographical immobility** tends to be less severe for a smaller country. However, as a smaller country tends to be less diversified economically, **occupational immobility** tends to be more severe instead.
- Trade renders a country more susceptible to **macroeconomic instability** brought about by **external shocks**. A fall in export demand brings about an economic downturn while a rise in import prices brings about imported cost-push inflation. As smaller countries tend to be more trade dependent, the adverse impact of such shocks are likely to be greater
- Trade allows emerging economies to **import capital goods** from developed countries. With a smaller domestic market and less resources, small emerging economies are arguably less able to produce such goods than large emerging economies. Hence the former likely to benefit more from importing capital goods.
- As emerging economies tend to have **weaker environmental laws** than developed countries, trade often results in emerging economies specialising more in highly polluting industries. Smaller emerging economies have less land to **accommodate pollution** compared to large ones so the former is likely to suffer more than the latter.

Benefits and costs of increased factor mobility

- Emerging economies tend to face **brain drain** i.e. the emigration of high skilled labour, thus reducing the country's potential growth. The costs of brain drain are likely to felt more acutely in smaller countries as they have smaller populations
- Emerging economies often try to **attract foreign skilled labour** in their attempts to develop **higher value-added industries**. Smaller economies with **smaller talent pools** tend to benefit more from such influx in foreign talent than larger economies.

- **Foreign direct investments** (FDI) enable emerging economies to acquire better foreign capital, technology and enterprise from developed countries, thus boosting potential growth. Besides attracting FDI into export-oriented sectors, large countries are also more likely to attract FDIs that aim to exploit their **large domestic markets**. Hence large emerging economies tend to attract more FDI and hence benefit more than smaller ones.
- International capital flows can exacerbate extent and impact of **asset bubbles**. Such capital flows can also cause substantial **fluctuations** in the **exchange rate**, which can harm export competitiveness or bring about imported inflation. As a proportion of GDP, the amount of such capital flows tends to be higher for a smaller country so the resulting macroeconomic risk and instability are also correspondingly higher
- As emerging economies develop, wages tend to rise, which attracts immigration of low-skilled labour from neighbouring countries which are less developed than them. This depresses the wages of local unskilled workers thus worsening **income inequality.**

Conclusion

- As the characteristics of emerging economies differ, a smaller emerging economy may suffer or benefit more or less than a larger emerging economy
- However, given that smaller economies are likely to be more dependent on trade and more affected by factor flows than larger economies, the impact of globalization is likely to be experienced more acutely by smaller emerging economies.
- Hence I do not agree that smaller emerging economies tend to experience greater costs and enjoy fewer benefits from globalization than larger emerging countries because the former tends to experience greater costs **and also greater benefits** than the latter

L1	Define terms of trade, globalisation and emerging economies	1-3
L2	Explain whether emerging economies suffer from declining terms of trade	4-10
L3	Analyse how the size of an economy affect the costs and benefits of globalisation experienced by emerging economies	11-21
E	Assess whether smaller emerging economies tend to experience greater costs and enjoy fewer benefits from globalization than larger emerging economies	+4

VICTORIA JUNIOR COLLEGE

2013 JC2 PRELIMINARY EXAM

H1 ECONOMICS (REVISED) – PAPER NO. 8819/01

19 September 2013 8:00 – 11:00 am

READ THESE INSTRUCTIONS FIRST

Write your name and class on all the work you hand in.
Write in dark blue or black pen.
You may use a soft pencil for diagrams.
Do not use staples, paper clips, glue or correction fluid on the work that you hand in.

Section A

Answer **all** questions.

Section B

Answer **one** question.

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

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.

This document consists of **8** printed pages.

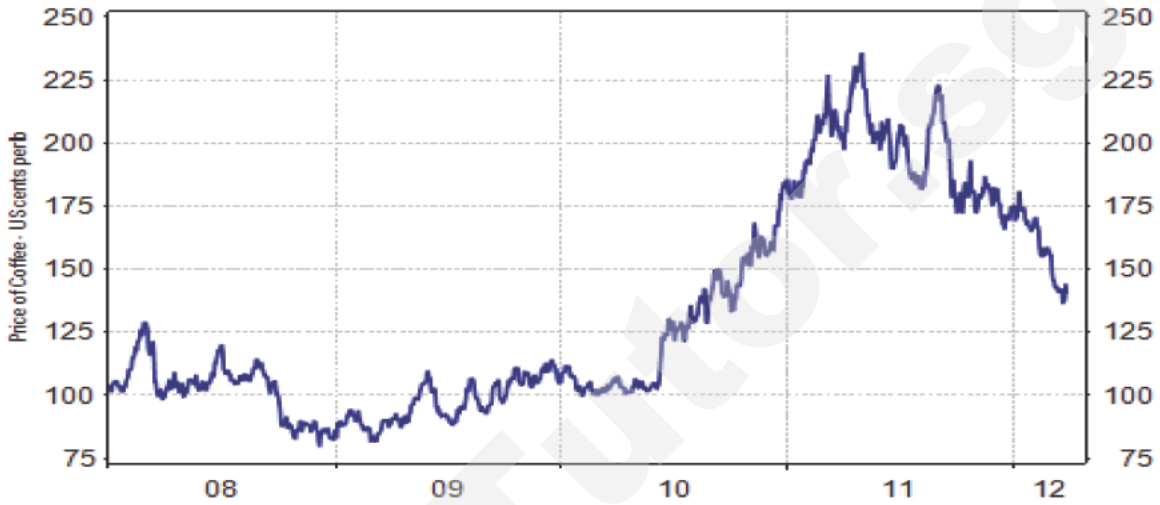
Section A

Answer **all** questions in this section.

Question 1

The Coffee Market

Figure 1: World Coffee Prices (US$ per tonne)



Source: *Reuters EcoWin*

Extract 1

A combination of the growing demand for different types of coffee and the poor harvests in recent years have led to coffee prices hitting a 14-year high this week. Coffee roasters are already passing on some of these rises to stores and cafes. Starbucks has already increased prices and Dunkin' Donuts and Folgers have also raised prices several times to cope with the rising coffee bean prices.

"It's pretty easy to see why. When you combine the demand and speculation that harvests will be poor, it's not difficult to understand where prices are currently," said Hector Galvan, a senior trader at RJO Futures.

Hawaii is the only coffee-producing state in the United States (U.S.) and cannot supply enough to meet the nation's needs. The vast majority of coffee consumed in the U.S. is imported. The dependence upon coffee as an import has haunted Americans for centuries. The U.S. is particularly dependent upon Brazil to produce bumper crops of coffee as harvests have been weak in other coffee-producing nations, like Mexico, Kenya and Colombia. Brazil and Colombia, the leading coffee producers, have suffered consecutive poor crop harvest, one of the biggest factors in driving up prices as other coffee-producing nations do not have the ability to offset the slump from Colombia and Brazil.

Adapted from *CNN Money*, 18 February 2011

Extract 2

The prices of coffee continue to trade down and have had a downward trend during most of 2012. The decline started somewhere around September 2011 after the volatility in the financial markets was high. Bloomberg reported that there are expectations that the production will pick up in 2013 and will outpace the growth in demand by 5.3 million bags.

Adapted from *Trading NRG*, 28 May 2012

Extract 3

With the coffee-picking season in India, water bodies, such as rivers, are getting polluted with waste water from coffee pulping machines. Though this is a seasonal occurrence, this time some village local governments have started taking action against this type of pollution.

Waste water released from coffee pulping machines is a health hazard and causes stomach diseases. Hence, the Pollution Control Board (PCB) has strictly imposed regulation to install lagoons to treat water used for pulping. This water should also be used for gardening or in their farms and not let into the streams. But in many coffee estates, this norm is not followed and every year, the people air their grievances but in vain. For the first time, village local government in Chikmagalurk raised its voice against water pollution by coffee planters and its chairman B E Nagesh, went around the estates strictly telling the planters who are not following the norms fixed by the PCB to stop pulping till they install lagoons to recycle the waste water.

The PCB has also advised them to opt for dry pulpers, which use very little water. The PCB spokesman reported that the planters have requested for more time so that they can pressure the Federal Government to enhance subsidies from the existing 20% to 50% to purchase dry pulpers.

Due to the resource constraints, the PCB has sent letters to all village local governments in coffee-growing areas to inspect the 1,300 coffee estates in their areas if they are adhering to rules laid down by the PCB. The village local governments will then inform the Federal Government to take actions against offenders.

Adapted from *The Times of India*, 23 Dec 2011

Extract 4

The PCB has decided to take some stricter actions to protect water bodies from coffee pulping waste in coffee-growing areas. The PCB has issued notices to all coffee growers warning them against releasing water used for pulping coffee into nearby streams and rivers. The notice says a violation will be dealt with seriously by lodging criminal cases.

The PCB has already collected water samples from small rivers near coffee growing areas. Water samples will be collected again during coffee pulping season and the two samples will be tested to assess the percentage of contamination and actions will be initiated accordingly. However, due to a lack of technical staff, the PCB has requested the government to send a special squad to inspect instances of water pollution during coffee picking season.

Adapted from *The Times of India*, 23 Nov 2012

Extract 5

Starbucks Corp which yesterday introduced India to its coffee drinks, such as caramel macchiatos and espressos, may find smaller and cheaper beverages the fastest way to win local coffee drinkers from established local rivals. It is a great time for Starbucks to enter the market because the average Indian consumer will be happy to upgrade to a Starbucks environment.

In a nation where about two-thirds of the people live on less than US$2 a day, Café Coffee Day, the nation's biggest locally-owned café chain with 1,360 outlets across the country, sells a regular cup of coffee for US$1. Its closest local competitor Barista with 318 outlets sells for US$1.10. These may prompt Starbucks to sell its coffee drinks for about US$2 to US$2.50 a cup, compared to US$4 in Beijing and US$3.50 in the US.

Café Coffee Day, which also offers local dishes including samosas or savoury pastries catering to Indian palates, plans to expand its outlets to 2,000 by the end of 2014 that would serve all segments of consumers - teenagers, students, office goers and families.

Adapted from *The Business Times*, 20 October 2012

Questions

a. i) Describe the trend of world coffee prices in Figure 1. [2]

ii) Using economic concepts, account for the changes in world coffee prices between 2010 and 2012. [5]

iii) With reference to the data, explain how the trend of world coffee prices will continue in 2013. [3]

b i) Using economic analysis, explain the market failure described in Extract 3. [4]

ii) In light of the above market failure, you have been tasked by the Federal Government to evaluate the appropriateness of the measures implemented by the various bodies mentioned in the data and recommend how the market failure can be better tackled. [8]

c. Discuss the impact of globalisation on the coffee café market in India. [8]

Question 2

Macroeconomics

Extract 6

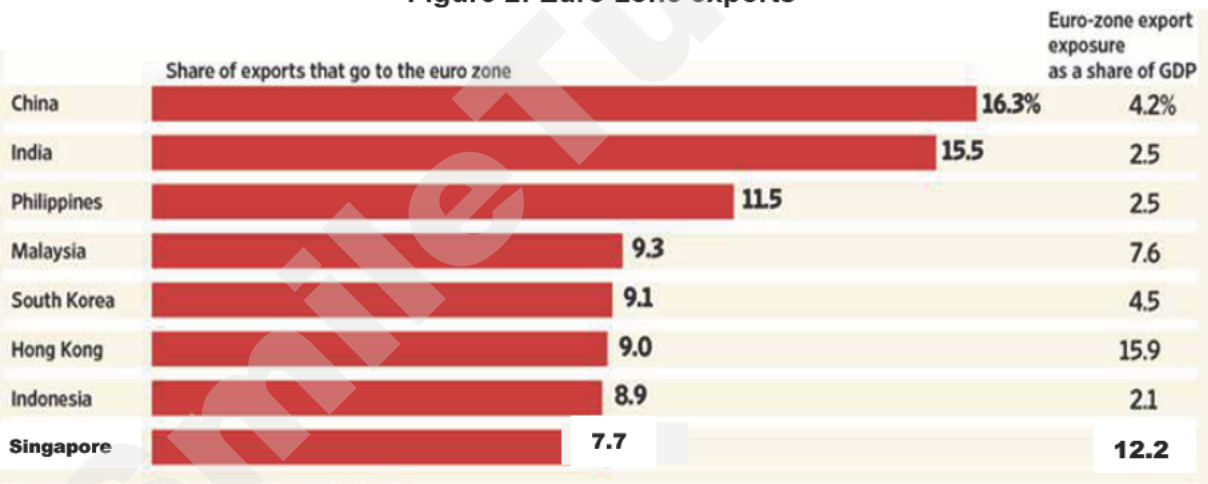
The Asian Development Bank says Asia faces a number of threats, with commodity prices driving inflation at the top of the list due to turmoil in Middle East and Japan's nuclear crisis driving up oil prices. Higher global commodity prices also drove food prices up across the region. It warned that these higher prices could shake Asia's macroeconomic stability.

If left unchecked, rising inflation would affect the region's economic outlook and the external economic environment continues to weaken with an anaemic US recovery. Also, Asia's reliance on Europe as an export market has made it vulnerable to the continent's economic woes.

Persistent and volatile changes in the commodity prices are a challenge to inflation management and the main difficulty for Asia's policymakers is to achieve a coherent policy mix that will tackle inflation and achieve economic growth that is sustainable in the long term.

Adapted from *The Business Times*, 29 July 2011

Figure 2: Euro-zone exports



Source: Credit Suisse (exports); International Monetary Fund (GDP)

Extract 7

Singapore's inflation unexpectedly accelerated to hit 5.2% last year, the second-highest rate in nearly 30 years, creating risks to the already halting growth. Irvin Seah, an economist at DBS Group Holdings Ltd remarked that the increase was a result of higher domestic spending, costs of accommodation, road transportation costs and a tighter foreign worker policy. Higher than expected domestic inflationary pressure has kept inflation elevated even when global energy and commodity prices have eased.

Policy makers are planning to give equal priority to containing inflation and spurring growth. An MAS official said that the central bank will keep its current stance of "modest and gradual" appreciation of the Sing dollar but there will be a policy dilemma if the current economic environment continues. Research has shown that a 1% appreciation of the

Nominal Effective Exchange Rate will lead to a 0.8% decline in the domestic CPI level over eight quarters in Singapore.

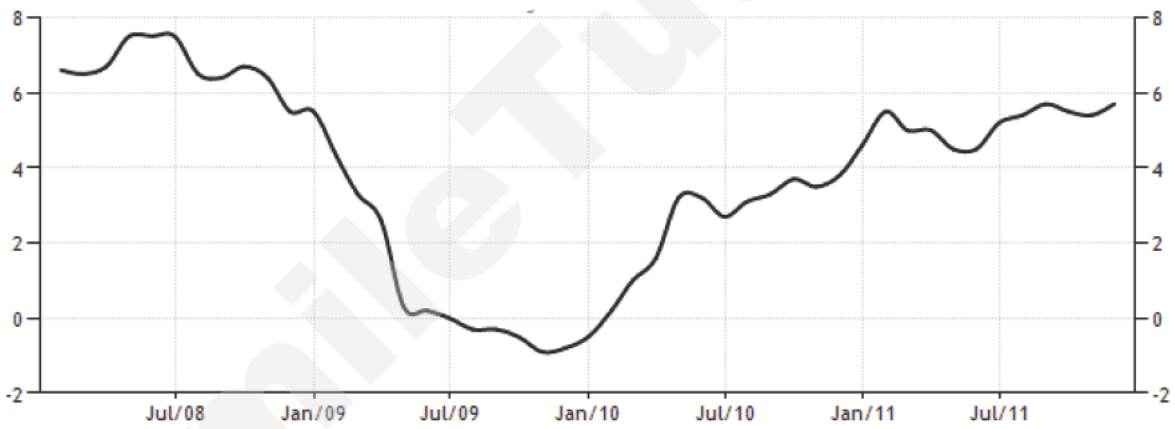
A report with the breakdown of the inflation figure showed that from 2006 to 2011, the real median income rose by 2.5% a year while for the 20th percentile group; it has an annual rate of 2.2%.

Economists noted that productivity growth is a key driver of real wage growth. But this has virtually grounded to a halt last year, in part due to the slow growth experienced. This underscores the difficulty by the government to shift the mature economy to a productivity-driven model. Besides, historically, productivity growth has always been somewhat lower than other countries.

The Singapore government hopes that by pushing the Productivity and Innovation Credit Scheme which gives financial incentives for productivity initiatives, more companies will gradually adopt some of the productivity measures.

Adapted from *The Straits Times*, 1 Feb 2012

Figure 3: Singapore's inflation rate



Source: www.tradingeconomics.com; Statistics Singapore

Extract 8

Job losses rose in the final quarter of the year as the economic outlook deteriorated sharply. However, for the whole of 2011, the unemployment rate averaged 2 per cent overall, 2.9 per cent for residents and 3 per cent for Singaporeans – Singapore's unemployment rate fell to a 14-year low in 2011.

Citigroup economist Kit Wei Zheng, commented that the labour market remains fairly tight, notwithstanding pockets of weakness in cyclical sectors and that the strong jobs report suggests that many businesses here still face an acute labour shortage, despite a slowdown in economic activity in recent months.

Credit Suisse economist Wu Kun Lung remarked that the jobs report supports the view that the tightness in the labour market is partly structural, reflecting the tightening of immigration

policies in Singapore**.** High job vacancy levels, especially in the services sector, suggest that firms have trouble meeting their labour demand.

Barclays Capital economist Leong Wai Ho added that the tightness in the job market has not dissipated, even as economic growth slows, reflecting slower resident population growth, higher labour force participation rate, more stringent foreign labour policy, and continued unmet demand for service, support and administrative staff following recent large increases in capacity in key services industries.

Adapted from *The Business Times*, 1 Feb 2012

Table 1: Singapore's selected macroeconomic indicators

	2008	**2009**	**2010**	**2011**
Real GDP ($m)	251,374	248,911	285,659	299,625
Unemployment rate (%)	2.2	3.0	2.2	2.0
Productivity (% change)	-7.3	-3.6	11.1	1.0
Current Account	37,276	43,836	75,687	71,680
Exports as % of Real GDP	190%	157%	168%	172%
Exchange rate (S$ per US$)	1.4392	1.4034	1.2556	1.3607

Source: Department of Statistics, Singapore

Questions

a. i) Based on Figure 2, identify the country that will be most affected by Europe's economic woes. [1]

ii) Explain how Europe's economic woes will affect the growth of the country you have identified in part (a)(i). [3]

b. i) Account for Singapore's inflation rate in 2011. [4]

ii) To what extent will rising inflation in Singapore affect her other macroeconomic goals? [10]

c. With the help of a diagram, explain why Singapore's unemployment rate fell to a 14-year low in 2011 despite the economic outlook deteriorating sharply. [4]

d. Comment on the effectiveness of the policies undertaken by Singapore in achieving low inflation and sustainable economic growth. [8]

Section B

Answer **one** question from this section.

3. a) Explain how resources are allocated in a free market economy. [10]

   b) If a good or service gives rise to positive externalities, it should be produced by the Singapore government. Discuss. [15]

4. a) Explain the benefits of free trade to a nation. [10]

   b) Discuss the extent to which the Singapore government uses trade to promote economic growth. [15]

---- End of paper ----

2013 JC2 Prelim Economics H1

CSQ 1

a.	i)	Describe the trend of world coffee prices in Figure 1.	[2]
		World coffee prices were generally rising until end of 1Q in 2011 (1), thereafter falling (1).	
	ii)	Using economic concepts, account for the changes in world coffee prices between 2010 and 2012.	[5]
		Coffee prices were rising between 2010 and 1Q 2011 can be explained by (max 3m): 1) Increase in DD - Increase in number of coffee drinkers - Increase in speculation DD due to expectations of rising prices 2) Fall in SS - Poor harvest in leading coffee-producing countries, e.g. Brazil and Columbia Coffee prices were falling between 1Q2011 and beginning of 2012 can be explained by (max 2m): 1) Decrease in DD - Decrease in speculation DD due to volatility in the financial market - Decrease in DD due to falling income Changes in prices have been significant due to inelastic SS of coffee (max 2m). - Any shifts in the DD curve will result in a sharp change in the prices. 3+2+2 = max 5	
	iii)	With reference to the data, explain how the trend of world coffee prices will continue in 2013.	[3]
		Expectation that SS will increase faster than the increase in DD à expectation of falling prices (1) à fall in DD (1) à world coffee prices will continue to fall (1)	
b	i)	Using economic analysis, explain the market failure described in Extract 3.	[4]
		There is no well-established property right of water bodies (2m) è Coffee planters will free-ride on the water bodies and discharge waste water into water bodies at low or no cost	

		Since coffee planters only care about their private benefits and costs and do not care about externalities (3m) è Coffee planters will discharge waste water into water bodies since that is the cheapest way to deal with the waste water è Since waste water released is a health hazard and causes stomach diseases, MEC > 0 è The irresponsible actions of coffee planters will result in welfare loss	
	ii)	In light of the above market failure, you have been tasked by the government to evaluate the appropriateness of the measures implemented by the various bodies mentioned in the data and recommend how the market failure can be better tackled.	[8]
		Measure #1: Lagoon methods to treat water + Regulation This technique recycles the waste water generated from the coffee pulping machines until the water is free from pollutants. Hence, if the coffee planters use this technique there will be a reduction in negative externalities generated which addresses the root of the market failure. Regulation is a command measure and there needs to be close monitoring and harsh penalties in place to stop the coffee planters from continuing to pollute the water bodies and flout the rules set by the PCB. This is necessary for the measure to be successful Evaluation: - This measure is however resource intensive as manpower has to be allocated by PCB or village government to closely monitor the use of lagoon system. - Besides a well-established system of rules and penalties must be in place to effectively deter flouting of the rules. - However, due to resource constraints, there is weak monitoring by the PCB in the 1,300 coffee estates, hence enforcement was left to the village governments which may not have the expertise in dealing with the monitoring. - From the data, many coffee planters in many estates are still not using the lagoon methods and continuing to generate external costs on third parties. Measure #2: Subsidies given to use dry pulpers Subsidies given to coffee planters reduce the cost of switching to dry pulpers which encourages these planters to use the dry pulpers which use less water and hence generate less waste water. This will reduce the negative externalities generated which will address the root of the market failure. Evaluation: - Due to the weak monitoring of the use of lagoon systems, higher subsidies can be given to encourage planters to switch to a 'cleaner' method.	

- This could be a more efficient and sustainable measure to reduce the externalities.
- However, the implementation costs are significant as the government or Coffee Board may not have the funds to channel into such subsidies. This can be seen from the data in that coffee planters seem to be delaying the switch to dry pulpers because they are waiting for the Coffee Board to increase the amount of subsidy from 20% to 50%.
- Therefore, although it may be a more efficient and sustainable measure, the set up cost may be very high.

<u>Conclusion</u>
Several measures have been put in place to address the source of the market failure and if the coffee planters adhere to these measures the negative externalities will be reduced. However, it seems that the coffee planters have yet to take up the techniques which will reduce the amount of waste water generated which means that the source of the market failure is not addressed. Furthermore, it seems that due to the large number of coffee growing areas which translates to the large number of coffee planters, the government bodies are unable to enforce that the coffee planters are adhering to the rules. Hence, water pollution issue has not been resolved.

Level	**Descriptor**	**Marks**
L1	An answer which lists the measures implemented to address the market failure with very little explanation.	1-2
L2	A one-sided answer which explains how the measures address the source of the market failure OR A two-sided answer which explains how the measures address the source of the market failure AND evaluates the effectiveness of the measures but there are gaps in the discussion. An answer which makes some reference to the data.	3-4
L3	A well-developed two-sided answer which discusses how the measures address the source of the market failure AND evaluates the effectiveness of the measures. An answer which thoroughly uses data evidence.	5-6
E1	Conclusion with little or no justification.	+1
E2	Conclusion with justification.	+2

c.		Discuss the impact of globalisation on the coffee café market in India.	[8]

Impact on consumers:

- Globalisation à entry of foreign firms into India (e.g. Starbucks) à increase in SS (i.e. more coffee chains/joints or competition forcing firms to be more efficient) à fall in prices (ceteris paribus) + increase in Q
- Globalisation à entry of foreign firms into India à increasing competition amongst firms à better quality services (e.g. environment, experience) + better variety (e.g. can cater to different taste and preferences)

Impact on producers:

- Globalisation à entry of foreign firms into India à increases competition in the market à more competitive environment à India coffee café chains have to constantly innovate or bring down cost to maintain competitiveness à expansion of outlets + catering to local taste and preferences
- Such firms may not lose a lot of market share as their prices are still relatively lower to those of Starbucks and the DD for such coffee will probably increase with growing affluence in India.

Overall, the coffee café market in India should expand with a higher Q and lower P. There is also more variety and choices for the consumers. Efficiency (productive and allocative) should also improve

Level	Descriptor	Marks
L1	An answer which lists the possible impact of globalisation on the coffee café market in India.	1-2
L2	An answer which explains 1) How the consumers will be impacted or how the producers will be impacted or 2) How the impact is positive or how the impact is negative OR An answer which explains (with gaps) 1) How the consumers will be impacted and how the producers will be impacted or 2) How the impact could be positive and/or negative The answer should make some reference to the data.	3-4
L3	A well-developed answer examining a range of impact which could be positive and/or negative on both the consumers and producers with good use	5-6

		of data evidence.	
E1	Conclusion with little or no justification.	+1
E2	Conclusion with justification.	+2

CSQ 2

(a)	(i)	Hong Kong.
	(ii)	Europe's "economic woes" have resulted in falling incomes amongst Europeans. Purchasing power is lowered thus reducing demand for exports from Hong Kong. This fall in export revenue will lead to lower net exports thus reducing aggregate demand and Hong Kong's national income. *Falling incomes/purchasing power – 1m* *Reduced demand for exports / Fall in net exports – 1m* *Fall in AD and NY – 1m* *Given that Figure 1 references exports, other causes of falling growth in HK will not be accepted.*
(b)	(i)	**Cost push inflation (2m)** Rising oil and food prices (Extract 1). Rising accommodation/transportation costs (Extract 2) Tighter foreign worker policy (Extract 2) Rising cost of production will reduce aggregate supply, causing the general price level to rise. **Demand pull inflation (2m)** Higher domestic spending (Extract 2) Higher consumption will lead to rise in aggregate demand, causing the general price level to rise. *A maximum of 3 marks may be given if answer only addresses cost-push inflation with identification of 2 different pieces of evidence and explanation.*
	(ii)	Aim: explain how inflation could affect the other economic objectives: **Actual growth & Cyclical Unemployment** · Rise in cost-push inflation is represented by a fall in AS due to higher costs of production. This will lead to reduced production by firms given the lower rate of return, thus resulting in a fall in national income and a rise in cyclical unemployment. · Extent: Since inflation in Singapore is driven by both demand and supply-side factors (Extract 2), this might mitigate the impact on national income. Producers will weigh the higher costs against stronger domestic demand. However given the weak global

outlook (Extract 1), the impact on actual growth is likely to be significant given Singapore's export-driven growth (Table 1).

Potential growth

- Rising costs will discourage FDI leading to a lower rate of capital accumulation thus hampering potential growth.
- Extent: Coupled with the weak economic outlook (Extract 1) and our stuttering productivity growth in 2011 (Table 1, Extract 2), the fall in FDI is likely to be significant.

BOP

- As mentioned above, the fall in FDI will lead to LT capital account outflow.
- Rising costs will diminish our export competitiveness and lead to reduced export revenue (assuming Ep>1). This will adversely affect our current account.
- Extent: While BOP is likely to deteriorate given inflation, Singapore's BOP is generally healthy (CA in Table 1) and unlikely to be of major concern.

Conclusion

- Adverse effect on Singapore's macroeconomic stability due to lowered growth and higher unemployment.
- This is especially so given our need to maintain competitiveness in light of our dependence on external sources of growth.

Level	Descriptor	Marks
1	List or describe the impact on a few macroeconomic goals	1 – 2
2	Attempt at explaining of the possible impact on other macroeconomic goals but with gaps or inaccuracy in explanation Or Clear explanation of the possible impact on limited macroeconomic goals (lacking in scope)	3 – 5
3	Clear analysis of the impact on at least 3 macroeconomic goals.	6 – 8
E	Substantiated conclusion	+2

(c)

Tightening immigration policy for foreigners (Extract 3) and slower resident growth (Extract 3) (1) has resulted in a fall of Yf due to the reduced labour force (quantity of labour) (1). Thus despite the poor economic climate, unemployment rate has fallen given that AS fall exceeds AD fall (1).

Appropriate AD-AS or PPC diagram (1m)

(d)

Exchange rate policy

- Currency appreciation (extract 2) targets both demand-pull and cost-push inflation. This may also increase the price competitiveness of our exports which have high import content, thus bringing in greater export revenue.
- However, currency appreciation to address short-term fluctuations in price may not be suitable due to its limited effectiveness (1% appreciation of the Nominal Effective Exchange Rate (S$NEER) will lead to a 0.8% decline in the domestic CPI level over eight quarters – Extract 2). However Singapore is limited in its choice of monetary policy since it is an interest rate taker.
- While exchange rate policy will reduce imported inflation, it may lead to slower growth since exports are now relatively more expensive in foreign currency. Thus while an effective means of addressing inflation, the impact on growth is more uncertain.

Supply-side policies

- Singapore's focus on productivity through financial incentives (Extract 2) will cause PPC to shift outwards and possibly achieving non-inflationary growth. Likewise, productivity gains will aid in lowering costs (cost-push inflation) and thus boost production (actual growth).
- This will help complement demand-side efforts to boost growth which might be limited due to our weak multiplier.
- But given that Singapore is a mature economy (Extract 2) with a large tertiary sector, it is not as easy to increase productivity by simply increasing capital or labour. Our productivity gains are typically lower than our neighbours (Extract 2). Furthermore take-up by firms is slow suggesting the incentives may do little to address growth in the short term (Extract 2).

Conclusion

Singapore's policy mix tends to take a longer term view in achieving both inflation and growth. In the short term, they appear to be more effective in addressing inflation woes. However, productivity gain for Singapore may be elusive given its economic structure. Perhaps Singapore should consider exploring new markets and continue its training of her workers to ensure that its growth is more balanced.

Level	Descriptor	Marks
1	Describe the effects of the policies without making good connection on inflation and economic growth	1 – 2
2	Attempt at explaining the effectiveness/non-effectiveness of the policies undertaken but with gaps or inaccuracy in explanation Or Clear explanation of the effectiveness or non-	3 – 4

	effectiveness of the policies undertaken but largely 1-sided.	
3	Clear analysis of the effectiveness and non-effectiveness of the policies undertaken on achieving low inflation and sustainable economic growth.	5 – 6
E	Substantiated conclusion	+2

Question 3

a) Explain how resources are allocated in a free market economy. [10m]
b) If a good or service gives rise to positive externalities, it should be produced by the Singapore government. Discuss [15]

Suggested outline part a)

How resources are allocated in a free market economy:

The price of a good reflects the value placed on it by consumers. Consumers indicate their tastes and preferences to firms by the price that they are willing and able to pay for the goods. The higher the demand, the more consumers want that good or service, the price of the good or service will increase (this shows consumers' sovereignty)

Producers indicate how much they are willing to supply at every price level using a combination of labour and capital to produce the output. Producers seeking to maximise profits would only produce goods which consumers demand. The higher the price of a good, the more the producers will supply the good

In this way, the *price acts as a signal* telling the producers what to produce and how much of the good to produce, this will determine the allocation of resources among various goods.

Illustrate with a diagram that shows an increase in the demand of a particular good (use an example of a good) and explain how price will adjust and eliminate the shortage at the initial price level, resulting in an increase in the equilibrium price and quantity.

The profit-motive of producers will mean firms tend to choose the least cost method. To do so, firms are guided by signals they receive regarding relative factor (resource) prices.
E.g. For a firm whose production includes both capital and labour, should the price of capital decreases relative to labour, the firm will replace labour for more capital (assuming they are both close substitutes)

The free market then distributes the good produced according to consumers' willingness and ability to pay, i.e. according to their purchasing power. Purchasing power depends on factor income (wages, rent, interest and profit).

Level	Descriptor	Marks
L1	For an undeveloped answer with superficial explanation of the role of market in allocating resources.	1 – 3
L2	Answer that attempts to provide an explanation on the role of the free market in allocating resources using price signals with the use of examples though answer may lack depth or there are gaps in explanation.	4 – 6
L3	A well-developed answer which is able to clearly state how consumers and producers interact with one another through the intersection of demand and supply to achieve an equilibrium price and output (mechanism). The analysis must address the 3 fundamental questions. Good examples are necessary.	7 - 10

Suggested outline for part b)

Intro: Define positive externalities and Singapore production

<u>Thesis: the S'pore govt should produce</u>

<u>In the case of pure public goods (100% externalities):</u>

→ Non-excludable . This means it is not possible to prevent a non-paying user from enjoying the benefits of consumption of a good - free rider problem since there is no incentive for consumer to pay. So public goods generate 100% positive externalities
→ Non-rival in nature; consumption of a good by a user does not diminish the amount of the good available to the additional user. Marginal social cost of providing the good to an additional user is zero. Difficult for private producers to charge a price for it
E.g. In the case of a pure public good like National Defence, the provision of defence security to a citizen does not diminish the level of security available to the additional citizen of a country.

Left to the free market, public goods will not be provided by private producers, there will be total market failure. Thus in this case, the S'pore govt should provide for it. Direct provision is feasible as the govt is not profit oriented, so it does not need to charge a price. It can use tax revenue to fund for the production of such goods.

Evaluation:

Government as the sole of producer of a good may result in productive efficiency as the government is not guided by profit motive. There could be excessive use of

resources and new distortions may emerge when the funding for such goods is generated through the imposition of taxes in other markets.

However, one can argue that the welfare loss generated when the market is allowed to fail is very great ve (because of the presence of large positive externalities). Government's direct provision is justified in this case. In order to minimise productive inefficiency, S'pore government may employ private firms to carry out production or supply the service directly while the government remains as the sole provider. E.g. Street Lamps are provided by Singapore's Land Transport Authority but their construction is carried out by private contractors.

<u>In the case of merit goods that are non-rivalrous</u>

Explain briefly how merit goods may result in allocative inefficiency →the presence of positive externalities → MSB>MPB → the problem of under consumption → partial market failure. Thus the Singapore government intervention is needed to move the output level to where MSC = MSB for optimum allocative efficiency.

Some merit goods generate large positive externalities and the MSC of providing the good to an additional consumer is negligible (similar to the case of public goods) e.g. museums and art galleries. Apart from some congestion costs during the busiest periods or additional staffing for special exhibits, the MSC of museums should be close to zero. It is difficult then to charge a price when MSC (MPC) = 0. So the government should provide the good for free.

The Singapore government has allowed free admissions to 11 museums for Singaporeans starting in March 2013.

Evaluation:

Even though the museums in Singapore are funded by the government, the management of the museums are allowed to run on their own. This will ensure that the museums are exposed to market forces and they will compete to bring in quality exhibits and art programmes to the public.

<u>In the case of certain basic human right with large positive externalities:</u>

Some merit goods are viewed as a basic human right, so the public sees it as the duty of the state to provide these goods for free or at very low charge. The govt ensures that these merit goods can be consumed by everyone, regardless of their income level, as it brings large benefits not only to the private consumers but also to society.

Singaporean children can get four vaccinations for free at polyclinics. The vaccinations will shield them against some common and preventable childhood infections such as whooping cough and measles. There are overwhelming benefits from these vaccinations, not only for the children but for society's public health in general. It is recommended that at least 95 per cent of the population needs to be vaccinated in order to stop outbreaks of some of these diseases. Through

government provision, the Singapore ensures that these vaccinations are accessible for every child.

Anti-thesis: the S'pore govt should NOT produce goods with positive externalities

In the case of merit goods where competition is important to ensure quality:

Government's provision may bring along inefficiency, it may result in poor quality goods or service. There could also be the problem of over consumption of the good. (Illustrate with a diagram that shows the problem of over consumption).This results in wastage and misallocation of resources. The resultant inefficiencies may be very large and reduces society's welfare significantly.

The Singapore govt regards that in some cases, goods with positive externalities, should be supplied through the market. Competition amongst providers is vital in some markets to ensure high quality service or product. Competition may also bring about innovation and may result in an array of differentiated goods or services that will benefit society. The govt's role in these cases is to influence consumption or production through subsidies or grants to correct the market to achieve efficiency. The government may also intervene through the construction of certain infrastructure or network to offset the high capital outlay for private producers.

In the healthcare industry, there is direct provision of healthcare infrastructure by the govt in the construction of public hospitals and polyclinics but the govt subsidises patient's medical fees and the hospital's operating costs. Explain with a diagram how a subsidy will correct the market failure.

The government has also given public hospitals the full autonomy to manage its operations and run as private firms to ensure a high quality service. This move also ensures that there is competition from private hospitals in attracting quality staff and may spur medical innovation for the industry

Evaluation:

Unlike govt production, a subsidy may not necessarily ensure that medical services are affordable for low income households. Therefore Singapore govt has implemented means testing, a targeted form of subsidy, to address this. This means that the low income individuals will receive more subsidies whilst those in the highest income group receives none at all.

Conclusion:

Besides pure public goods such as public defence, law enforcement services and flood control system, the Singapore government has moved towards providing some merit goods for free such as entrances to museums and early morning MRT rides. This can be attributed to the fact that the government deems these goods or services to have large positive externalities and the impact on society when provided for free, will be significant. Direct govt production in the construction of certain infrastructure, that is very costly for private producers, may also justified to increase the production of certain merit goods.

However, the Singapore government believes strongly in public-private provision of most merit goods to ensure that Singaporeans enjoy a high quality service. Instead of direct provision, the government employs market based solutions such as subsidies or grants to ensure efficiency in the allocation of resources. This is seen in Singapore's education, healthcare and public transport industry. This approach will also reduce the reliance of the citizen's on the government and is more sustainable. It will free up Singapore's budget to address potential macro problems for the economy.

L1	For a limited or inadequate analysis (descriptive knowledge) of government's production in some markets with positive externalities.	1-4
L2	For an explanation to support government's production in some markets with positive externalities, provided sound economic analysis, but arguments were only one-sided OR For a balanced argument in at least 2 cases in the discussion of government's production in some markets with positive externalities, with flaws in economic analysis. Limited use of examples	5-8
L3	For a balanced and well-elaborated arguments of 3 cases in the discussion of government's production or private production. Accurate use of relevant economic analysis. Good reference to Singapore's context.	9-11
E1	For an unexplained assessment, or one that is not supported by economic analysis.	1 – 2
E2	Judgment is based on economic analysis and adequately substantiated	3 – 4

Question 4

(a) Explain the benefits of free trade to a nation. [10]

(b) Discuss the extent to which the Singapore government uses trade to promote economic growth? [15]

Approach to Part (a):

Candidates are expected to differentiate between free trade versus trade since 'free' refers to no restrictions are imposed on the international transactions between nations. The benefits are based largely on the Comparative Advantage Theory that forms the basis for trade and the benefits that come with it. Ultimately, the benefits are expected to promote sustained economic growth and improve standards of living.

Suggested Answer (a)

Intro

- Free trade refers to transactions without any restrictions and often depends on the comparative advantage of a nation
- However, there may be instances where free trade occurs due to intra-industry arguments

Body

Explain the benefits of free trade

1. Actual growth
    a. Rise in world output from increase in net exports è c.p. increases AD è via k effect è rise in national income
        i. Greater access to markets è able to reap Economies of Scale in production è lowers price
        ii. A vent for surplus in domestic production Eg. When there are insufficient domestic demand to fully utilise all the available resources
    b. Rise in national income è higher purchasing power
    c. Evaluation: depends on availability of spare capacity, else there may be inflationary pressure in the economy
    d. Evaluation: depends on infrastructural rigidity
2. Potential growth
    a. Structural development from greater competition and efficiency è improvements in production processes and transfers of technology è improves capacity and productivity over time
    b. Import of capital equipment and technology to improve capacity and efficiency of domestic firms
3. Higher SOL
    a. Rise in consumption possibilities
        i. From import of cheaper alternatives for domestic consumers è consumer surplus rises
        ii. From rise in import in variety of goods and services for domestic consumers è welfare increases
    b. Rise in import è provides cheaper raw materials for production è lowers domestic cost of production

Conclusion

- Given the benefits, it is often a driver of a nation's economic growth
- However, there may be costs and trade-offs involved

Mark Scheme

Level/Mark	***Competencies / Descriptors***

L3 7 - 10	Well-substantiated answer that covers the areas of sustained growth and standard of living.
L2 4 - 6	Answer that lacks sufficient scope and may contain gaps in explanation. Answer that covers at least 2 out of the 3 areas in the suggested answer above.
L1 1 - 3	Mere listing of the benefits of trade without clear understanding or weak attempts in explanation of how a nation may benefit.

(b) Discuss the extent to which the Singapore government uses trade to promote economic growth? [15]

Approach to Part (b):

The basis for argument hinges on whether trade forms an essential part of a nation's contribution to national income. Thus, the characteristics of such nations should be highlighted in the answer expected. However, there may also be costs involved in trade that may require policies to mitigate. For nations that are less reliant on external demand, economic policies that focus on domestic factors may play a larger role. In the final analysis, in order for economic growth to be sustained, economic policies may be relied upon to complement the benefits of trade to boost growth.

Suggested Answer (b)

Intro

- Trade that leads to rise in (x-m) promotes economic growth in general for all economies
- But there are costs involved too Eg. Excessive rise in M becomes a withdrawal affecting rate of growth; externalities such as environmental degradation
- Degree of impact of trade to drive growth differs amongst nations Eg. Singapore more reliant than other where domestic economy contributes more to GDP
- Therefore, there is a need for macroeconomic policies to promote economic growth and curb other problems from trade

Body

Explain how & extent trade has been used to promote economic growth

1. Trade policies
    a. Trade agreements

        i. Reduces restrictions with trade partners (i.e. reduction in tariffs) è increase export volumes è rise in AD è rise in national income via k effect
        ii. Evaluation: possible rise in imports from trade partners negate rise in exports, proportion of contribution from internal demand
    b. Trade restrictions
        i. Reduces trade restrictions à foreign countries exporting more to Singapore à rise in AD and national income for them à rise in DD for Singapore exports (beggar-thy-neighbour effect) è rise in AD è rise in national income via k effect
        ii. Evaluation: export growth should be more than import growth due to the size of global market vs local market
    c. Trade arrangements (eg. Customs union)
        i. Formation of trade arrangements may lead to more trade creation between member nations but leads to trade diversion with non-members
        ii. Evaluation: complimentary endowments in factors of production or technology affects the degree of effectiveness to boost trade
2. Devaluation of home currency to boost net exports in times of global recession
    a. Exports in foreign currency is cheaper è rise in export competitiveness
    b. Imports in home currency is more expensive è fall in import expenditure
    c. Net fall in (x-m) è rise in AD è rise in national income via k effect
    d. Evaluation: M-L condition or elastic DD for export and import, time lag (J-curve effect), proportion of contribution to GDP from external demand, root cause of falling net exports is not due to price competitiveness but a fall in foreign income levels.

Explain how & extent other economic policies have been used to promote economic growth

These arguments focus on the domestic factors to promote economic growth and are effective because the domestic sectors / demand constitute a larger proportion in terms of contribution to national income. Thus, focus of policies to boost to C, I and G in the AD instead of (x - m). These arguments may also be used to reduce the over-reliance on trade as the main driver of economic growth for the nation.

1. Expansionary demand management policies
    a. Expansionary fiscal policies
        i. Increase government expenditure (G) è rise in AD
        ii. Lower taxation (T) è higher disposable incomes è rise in C and I è rise in AD
        iii. Rise in AD è increases national income via k effect

iv. Evaluation: limited by confidence in economy, time lag, government budget, size of k

b. Expansionary monetary policies
   i. Lower domestic interest rate due to increase in domestic money supply
   ii. Encourages investment (I) due to cost of borrowing falls relative to rates of return è rise in AD
   iii. Encourages consumption (C) due to lower opportunity cost of consumption è rise in AD è rise in national income via k effect
   iv. Evaluation: subject to strong consumer/business confidence, interest elasticity, Singapore is an interest-rate taker.

2. Expansionary supply side policies – keeps inflationary pressures in check
   a. Lowers business costs (SRAS)
      i. Via rise in productivity è training or improvement of skills, harness technology, use of machines etc
      ii. Helps mitigate negative impact from greater foreign competition due to increased trade
      iii. Evaluation: mindsets, funding
   b. Raises long run capacity of economy (LRAS)
      i. Via Infrastructure expenditure and development è building of road networks, R&D facilities etc
      ii. Helps mitigate structural unemployment through expenditures on training human capital
      iii. Evaluation: time lag, funding, land space and resources

Evaluation

- Whether trade or other factors are more important to promote economic growth depends on
  - nature of economy (degree of contribution from trade to GDP vs domestic factors)
  - mobility and supply of factors of production in the economy
  - state of economy (whether there are spare capacity to meet rise in AD)

Conclusion

- A nation that is more reliant on external demand (eg. Singapore) would depend on trade to drive its AD è economic growth because total trade comprises more than 300% of its GDP
- Other nations that rely more on domestic sectors for growth may therefore depend on other macroeconomic policies to boost C, I or G to increase AD

- The size of multiplier that depends on the proportion of leakage in the economy limits the effectiveness of using macroeconomic policies to promote economic growth

Mark Scheme

Level/Mark	***Competencies / Descriptors***
L3 9 - 11	A balanced answer that shows a clear understanding that trade and other policies can be used to promote economic growth. The extent of this synergistic relationship should be clearly demonstrated using the characteristics of economies as the basis for judgement.
L2 5 - 8	Answer that shows a clear understanding that trade and other factors can be used to promote economic growth but with some gaps in explanation (i.e. good scope but lacking depth) OR Answer that shows very clear understanding that trade can/cannot be used to promote economic growth without consideration of other factors promoting economic growth (i.e. good depth but lacking scope)
L1 1 – 4	Some attempt to answer the question but lacks both scope and depth in explanation.
E1 1 - 2	Some substantiation and evaluation of arguments demonstrated
E2 3 - 4	Well-substantiated answer that shows a clear understanding that the characteristics of an economy plays a pivotal role in how economic policies should be adopted.

VICTORIA JUNIOR COLLEGE

2013 JC2 PRELIMINARY EXAM

H2 ECONOMICS – PAPER NO. 9732/01

19 September 2013 8:00 – 10:15 am

READ THESE INSTRUCTIONS FIRST

Write your name and class on all the work you hand in.

Write in dark blue or black pen.

You may use a soft pencil for diagrams.

Do not use staples, paper clips, glue or correction fluid on the work that you hand in.

Answer **all** questions.

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

Start each question on a FRESH piece of paper.

At the end of the examination, fasten your work securely using the string provided.

This document consists of **7** printed pages.

Question 1

The Coffee Market

Extract 1

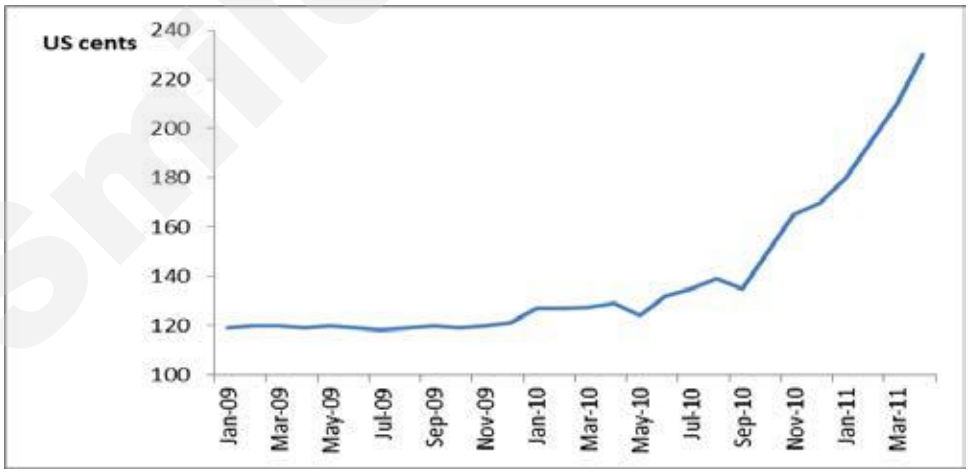
A combination of the growing demand for different types of coffee and the poor harvests in recent years have led to coffee prices hitting a 14-year high this week. Coffee roasters are already passing on some of these rises to stores and cafes. Starbucks has already increased prices and Dunkin' Donuts and Folgers have also raised prices several times to cope with the rising coffee bean prices.

"Demand and speculation that harvests will continue to be poor is an on-going sentiment and is likely to continue in the next couple of years," said Hector Galvan, a senior trader at RJO Futures.

Hawaii is the only coffee-producing state in the United States (U.S.) and cannot supply enough to meet the nation's needs. The vast majority of coffee consumed in the U.S. is imported. The dependence upon coffee as an import has haunted Americans for centuries. The U.S. is particularly dependent upon Brazil to produce bumper crops of coffee as harvests have been weak in other coffee-producing nations, like Mexico, Kenya and Colombia. Brazil and Colombia, the leading coffee producers, have suffered consecutive poor crop harvest, one of the biggest factors in driving up prices as other coffee-producing nations do not have the ability to offset the slump from Colombia and Brazil.

Adapted from *CNN Money*, 18 February 2011

Figure 1: World Coffee Prices (in US cents per pound)



Source: *International Coffee Organisation*

Extract 2

With the coffee-picking season in full swing in India, water bodies such as rivers are getting polluted with waste water from coffee pulping machines. Though this is a seasonal occurrence, some village local governments have started taking action against this type of pollution this year.

Waste water released from coffee pulping machines is a health hazard and causes stomach diseases. Hence, the Pollution Control Board (PCB) has strictly imposed regulation to install lagoons to treat water used for pulping. But in many coffee estates, this norm is not followed and every year, the people air their grievances but in vain. For the first time, village local government in Chikmagalurk, a province in India, raised its voice against water pollution by coffee planters and its chairman B E Nagesh, went around the estates strictly telling the planters who are not following the norms fixed by the PCB to stop pulping till they install lagoons to recycle the waste water.

The PCB has also advised them to opt for dry pulpers, which use very little water. However, the planters requested for more time so they can pressure the Federal government to enhance the subsidy from the existing 20% to 50% to purchase dry pulpers.

He said that due to resource constraints, the PCB has sent letters to all village local governments in coffee-growing areas to inspect the 1,300 coffee estates in their areas. These village local governments are to inform the Federal government to take actions if any coffee planters do not adhere to the rules laid down by the PCB.

Adapted from *The Times of India*, 23 Dec 2011

Extract 3

Choi Kyung-suk is grateful that his small café has lasted 10 years in the trendy neighbourhood of Hyehwa-dong in central Seoul. But he is also a realist who says that the odds are against it lasting another decade. “I think I am getting about 30 to 40 per cent fewer customers now compared to a few years ago. The location of the new Starbucks right at the entrance of our street really hurts,’’ Choi said. “It’s becoming more and more difficult to compete with the major café chains and their generous space, cushy sofas and cool interior. I can say with confidence that my coffee is better, but these days it’s less about the drink than lifestyle — you go to Starbucks to be seen and I can’t compete with that.’’

According to industry estimates, the country now has dozens of café chains operating around 3,000 outlets. The top ten chains operate about 2,000 of the outlets, with Caffe Bene emerging as the leader with about 550 outlets, followed by Angel-In-Us with 400 and Starbucks 350.

The rapid expansion of café chains on streets throughout Korea has some observers believing that the market has entered a phase of over-capacity and only a few of the current total number of players will eventually survive. The café chains, however, continue to insist that there is considerable room left for growth. Caffe Bene, which has been expanding rapidly thanks to a celebrity advertisement campaign, is planning to increase its number of outlets to 800 by the end of the year.

Adapted from *The Korean Times*, 10 June 2011

Extract 4

Starbucks Corp which yesterday introduced India to its coffee drinks, such as caramel macchiatos and espressos, may find smaller and cheaper beverages the fastest way to win local coffee drinkers from established rivals. It is a great time for Starbucks to enter the market because some of the base is already here, in terms of cafes and people using them

as socialising hotspots. The average Indian consumer will be happy to upgrade to a Starbucks environment.

In a nation where about two-thirds of the people live on less than US$2 a day, Café Coffee Day, the nation's biggest café chain with 1,360 outlets across the country, sells a regular cup of coffee for US$1, while its closest competitor Barista with 318 outlets, sells for US$1.10. That may prompt Starbucks to sell its coffee drinks for about US$2 to US$2.50 a cup, compared to US$4 in Beijing and US$3.50 in the US.

Café Coffee Day, which also offers local dishes including samosas or savoury pastries catering to Indian palates, plans to expand its outlets to 2,000 by the end of 2014 that would serve all segments of consumers - teenagers, students, office goers and families.

Analysts believe that this is not a saturated market that one player will end up trampling others. On the other hand, they see that there is a lot of room to grow in this business in India.

Adapted from *The Business Times*, 20 October 2012

Questions

a. i) Describe the trend of world coffee prices between 2010 and 2011 in Figure 1. [2]

ii) Account for your observation(s) in ai). [5]

b. Assess the relative effectiveness of two measures implemented by the various bodies to address the source of market failure mentioned in Extract 2. [8]

c. Using Extract 3, describe the type of market structure operating in the Korean café market. [2]

d. With reference to the concept of price elasticity of demand, explain the economic rationale behind Starbucks' pricing strategy in India. [3]

e. Discuss the impact of greater competition in the café market. [10]

Total: 30m

Question 2

Inflation in Asia

Extract 5

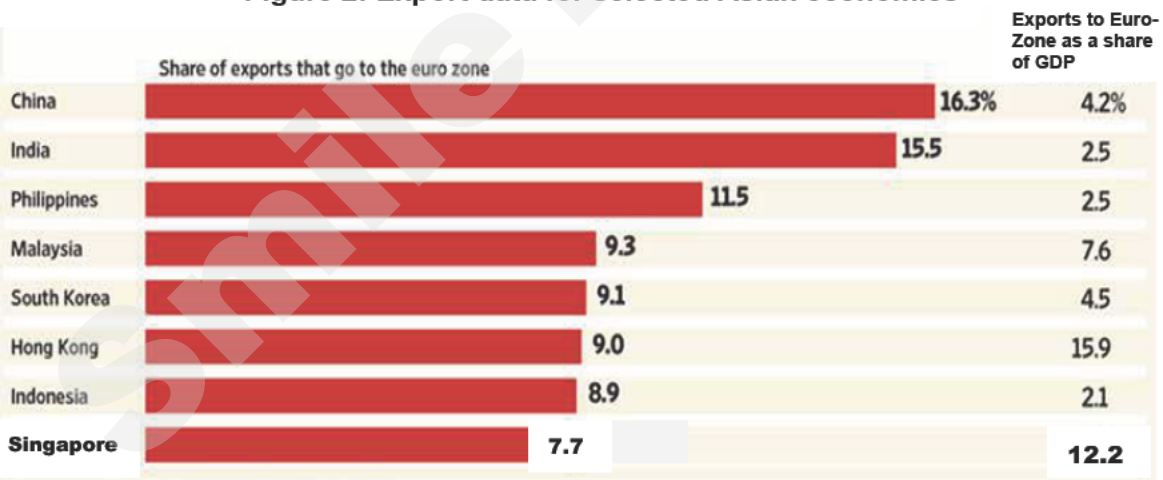
The Asian Development Bank (ADB) says East Asia faces a number of threats, with commodity price driven inflation at the top of the list due to turmoil in the Middle East and nuclear crisis in Japan driving up commodity prices. Higher global commodity prices also drove food prices up across the region. It warned that these higher prices could shake developing Asia's macroeconomic stability and cause widening income inequality.

ADB warned that if left unchecked, rising inflation would trigger wage spirals and affect the region's economic outlook. The external economic environment continues to weaken with an anaemic US recovery and Asia's reliance on Europe as an export market has also made it vulnerable to the continent's debt woes.

Persistent and volatile changes in commodity prices are a challenge to inflation management and the main difficulty for Asia's policymakers is to achieve a coherent policy mix that will tackle inflation and rebalance the sources of growth that is more inclusive and sustainable in the long term.

Adapted from *The Business Times* 29 July 2011

Figure 2: Export data for selected Asian economies



Source: *Credit Suisse (exports); International Monetary Fund (GDP)*

Extract 6

Poor internal fundamentals are the root causes of Vietnam's inflation, which has accelerated for the 12th consecutive month in August to 23% from a year earlier. Most of Asia has been grappling with rising prices, yet Vietnam's economy has been singularly susceptible. This is the country's second bout with inflation in excess of 20% within a period of three years. According to ADB, the causes of inflation are due to high growth of credit expansion, rising transportation costs, declining investment efficiency in state-owned enterprises. High demand for capital and imports of raw materials to fuel its growth was among the contributing factors. While Vietnam is an important rice exporter, its imports were also high, at times equal to 90% of its gross domestic product. Experts have pointed

the finger at the nation's cumbersome product distribution systems with many middlemen that added to costs and made control of the prices of products difficult. Higher inflation expectations than other countries in the region further created an inflationary mind-set.

However, the latest monthly inflation data gave hope that price pressures had peaked, thanks to the government's introduction of a package in May to tighten credit and rein in the country's state-owned enterprises.

Although inflation is set to ease, the situation remains delicate, given a new minimum wage hike that will take effect in October, and Vietnam's continued currency manipulation. In the past weeks, there have been signs of a possible shift toward relying more on price controls on essential goods.

The central bank went on to reduce its interest rate in July to 14% from 15%. In response, the International Monetary Fund said that the cut may confuse investors. "It is too early to go into a full-blown easing cycle given that inflation and inflation expectations remain elevated. Policymakers seem to be demonstrating their low tolerance for slower growth again. A strong commitment to sustaining the effort of tight monetary policy is essential to re-establishing confidence in the dong and restoring macro-economic stability."

Adapted from *Reuters*, 25 Aug 2011

Figure 3: Vietnam's exchange rate and inflation rate

Source: *CEIC*

Table 1: Vietnam's external trade (million US Dollars)

	2008	2009	2010	2011
Exports	62,685	57,096	72,237	96,906
Imports	75,468	64,703	77,339	97,356
Trade balance	-12,783	-7,607	-5,147	-450

Source: *General Statistics Office of Vietnam*

Extract 7

Singapore's inflation unexpectedly accelerated to hit 5.2% last year, the second-highest rate in nearly 30 years, creating risks to the already halting growth. The increase was a result of higher domestic spending, costs of accommodation, private road transport including COEs and a tighter foreign worker policy. Higher than expected domestic inflationary pressure has kept inflation elevated even when global energy and commodity prices have eased.

Policy makers are planning to give equal priority to containing inflation and boosting growth. The central bank will keep its current stance of "modest and gradual" appreciation of the Sing dollar. However, if the current economic environment continues, this will pose a policy dilemma. In Singapore's case, it was estimated that a 1% appreciation of the Nominal Effective Exchange Rate will lead to a 0.8% decline in the domestic CPI level over eight quarters.

A report showed that from 2006 to 2011, the real median income rose by 2.5% a year while for the 20th percentile group, real income has an annual rate of 2.2%. Economists noted that productivity growth is a key driver of real wage growth. But this has virtually grounded to a halt last year, in part due to the slow growth experienced. This underscores the difficulty by the government to shift the mature economy to a productivity-driven model. The concern is that historically, productivity growth has always been somewhat lower than other countries. With the government's push of the Productivity and Innovation Credit Scheme which gives financial incentives for productivity initiatives, more companies are gradually adopting some of the productivity measures.

Adapted from *The Straits Times*, 1 Feb 2012

Questions

a. With reference to Figure 2, explain which country is the most reliant on Europe as a source of its economic growth. [2]

b. Explain how rising inflation could shake a country's macroeconomic stability and cause widening income inequality. [5]

c. (i) With reference to Figure 3, describe the trend of Vietnam's inflation between 2008 and 2011. [2]

(ii) Do you agree with the view in Extract 6 that the poor internal fundamentals are the root causes of Vietnam's inflation? [6]

d. Explain the relationship between Vietnam's exchange rate and its trade balance. [3]

e. Discuss the effectiveness of the policies undertaken by Vietnam and Singapore in tackling rising inflation and creating a more inclusive society. [12]

Total: 30 m

------ End of paper ------

a.	**i)**	**Describe the trend of world coffee prices between 2010 and 2011 in Figure 1.**	**[2]**
		Suggested answer: World coffee prices were generally increasing [1]. With the rate of increase rising [1] OR except for drop in prices in May 2010 and Sept 2010 [1].	
	ii)	**Account for your observation(s) in ai).**	**[5]**
		Suggested answer: <u>To account for the increase in prices</u> [3] Increase in DD [1]: Increase in number of people drinking coffee Fall in SS [1]: Poor harvests in leading coffee-producing nations like Columbia and Brazil (Ext 1, Para 3) Overall, explain combined effect of increase in demand and fall in supply puts an upward pressure on prices or show on a diagram to explain the rise in world coffee prices. [1] <u>To account for increasing rate of rise</u> [2] Consecutive 'disappointing' crop harvest and the inability of other coffee-producing nations to offset the fall in SS => speculation that coffee bean harvests will continue to be poor => expectation of future prices to rise => increase in DD (Ext 1, Para 2) OR SS of coffee beans is price inelastic in the short-run as it takes time for the coffee crops to grow. Therefore, rise in DD leads to increasing rate of rise in prices. OR DD for coffee beans is price inelastic as producers of coffee products have few/no substitutes. Therefore, fall in SS leads to increasing rate of rise in prices. *Stating either DD or SS is P inelastic (without accurate justification) hence sharp change in prices – 1m	
b.		**Assess the relative effectiveness of two measures implemented by the various bodies to address the source of market failure mentioned in Extract 2.**	**[8]**
		Suggested answer: Market failure occurs when society's welfare is not maximised (MSB≠MSC). From the data, the source of market failure is negative externalities generated from the production of coffee.	

		Coffee planters release waste water into water bodies which lead to external costs onto third parties, who are not directly involved in the production of coffee, in the form of stomach diseases. **1. Regulation to use lagoon methods to treat water** This technique recycles the waste water generated from the coffee pulping machines until the water is free from pollutants. Hence, if the coffee planters use this technique there will be a reduction in negative externalities generated which addresses the root of the market failure. Regulation is a command measure and there needs to be close monitoring and harsh penalties in place to stop the coffee planters from continuing to pollute the water bodies and flout the rules set by the PCB. This is necessary for the measure to be successful. Evaluation: - This measure is however resource intensive as manpower has to be allocated by PCB or village government to closely monitor the use of lagoon system. - Besides a well-established system of rules, penalties must be in place to effectively deter flouting of the rules. - However, due to resource constraints, there is weak monitoring by the PCB in the 1,300 coffee estates; hence enforcement was left to the village governments which may not have the expertise in dealing with the monitoring. - From the data, many coffee planters in many estates are still not using the lagoon methods and continuing to generate external costs on third parties. **2. Subsidies given to use dry pulpers** Subsidies given to coffee planters reduce the cost of switching to dry pulpers which encourages these planters to use the dry pulpers which use less water and hence generate less waste water. This will reduce the negative externalities generated which will address the root of the market failure. Evaluation: - Due to the weak monitoring of the use of lagoon systems, higher subsidies can be given to encourage planters to switch to a 'cleaner' method. This could be a more efficient measure to reduce the externalities. - However, the implementation costs are significant and the Federal government may not have the funds to channel into such subsidies. This can be seen from the data in that coffee planters seem to be delaying the switch to dry pulpers because they are waiting for the Federal government to increase the amount of subsidy from 20% to 50%. - Therefore, although it may be a more efficient measure, the set up cost may be very high.	

Comparison of relative effectiveness

1. Regulation is command solution vs. Subsidies which is a market-oriented solution.

Regulation is a blunt policy instrument that forces coffee planters to use lagoon methods and does not consider the possible constraints to make the switch. It also leads to certain inefficiencies e.g. high monitoring costs which is especially the case in India with a lack of expertise in monitoring. On the other hand, subsidies are more efficient as they allow the market to adjust according to market forces.

2. Overall outcome of regulation will be more effective in addressing the source of market failure compared to the subsidies.

Regulation forces the coffee farmers to use the lagoon methods which leads to a more certain impact on reducing the amount of pollution. On the other hand, the subsidy does not make it mandatory for coffee farmers to switch to the use of dry pulpers. Therefore, this measure may not effectively reduce the pollution levels.

<u>Conclusion</u>

Regulation that coffee planters use lagoon methods of producing coffee and provision of subsidies to purchase dry pulpers have been put in place to address the source of the market failure, and if the coffee planters adhere to these measures the negative externalities will be reduced. Although from data evidence, these measures do not seem to be that effective currently, this mixture of measures should be kept in place to complement each other. Overall, it seems that though regulation is a blunt policy, it has more certain effects on addressing the source of the market failure.

L1	An answer which briefly explains the source of market failure OR An answer which describes the measures implemented to address the market failure with very little explanation.	1-2
L2	An under-developed answer which explains how the measures address the source of market failure but with gaps in discussion. An answer which does not assess the relative effectiveness of the 2 measures. An answer which makes some reference to the data.	3-4
L3	A well-developed answer which discusses how both measures address the source of the market failure	5-6

		AND evaluates the relative effectiveness of the two measures. An answer which thoroughly uses data evidence.	
		E1 Judgement of any policy with justification. +1 E2 Judgement of relative effectiveness of 2 measures with justification. +2 1 measure well evaluated but no relative effectiveness – max 3 +1 2 measures well evaluated but no relative effectiveness – max 4 +1	
c.		**Using Extract 3, describe the type of market structure operating in the Korean café market.**	**[2]**
		Suggested answer: The Korean café market is likely to be an oligopolistic industry [1] because there are 10 dominant firms in the industry such as Caffe Bene, Angel-In-Us and Starbucks which operate in total 2,000 out of the 3,000 café outlets [1].	
d.		**With reference to the concept of price elasticity of demand, explain the economic rationale behind Starbucks' pricing strategy in India.**	**[3]**
		Suggested answer: The Ep for Starbucks is likely to be price elastic due to the availability of close substitutes such as Café Coffee Day and Barista, and a large proportion of income is spent on such coffee drinks (Extract 4, Para 2). [1] Hence, by lowering the price of its coffee drinks, Starbucks will see a more than proportionate increase in the quantity demanded of its coffee drinks. [1] This will allow Starbucks to enjoy an increase in total revenue. Assuming ceteris paribus, this means that Starbucks will enjoy more profits. [1] OR The Ep for Starbucks coffee drinks is P inelastic due to strong brand loyalty (Extract 4, Para 1: The idea that the average Indian consumer will be happy to upgrade to a Starbucks environment hint that people already know of the brand). Therefore, there are few substitutes. [1] Hence, Starbucks can charge a higher price (US$2 to US$2.50) and will not lose TR. [2]	
e.		**Discuss the impact of greater competition in the café market.**	**[10]**
		Suggested answer: <u>Intro</u> The café market has seen an increase in the number of	

		competitors in the market. These competitors come in the form of small cafes and large local and foreign café chains. Greater competition can lead to both positive and negative effects on firms and consumers. Other effects on allocative efficiency, consumer choice and innovation can be considered as well. **1. Impact on small cafes/firms** - Small cafes/firms do not earn sufficient profits to engage in significant non-price competition strategies (e.g. generous space, cushy sofas and cool interior) and hence may see falling demand as consumers flock to outlets of large café chains which are more appealing (lifestyle vs drink). - Small cafes/firms are also unable to compete in terms of number of outlets in the streets as compared to large coffee chains which means that consumers are likely to have a greater demand to patronise large coffee chains as they are more readily available. - Overall, small cafes/firms are likely to face falling demand and hence falling revenue. Ceteris paribus, these small cafes/firms will see falling profits. (Extract 3) OR There is a possibility that niche small cafes will survive as 'smaller and cheaper beverages may be the fastest way to win local coffee drinkers' which means these small cafes may still continue to earn revenue. Furthermore, analysts believe that the market is large enough for businesses to survive and thrive which again hints at the possibility that small cafes will continue to enjoy demand and revenue. (Extract 4) **2. Impact on large café chains/firms** - Large café chains/firms are able to attract many consumers due to its ability to engage in non-price competition such as offering 'generous space, cushy sofas and cool interior' (Extract 3) which appeals to consumers' current tastes and preferences. In addition, some of these large firms like Caffe Bene in Korea which has sufficient profits to engage in advertising, have launched a celebrity advertisement campaign (Extract 3) which will further increase DD and lower Ep leading to bigger market share and profitability. - Furthermore, with the expansion of the number of outlets by these large firms e.g. Caffe Bene plans to increase its number of outlets to 800 (Extract 3) and Café Coffee Day in India plans to increase its number of outlets to 2,000 (Extract 4), these cafés will be very accessible to consumers. - Also, branded world-renown café chains like Starbucks already has strong branding worldwide. Although it faces strong competition from other large café chains, it still has loyal consumers who will demand its goods and services. - Overall, these large café chains/firms are likely to see rising demand and hence rising revenue. As long as they are able to	

		keep their costs in check, they are likely to see rising profits, which is likely to be the case as evident in their huge expansion plans. **3. Impact on allocative efficiency** - There is a possibility that as there are more firms in the industry, allocative inefficiency will be reduced. The demand for each firm in this situation is generally much more price elastic as there are many competing firms in the industry. Hence, the level of underproduction and welfare loss is less compared to an industry with fewer firms. OR - If many small firms close down as they are unable to compete with the larger café chains, there will be fewer firms in the industry and there might be greater allocative inefficiency. The demand for each firm in this situation is generally much more price inelastic as there are fewer competing firms in the industry. Hence, the level of underproduction and welfare loss is greater compared to an industry with a larger number of firms. OR Advertising (e.g. Extract 3, Para 3: Caffe Bene's celebrity advertisement) => wastage of resources if every producer engages in such wasteful competition => greater allocative inefficiency **4. Impact on consumers** - Consumers benefit from a large variety of choices as there are more cafés which enter the market. They can choose between small cafes or any one of the many outlets of large café chains. - Consumers also get to enjoy a better quality experience at these cafes as firms implement strategies to attract consumers. E.g. more comfortable seats (Extract 3) and local dishes sold at cafes (Extract 4). - Consumers may also enjoy lower prices of coffee drinks as firms compete among each other in terms of pricing. E.g. Starbucks may offer a lower price to attract more consumers. - Consumers who still prefer a 'traditional', good quality coffee may lose out with the closure of 'traditional' small scale coffee cafés. <u>Conclusion</u> Consumers are the clear winners in terms of greater variety of choice and quality of beverages from greater competition in the café market as firms try to attract them using both price and non-price strategies. The impact on firms is not so straightforward and it depends on the size of the firm. There will also be greater innovation from firms as they try to win over consumers in order to gain more demand. Distinguish between Korea and India. Korea is facing over capacity	

therefore likely that the small firms who cannot compete with the larger chains will close down. However, in India, the data seems to suggest that there is ‘room to grow’; therefore it is likely that even small firms can still survive in India.

L1	An answer which very briefly describes or merely lists the impact of greater competition on the café market.	1-2
L2	An under-developed answer which explains how greater competition affects the café market but there are gaps in the discussion. An answer which discusses less than 3 effects on the market. An answer which makes some reference to the data.	3-5
L3	A well-developed answer which **thoroughly discusses 3 effects** of how greater competition affects the café market. An answer which thoroughly uses data evidence.	6-8
E1	Evaluative comments with little or no justification.	+1
E2	Evaluative comments with justification.	+2

CSQ 2

a.		**With reference to Figure 2, explain which country is most reliant on Europe as a source of its economic growth.**	**[2]**
		Hong Kong (1) as its euro-zone export share of GDP is highest, reflecting the significance of trade on the economy (1).	
b.		**Explain how rising inflation could shake a country's macroeconomic stability and cause widening income inequality.**	**[5]**
		Aim: explain how rising inflation could shake the other macro targets · Rising inflation could lead to escalating wage spiral (extract 1) which in turn leads to rising cost push inflation => price of exports rise faster => faster fall in (X-M) => BOT worsens at faster rate. · In addition, slower increase in FDI inflow or faster increase in FDI outflow due to increasing cost of production. This will slow down a country's EG esp for trade-dependent countries => this could potentially lead to increasing demand-deficient unN · Rising inflation leads to higher inflation expectation (extracts 2 & 3) => consumers and firms consider real price changes (inflation accounted for) when they negotiate wage increase with employers or set product prices. => their decision making may result in higher actual inflation. · The faster increase in commodity price will cause faster rise in price of food (extract 1). Since the poor spends a higher % of income on food relative to rich => poor will be worse off than rich · In Singapore, real annual income of the lowest 20% lags behind the top 50% (extract 3) => widens income inequality. Max 4m for impact on macroeconomic stability alone Max 2m for impact on income inequality alone Minus 1 m if students consider impact of inflation rather than rising inflation	
c.	**(i)**	**With reference to Figure 3, describe the trend of Vietnam's inflation between 2008 and 2011.**	**[2]**
		Inflation was slowing from 2008 to 2009 (1) before starting to increase steadily from 2009 to 2011 (1).	
	(ii)	**Do you agree with the view in Extract 6 that poor internal fundamentals are the root causes of Vietnam's inflation?**	**[6]**
		Causes of the inflation are due to : • Internal factors – easy credit , inefficient use of capital in state-owned enterprises, devaluation of dong making exports relatively cheaper (all these are demand–pull factors), cumbersome product distribution systems, inflation expectation (cost-push) • External factors – rising global oil / food prices => imported	

inflation since Vietnam is heavily dependent on imports

Explain how the above contribute to inflationary pressures.
E.g.: easy credit increases domestic consumption which in turn leads to inflation if the economy is near full–employment.

Conclusion: Agree with the view that internal factors are the culprit since "most of Asia has been grappling with rising prices, yet Vietnam's economy has been singularly susceptible" (extract 1). Singapore which is more dependent on imports than Vietnam (since its imports takes up >90% of GDP) has inflation of only 5.2%, 2nd highest in last 30 years compared to that of Vietnam's >20% within 3 years.

L1	Listing / description of factors	1
L2	Consider either internal or external factors or both but does not explain clearly how which contributes more to inflation.	2- 3
L3	Thorough analysis of how an internal **and** an external factor contribute to inflation to different extent with appropriate application of data	4-5
E	Use of appropriate data to form a conclusion	+1

d. **Explain the relationship between Vietnam's exchange rate and its trade balance.** **[3]**

Dong devalues against US$; balance of trade improves – inverse relationship (1)

Explanation of the relationship, applying the use of Marshall-Lerner's condition - max 2m

e. **Discuss the effectiveness of the policies undertaken by Vietnam and Singapore in tackling rising inflation and creating a more inclusive society.** **[12]**

Vietnam: its initial adoption of tightening up its monetary policy and looking into the inefficiencies of the state-owned enterprises seem to work well as evidenced by the easing of the inflationary pressures.

However, the effect has barely taken off when the central bank embarks on its expansionary monetary policy by cutting rate. This will boost AD due to higher C and I and lead to inflationary pressures. This seems to indicate that the Vietnam govt places the priority of achieving EG over price stability.

The use of price controls e.g. minimum wage hike and control of prices of essential goods lead to unemployment, inefficiencies and wastage.

Currency manipulation through devaluation will artificially make exports cheaper which is not sustainable in the long run in

		promoting EG. Hence Vietnam's policies tend to be more short term. It does not adequately seek to address the short term problem of rising inflation and ensure its growth is sustained by looking into alternative sources. Singapore: its main policy of currency appreciation to address short-term fluctuations in price may not be suitable due to its limited effectiveness (1% appreciation of the Nominal Effective Exchange Rate (S$NEER) will lead to a 0.8% decline in the domestic CPI level over eight quarters). However it is limited in its choice of monetary policy since it's an interest rate taker. While exchange rate policy will reduce imported inflation, it may lead to slower growth since exports are now relatively more expensive. Its reliance on exports may also mean its growth is unbalanced. Hence the policy dilemma between control of inflation vs growth. Its focus on productivity through financial incentives will cause PPC to shift outwards and possibly achieving non-inflationary growth. In addition, if the productivity drive is targeted at training the lower-skilled workers, this will ensure that the growth is inclusive since productivity gain is the" key driver of real wage growth". But given that Sg is a mature economy with a large tertiary sector, it is not as easy to increase productivity by simply increasing capital or labour. Conclusion: Vietnam tends to adopt a short term view in its policy decision – it does not address key fundamental problems associated within the economy. It should look into restructuring its supply chains and introducing competition so as to increase its efficiency. On the other hand, Sg tends to take a longer term view in achieving both inflation / growth. Unlike Vietnam, productivity gain for Sg may be elusive given its economic structure. Perhaps Sg should consider exploring new markets and continue its training of her workers to ensure that its growth is more balanced.	

L1	Superficial listing / mention of ideas	1-3
L2	Unbalanced discussion with some reference to data - Analyse 1 country very well **or** analyse both countries with regards to one objective : max 6m	4-6
L3	Clear elaboration of policies by VN and Sg with appropriate use of data taking into consideration both short and long term implications	7-10
E1	Reasoned conclusion eg effectiveness of the policies is likely to be greater if the root causes are tackled.	+1

	One country analysis with discussion of criteria: max 1m	
E2	- Explain the common criteria affecting the effectiveness in both countries eg time period, match of policies against the root causes - Suggest alternative ways after considering the limitations faced by both countries	+2

VICTORIA JUNIOR COLLEGE
2013 JC2 PRELIMINARY EXAM
H2 ECONOMICS – PAPER NO. 9732/02

5 September 2013 8:00 – 10:15 am

READ THESE INSTRUCTIONS FIRST

Write your name and class on all the work you hand in.
Write in dark blue or black pen.
You may use a soft pencil for diagrams.
Do not use staples, paper clips, glue or correction fluid on the work that you hand in.

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 [ ] at the end of each question or part question.

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.

This document consists of **3** printed pages.

Answer **three** questions in total

Section A

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

1. Rising income levels and an ageing population are changing demand patterns amongst consumers in Singapore.

   Using economic analysis, discuss the likely effects of these developments on different product and service markets in Singapore. [25]

2. a) Explain how firms can increase their market power. [10]

   b) Discuss whether dominant firms are always desirable from a society's point of view. [15]

3. Some governments provide free services, such as internet broadband and healthcare to households, while other governments merely subsidise production of certain goods and services, such as education.

   Discuss the extent to which the Singapore government could intervene in the supply of certain goods and services. [25]

Section B

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

4. "In 2011, Singapore's labour productivity growth rate fell to 1%. The government is investing heavily in restructuring of the economy towards skills, innovation and productivity-driven growth. The take-up of the various productivity schemes has been encouraging so far, but we can do better."

Ministry of Finance Singapore, 2012

a) Explain how the challenges in the labour market would affect Singapore's sustained growth. [10]

b) Discuss the policies that the Singapore government can implement to tackle these challenges. [15]

5. A central bank is an institution which manages a country's interest rates and exchange rates.

a) Explain how a central bank can manipulate the external value of a country's currency. [8]

b) Discuss the extent to which central bank interventions can impact an economy. [17]

6. Trade is the framework upon which a nation's prosperity rests.

To what extent do you agree with the above statement? [25]

----- End of paper -----

2013 JC2 Economics H2 Paper 2

Question 1
Rising income levels and an ageing population have changed demand patterns amongst consumers in Singapore. Many producers have reacted accordingly. Using economic analysis, discuss the likely effects of these developments on product markets in Singapore. [25]

Approach

To give the essay sufficient breadth, 3 different product markets can be chosen to be discussed. It is then necessary to discuss how rising income levels and an ageing population affect these markets separately. In order to answer the question well, it is important to choose markets where both factors affect it, not just one of them. The "likely effects" refer to changes in price, quantity, and revenue/expenditure in these different markets. Changes in those variables can be in terms of direction and extent. Direction would involve discussions of how demand and/or supply increase or decrease, and hence how price, quantity and revenue/expenditure increases or decreases. The extent of change would then involve discussions of elasticity concepts, and how that affects the magnitude of changes in price, quantity and revenue/expenditure. As there can be many different effects in one market, evaluative comments come from making a judgement on what the combined effect on price, quantity and revenue/expenditure would be in each market.

Suggested outline

Introduction
Identify suitable products in Singapore that we can use as our 3 product markets – simple medical checkups (e.g. blood tests), condominiums and non-smart l phones.

Body

	Medical checkup (E.g. Blood test)	Condominiums	Non-smart phones (Older models e.g. Nokia, Samsung, Sony Ericsson)
Income up	Medical checkups such as blood tests are relatively expensive in Singapore. 0<Ey<1 for the middle income and high income. Although the checkups are necessary for all income groups, the higher and middle-class income groups are better able to afford it due to their	As compared to HDB flats, condominiums are a normal (luxury) good because they have a low degree of necessity, and given the income levels of Singaporeans, they are still considered a luxury good. Hence, Ey>1. With an increase in income level, demand increases more than proportionately because	With the presence of so many smart phones in Singapore, which are available at low prices, non-smart phones are considered not as necessary as it has fewer functions. In addition, the smart phones are sometimes available at $0 with a subscription plan,

	higher income levels. Yet, there is only so many blood tests that they can demand. Hence, demand will increase but less than proportionately. With rising income, the low-income households who previously did not demand this service will now demand blood checkups. This is because with a higher level of income, they now have a greater ability and willingness to pay for the checkups, and hence will contribute to the effective demand for medical checkups such as blood tests. Overall, the demand for medical checkups will increase. The extent is still unclear due to the new entrance of the lower income groups into the effective demand.	the higher income groups would buy more condominiums not only for them to live in, but more for investment purposes as well. In addition, there will be some Singaporeans who would like to upgrade from their HDBs to Condominiums in order to give themselves a better and more affluent lifestyle since they can afford it now.	implying that Singaporeans can afford the smartphones, which makes the non-smart phones an inferior good (Ey<0), given the income levels in Singapore. Hence, with an increase in income levels, demand would fall. (Especially since so many Singaporeans have smartphones already, and Singaporeans are generally very technology-savvy)
Aging population	An aging population is a shift in the distribution of the population towards older ages. Singapore's aging population has come about in two ways. Firstly, there has been declining growth in birth rates in Singapore, implying that the number of young people born into Singapore has been	There are many ways of explaining how an aging population affects the market for condominiums. One example is that with an aging population, this implies that there is a greater proportion of old people in Singapore, relative to the entire population. Hence, more retirees would likely downgrade from a condominium to an HDB	There are many ways of explaining how an aging population affects the demand for non-smartphones. 1) The older people may not be as receptive towards the new technology as it would take them a lot more time and effort to learn the new technology. Hence,

	increasing at a decreasing rate. Simultaneously, the life expectancy of people in Singapore has increased, implying that people are living for a longer time. Due to these reasons, the mean age of the population has increased as the total age of the population is increasing faster than the total population size. In addition, the median age of the population is increasing due to there being less young people and more old people. This would thus lead to a large increase in demand for medical check-ups, especially since old people are the ones who require these medical check-ups more frequently.	flat, in order to generate more retirement funds which they will need as they grow older and stop working. This would increase the supply of condominiums in the market. Another example is that some retirees may choose instead to buy a condominium as investment income for their future retirement (which they will receive when the sell the condominium). This would increase the demand for condominiums in the market. The retirees could also instead choose to buy a condominium for their children as their children would probably be old enough to set up their own families as well. This would also increase the demand for condominiums in the market.	they may refuse to migrate over to smartphones, implying that the decrease in demand for non-smartphones would be not as large, or the demand may not even decrease. 2) The older people may also prefer smartphones because they have bigger touch pads and display panels, which is friendlier to their eyes. Hence, there will be a decrease in demand for non-smartphones. Hence, it is difficult to say whether the demand will fall or increase and the extent to which this will happen.
Combined impact	Draw a diagram to illustrate an increase in DD in the market for medical check-ups, by demonstrating a rightwards shift in the DD curve.	Draw a diagram to illustrate an increase in DD and/or increase in SS in the market for condominiums, by demonstrating a rightwards shift in the DD and/or SS curve	Draw a diagram to illustrate a decrease in DD or increase in DD (depending on explanation) in the market for non-smartphones, by demonstrating a leftwards or rightwards (respectively) shift in the DD curve
Price	Increase	Depends on the	Depends on the

		examples illustrated	examples illustrated
Quantity	Increase	Depends on the examples illustrated	Depends on the examples illustrated
Revenue	Increase	Depends on the examples illustrated	Depends on the examples illustrated
Discussion	The extent of increase of demand may also depend on how effective government policies are to narrow the information gap that exists for this service. For e.g. doctors may unnecessarily prescribe additional blood tests for people, resulting in a greater increase in the demand for blood tests. This is possible because patients do not have full information on their health due to their lack of knowledge. Hence, this would increase the demand greatly, which may not be a true reflection of the requirements of the society. Other factors include the amount of government subsidies and availability of funds from insurance programs. In terms of subsidies, the Singapore government offers mean testing in hospitals, which enables the lower income groups to have greater subsidies for their medical	As the building of condominiums takes time due to their requiring a lot of construction work in the process, the supply of condominiums is relatively inelastic in the short run, but more elastic in the long run. Hence, in the short run, the increase in price is likely to be greater than the increase in the long run. (This can be illustrated on a diagram) There are many other types of discussions we can carry out on the extent of changes in the condominium market. Some examples are : 1) Due to the increase in revenue for developers of condominiums, their supernormal profits would increase. As developers make supernormal profits, more firms enter the market since the barriers of entry are moderate (in Singapore, it is relatively easy due to less restrictions) Supply of condominiums would thus shift to the right, dampening equilibrium price, but	There are many types of discussions we can carry out, depending on the points being put forward in the earlier analysis. E.g. The take up rate of smart phones may be influenced by other factors such as download and upload speeds and their respective pricing, which will affect the extent to which the demand for non-smartphones would decrease.

	checkups, than the higher income groups. This implies that some of the lower income groups may have already been demanding for the service. Hence, with the increase in income level, not only would more people demand for the service, but those lower income groups who were demanding for the service would also increase their demand further, albeit less than proportionately. (Since it is a necessity for them as well) The amount of insurance coverage a person has, would also affect the number of checkups they get. This is because if the insurance pays for their checkups, people tend to go for more medical checkups, even though they may not always be necessary in terms of their health. This would increase the demand more, be it due to aging population or rising income levels.	increasing equilibrium quantity. 2) With an increase in demand, and hence an increase in prices, the government may take measures to curb this increase in prices. Such measures may include an increase in land sales, which would increase the SS of condominiums as more developers bid for these plots of land. 3) The government may also increase the stamp duty for an investment property, which would make the price of condominiums more expensive to Singaporeans who are buying it for investment purposes. This would deter them from buying as many condominiums, and hence the extent of increase in DD would be less, or may even decrease if the measures are very drastic. 4) In the Singapore condominium market, a big portion of the demand is made up of demand by foreign buyers for investment purposes. Hence, the extent of increase in demand would be more dependent on the controls by the Singapore government on investment buying, as well as the income	

		levels of the foreigners.	

Evaluation

The outcome on the product markets depends on the type of goods and services chosen in the essay. An increase in income and an aging population would affect the direction of change of demand and supply. However, in order to examine the extent of change, elasticity would be needed to be used. (Which elasticity to use, would again depend on the examples chosen. In the above examples, Ey and Es were used.)

The final outcome on the product markets however, also depends on other factors (e.g. government intervention methods). This may affect the final outcome. (As illustrated in the condominium market, where Singapore government measures affects greatly due to the tight housing market)

Mark scheme

L1	Descriptive answer with minimal analysis and discussion, or listing of points with a lack of explanation.	1 - 8
L2	Underdeveloped analysis and discussion of the 2 factors affecting 3 distinct markets with suitable use of examples.	9 - 14
L3	Thorough analysis and discussion of the 2 factors affecting 3 markets with suitable use of examples. The answer must incorporate the combined effect on each of the product markets.	15 - 21
E1	For an evaluative comment that lacks justification.	1 - 2
E2	For an evaluative comment that has good justification.	3 - 4

Question 2
a) Explain how firms can increase their market power. [10]
b) Discuss whether dominant firms are always desirable from a society's point of view. [15]

Approach
Students need to explain the different strategies that firms can use to increase their market power.

Suggested outline

Introduction
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
Strategic deterrence
Incumbent firms might 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 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 firms to increase their market power due to extensive brand recognition.

Control of raw materials
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.

Mergers
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. This could be done to reap greater economies of scale and to rationalise the production process to minimise wastage and to increase efficiency. Duplicate departments and operations can be removed to reduce costs. This will increase their cost advantage over their rivals, enabling the firm to increase its market power. Also, as the merged firm controls a bigger market share, they have higher pricing abilities.

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.

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.

Mark scheme

Level	Descriptors	Marks
L1	For an answer that merely lists down and describe a few methods firms can increase their market power.	1-3
L2	For an underdeveloped answer that explains a few methods firms can use to increase their market power. Either lacking in scope or depth. Mere description of barriers with no linkage to what firms can do to protect these advantages – max 5 marks Well-developed explanation with no examples – max 6 marks	4-6
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 examples – max 7 marks	7-10

2b) Discuss whether dominant firms are always desirable from a society's point of view. [15]

Approach

Students are expected to explain both the advantages and disadvantages of dominant firms. Students may consider the impact on consumers (variety, quality), firms (profits) and society (productive efficiency, allocative efficiency and equity). Students should show the understanding that the impact is dependent on the nature of industry and the conduct / behaviour of the firms.

Suggested outline

Introduction
Dominant firms would be defined as firms with high market power, present in an oligopoly or monopoly. To determine whether dominant firms are desirable, the impact on consumers, firms and society would need to be examined.

Body

Thesis: Dominant firms are desirable

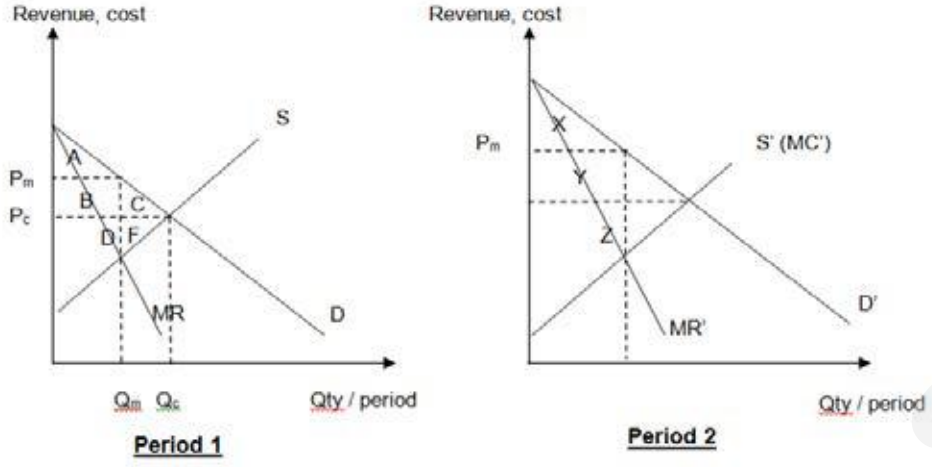
i) Innovation

Impact on consumers
With the supernormal profits earned, dominant firms have greater ability to engage in innovation to improve the quality of products and differentiate products to cater to the different tastes and preferences of consumers. Firms can use the supernormal profits earned to engage in R&D to develop new products and enhance existing products. This could benefit consumers in terms of better quality of goods as well as a wider variety of goods and services produced. This is particularly true in the oligopolistic market when the firms are close rivals and would strive to create product differentiation to increase their profitability.

For example, in the automobile market, different companies such as BMW have introduced new safety mechanisms to improve the safety of drivers and passengers and improved engine systems to enhance fuel efficiency. This would lead to greater consumer welfare, as shown in figure 2. In the pharmaceutical industry, through R&D, dominant firms such as GlaxoSmithKline are able to come up with more effective drugs such as Dabrafenib to treat skin cancer. In the smartphone industry, Apple has improved the features of its smartphone and added fingerprint detection features as well as a faster processor for the iPhone 5s.

Initially, before innovation, consumer surplus is shown by areas A+B+C as shown in Figure 1. With innovation, consumer surplus has increased to area X+Y as shown in Figure 2.

Figure 1 Figure 2



Impact on firms

In period 2, with innovation, this would lead to a higher demand for the product (demand curve shifts to the right to D') and a lower MC due to technological advancement, as shown in Figure 2. This would benefit firms in terms of higher profits. This would lead to a higher sum of producer and consumer surplus than before, hence benefiting society. Producer surplus has increased from areas D+F to area Z.

However, while greater amount of profits would lead to greater ability of firms to engage in innovation, it might not necessarily lead to an increase in willingness to engage in innovation. This could be dependent on the level of competition within the industry. For example, within an oligopoly, there is intense competition which would spur firms to engage in innovation to differentiate their products from their rivals.

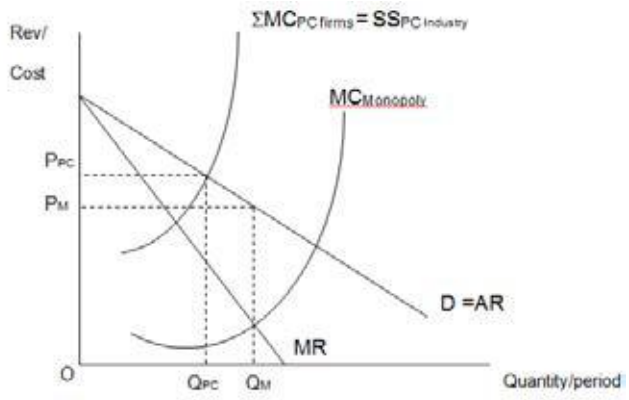
ii) Economies of scale

Impact on firms

Dominant firms would operate on a larger scale of production and would be able to reap internal economies of scale. Internal economies of scale refer to a fall in unit cost of production due to an increase in the production level of a firm. For example, with a larger scale of production, firms are able to engage in specialisation and division of labour. With specialisation, the production process is more efficient, leading to lower unit costs. As seen in Figure 3, with economies of scale enjoyed by dominant firms, this would lead to a lower marginal cost of production for a monopoly as compared to the perfectly competitive industry. Firms are able to enjoy higher profit margins due to lower unit costs of production.

Therefore, for industries where there are substantial economies of scale to be reaped such as telecommunications sector (due to the high set-up cost of infrastructure), dominant firms would be beneficial due to the lower costs enjoyed by the firms. Therefore, a few dominant firms in the telecommunication sector would be more desirable as compared to many small firms competing in that sector.

Figure 3



Impact on consumers

With lower costs of production, firms could potentially pass on the benefits of lower costs of production to consumers in terms of lower prices. As seen in Figure 3, a dominant firm which enjoys economies of scale is able to charge a lower price of Pm instead of P_{PC}. This would lead to higher consumer surplus.

Anti-thesis: Dominant firms are NOT desirable

i) Exploitation of market power

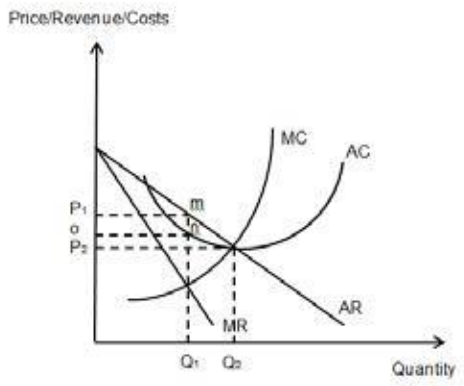
With greater market power, dominant firms are able to charge higher prices. Firms can also erect barriers to entry to prevent new entrants from entering the industry. This would make consumers worse off. The greater the amount of market power, the higher the prices that consumers could be charged. This is particularly true in the case of strong monopoly power, for example, Microsoft in the operating software market and MioTV when they had the sole right to screen BPL matches.

ii) Greater inequity

As seen in Figure 4, firms are able to charge higher prices (P_2) and are more likely to earn supernormal profits, as shown by the area P_1mno. This would mean that consumers are exploited at the expense of producers, as producers gain from higher profits while consumers are charged higher prices. This would lead to greater inequity between consumers and producers. (Note: students may also discuss this issue using consumers and producers surplus)

For example, the oil producers part of Organisation of Petroleum Exporting Countries (OPEC) collude to set higher prices, enabling them to earn higher profits at the expense of importing countries who have to pay higher prices for oil.

Figure 4



iii) X-inefficiency leading to negative impact on society

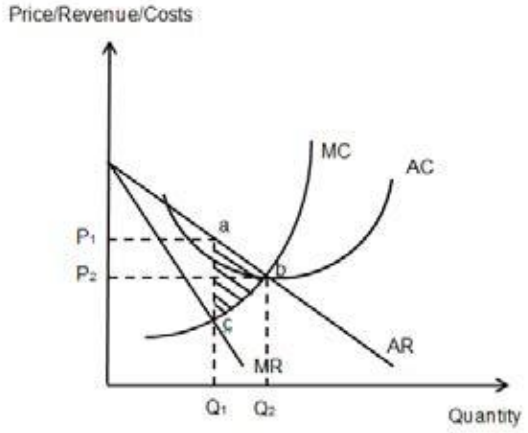
A dominant firm might acquire so much market power that it is no longer threatened by competitors to keep its cost down to remain competitive. Due to complacency arising from the absence of competition, X-inefficiency occurs as dominant firms do not actively curb its costs. Examples of X-inefficiency would be over-staffing or expenditure on prestigious buildings.

However, this is likely to happen only for the case of a monopolist, where there is absence of competition. For example, SMRT has been the sole operator of the MRT lines and had not followed up too closely with maintenance schedule resulting in frequent breakdowns or delays. In an oligopoly, there is stiff competition due to the presence of rival firms, which would encourage firms to actively cut costs to remain competitive.

iv) Greater allocative inefficiency

Allocative efficiency occurs when firms produce the combination of goods or services that is most preferred by consumers. It is achieved when all firms produce the socially efficient level of output where P=MC. For dominant firms, there tends to be under-production, and hence, there is welfare loss as the additional units produced could have brought about net benefits to society. As shown in Figure 5 below, with dominant firms, there will be under-production and hence, welfare loss as shown by the shaded area abc. Under a monopoly, the extent of welfare loss would be greater as compared to an oligopoly due to higher and relatively price-inelastic demand under a monopoly since the latter has higher price setting ability.

Figure 5



v) Wastage of resources

Dominant firms might engage in extensive advertising to gain greater market power. This would lead to wastage of resources, which could have been better channeled to other productive uses. Advertising costs would lead to higher costs of production for the firm, which might then pass on the higher costs to consumers in terms of higher prices.

E.g. consumers pay higher prices as a result of firms paying big sums of money to celebrities to endorse their product.

vi) Less choice

With a few dominant firms in the market as opposed to many small firms, this would mean that there would be less consumer choice in terms of brands to choose from in the industry.

Conclusion

In conclusion, dominant firms bring about both benefits and costs to society. Although benefits are reaped in terms of greater innovation and greater economies of scale enjoyed, there is a trade-off in terms of potential abuse of market power and greater inequity.

Whether dominant firms are desirable to society would depend on the nature of the industry. For industries such as the pharmaceutical sector in which R&D is crucial, dominant firms would be more beneficial due to the supernormal profits enjoyed which provides firms with the ability to carry out R&D. This would then benefit consumers in terms of improved quality of products. In industries where there are substantial economies of scale to be reaped, it would be more desirable to have a few dominant firms instead of many small firms.

However, there is likelihood that firms can exploit their market power. An example would be the tour coach agencies in Singapore which were accused of fixing the prices of express bus tickets to Malaysia. Therefore, there is a need for regulation, which is done by the Competition Commission of Singapore to monitor the behaviour of firms to ensure that firms do not engage in anti-competitive behaviour and that consumers are not exploited.

Another factor which would determine the desirability of large firms to society would also be the amount of competition within the industry. If there are many other dominant firms such as in the case of an oligopoly, this would still lead to greater competition. Hence, greater incentive to engage in innovation would benefit society.

Mark Scheme

L1	An answer which merely lists and describes why dominant firms are desirable/not desirable to society.	1 – 4
L2	An undeveloped, 2-sided answer which explains why dominant firms are desirable AND not desirable to society with some use of examples. Gaps in explanation (lacks depth). OR A developed but largely one-sided explanation on whether dominant firms are desirable/not desirable to society (lacks scope). Some use of examples.	5 – 8
L3	A balanced and well-developed answer with precise and correct application of concepts, explaining clearly why dominant firms are desirable and not desirable to society. Good use of examples.	9 – 11
E1	For unsubstantiated evaluation.	1-2
E2	For substantiated evaluation e.g. able to weigh the benefits bearing in mind the nature of industry	3-4

Question 3
Some governments provide free services, such as internet broadband and healthcare to households, while other governments merely subsidise production of certain goods and services, such as education.

Discuss the extent to which the Singapore government could intervene in the supply of certain goods and services. [25]

Approach

Students should first identify and explain briefly how the market for certain goods and services may fail and thus require government intervention. Even though the pre amble highlights the case of merit goods, students should also consider public goods, demerit goods and the market failure situation that may occur under firms with market power. Equity can also be another consideration for government intervention. (In other words there is no need to be 'tied' strictly to the content of the pre amble). Students are required to highlight at least 3 different sources of market failure with different market examples to give better breadth to their answers (merit/demerit goods is considered as the SAME source of market failure).

The phrase 'intervene in the SUPPLY' should be interpreted as government taking over production or influencing the supply through market-based approaches: taxes or subsidies to producers and deregulation of markets. (Campaigns to raise awareness and grants to consumers should not be included as they do not influence the supply) There are 2 ways to examine the extent (degree) of intervention: 1. The adoption of COMMAND MEASURES (direct provision, ban) as opposed to market based measures. 2. The LEVEL of subsidies/taxes as proportion of the price or total expenditure.

Students should choose examples of particular markets in Singapore, and examine the extent of intervention, compare the degree and justify why the extent of intervention is such. For example, in the case of public goods, the full extent of intervention, direct provision, is required due to the high degree of welfare loss when there is total market failure. In the case of education, a higher level of subsidies is given to primary school education as compared to secondary/tertiary education. This is because the former may be considered as generating a higher degree of positive externalities. Similarly for the market of cigarettes, on top of the tax implemented, a ban is imposed on smoking in public areas as the negative externalities incurred in these areas may be very high due to the high level of human traffic.

Students should then evaluate that the government should consider mainly the degree of market failure, the price elasticity of demand and also possibly the impact on private producers, amongst others, in deciding the appropriate degree of intervention. The method of intervention is feasible only when its benefits outweigh the costs.

Suggested outline

a) Public goods

- Explain briefly that a pure public good results in total market failure due to the characteristics of non-excludability and non-rivalry

Form of intervention

- Direct provision by the government
- The government is non-profit oriented so it does not need to charge a price to cover the costs of production → use of taxes to fund such goods.

Limitation

- Government's provision of public goods may result in inefficiency due to lack of profit motive.
- Misallocation and poor service, over-consumption of zero-priced goods → welfare loss.
- There can also be new distortions when funding for such goods are generated through the imposition of taxes in other markets.

Evaluation (Extent of intervention)

- As the external benefits from public goods are IMMENSE → the degree of welfare loss may be greater when the market is left alone as compared to under direct provision. Direct provision is necessary in this case.
- In order to minimise productive inefficiency, S'pore government does not need to produce all aspects of public goods → may employ private firms to carry out parts of production of these public goods while it remains as the sole provider.
- E.g. Street lamps are provided by LTA but their construction is carried out by private contractors

b) Merit goods

- Explain briefly that merit goods result in under-consumption as positive externalities are disregarded by private consumers à welfare loss
- Examples of merit goods: healthcare, education

[Note: The ignorance problem of merit goods should not be included as the measures to address this problem does not influence the supply (as stipulated in the question)]

Forms of intervention

- Free provision (e.g. free museum entries to 11 museums, 4 free vaccinations for Singaporean children)
- Direct provision of certain infrastructure of merit goods that incurs high financial outlay e.g. construction of MRT tracks and stations, provision of healthcare infrastructure
- Subsidies à lowers MPC à private consumers internalise the positive externalities

Evaluation (Extent of intervention)

- Direct provision can be given to goods where the production incurs little or zero marginal cost e.g the operation of museums, because it is difficult for government to determine the price in this case.
- Direct provision (instead of just subsidies) can also be given to merit goods with very high degree of positive externalities. The welfare loss that may result from over consumption may be minimal as compared to the welfare loss when the market fails, such as in the case of the free vaccinations.
- The Singapore government should also consider that the benefits of providing a good for free may outweigh the costs in some circumstances.
  E.g. free entrance to museums: The benefit of increasing the number of museum patrons (possibly a more cultured and refined society) is possibly greater than the loss in revenue from the free entrances.

- In the case of subsidies, if the degree of welfare loss under the free market is sufficiently large, the level of subsidies as proportion of the price given should also be high.
- Although a 'wrong' level of subsidy may be imposed as the government does not have perfect information, resulting in inefficiency, but if the level of subsidy is high enough, the degree of inefficiency under government intervention should be smaller.
- E.g. Primary school education generates greater positive externalities relative to tertiary education, therefore, the S'pore govt provides a higher level of subsidy for primary education as a proportion of the fees incurred.

c) Demerit goods OR Goods that generate negative externalities

- Explain briefly that demerit goods result in over consumption as the negative externalities incurred are not compensated by private consumers à welfare loss
- Examples of demerit goods: smoking, alcohol
- Negative externalities: road congestion (over consumption of roads)

Forms of intervention

- Ban on smoking in public buildings and spaces, ban on recreational drugs and chewing gum
- Taxes on cigarettes, alcohol

Evaluation (Extent of intervention)

- A ban can be given to demerit goods which generates high degree of negative externalities (e.g. the ban policy on smoking in enclosed public spaces is due to the larger external costs inflicted on passive smokers, a ban on recreational drugs as the external cost in terms of loss of workers' productivity and higher crime rate may be very high).
- In implementing the ban, the govt should also consider the monitoring costs involved. It is feasible only if the benefits of removing production/consumption outweigh the costs. E.g. Monitoring costs can be prohibitively high if an island-wide ban on smoking is imposed.

- In the case of a tax, the level of the tax should not only correspond to the degree of negative externality but should also consider the price elasticity of

demand of the good. If the demand is price inelastic, a higher level of tax is required to ensure that quantity demanded falls closer to the optimal level e.g. tax on smoking, higher ERP charges during peak hour

d) Market power

- Due to profit maximisation objective of private firms → P>MC → under production of the good/service → welfare loss to society

Forms of intervention

- Deregulation
- AC or MC pricing
- Nationalisation

Evaluation (Extent of intervention)

- The extent of deregulation may be limited by Singapore's small market size, especially for industries where there is large potential EOS to be reaped. E.g. Singapore government deregulated the market for MRT service to improve efficiency but as the industry has very high fixed costs, only two train companies are allowed to operate. This is to ensure that each company has sufficient demand to cover its cost and experience substantial EOS.
- Compare this to the greater extent of deregulation in the taxi industry where many more taxi companies are given licenses to operate because there is limited EOS in this industry.

- **Income inequality** Is the difference between individuals or populations in the distribution of their assets, wealth, or income.

Forms of Intervention

- Subsidies in the provision of certain goods to address inequity e.g. means testing in public hospitals

[Note: Transfer payments in the form of grants/aids to help the needy/poor directly should not be included as these measures do not influence the supply (as specified in the question)]

Evaluation (Extent of intervention)

- Greater amount of subsidies are given to goods/services which the govt deems to be of a higher degree of necessity, and where expenditure takes up a larger proportion of one's income.
- E.g. Public home ownership in Singapore where subsidies are given for first-time buyers, and for lower-income groups to buy smaller flats or rental flats
- E.g. Health care where the government will also pay a greater share of the health care bills, up from the current 30% to 40% or more (2013). This allows better affordability by the public or the poor (lower prices in polyclinics).
- In the case of equity, the government should adopt a targeted approach instead of a 'one-size-fits-all'. A higher level of subsidy is given to households/individuals with relatively lower level of income. E.g. mean testing

means where the poor received more subsidies for the use of hospital wards whilst those in the higher income group receive none at all

Conclusion:

The Singapore government has implemented different measures to intervene in the supply of goods and services to improve efficiency and equity. In deciding the extent of intervention in a market, the government needs to consider the type of product/service and industry which in turn affects the degree of market failure. Generally, a market which generates a higher degree of market failure warrants a higher level of intervention such as direct provision or a ban. When the degree of market failure is less significant, a market based approach, such as subsidies or taxes, can be implemented instead. The level of subsidy or tax imposed is also influenced by the price elasticity of demand. Demerit goods such as cigarettes and alcohol, which may result in habitual consumption, should be imposed a higher level of tax since the demand for such goods is more price inelastic. In the case of market power, Singapore's small market size limits the government's willingness to open up certain industries to more competition as this may affect the viability of the firms involved. The costs and benefits of each form of intervention should be considered thoroughly and a particular measure is said to improve the outcome of the market when the benefits of intervention outweigh the costs.

Mark scheme

L1	Demonstrates the ability to *define* market failure and *recognise* some form of government interventions. Limited explanation on the factors that influence the degree of intervention.	1 – 8
L2	An explanation which includes at least 2 sources of market failure, but inadequate consideration on the extent of intervention. There are some inaccuracies in the application of concepts and/or gaps in explanation. Limited use of examples.	9 – 15
L3	An accurate and clear explanation which includes 3 sources of market failure, with a thorough consideration that the extent of intervention depends on the degree of market failure. Above + considered other factors such as the size of S'pore market, the proportion of income spent on the good, high initial capital outlay, etc Good use of examples.	16 – 18 19 – 21
E1	For an unexplained assessment, or one that is not supported by economic analysis.	1 – 2
E2	Judgment is based on economic analysis and adequately substantiated	3 – 4

Question 4

"In 2011, Singapore's labour productivity growth rate fell to 1%. The government is investing heavily in restructuring of the economy towards skills, innovation and productivity-driven growth. The take-up of the various productivity schemes has been encouraging so far, but we can do better."

Ministry of Finance Singapore, 2012

a) Explain how the challenges in the labour market would affect Singapore's sustained growth. [10]

b) Discuss the policies that the Singapore government can implement to tackle these challenges. [15]

(a)

Suggested outline

Introduction

- In the last few years, the Singapore economy has been experiencing 2 main challenges in the labour market :
  - Rapid pace of globalisation à Leading to the need for restructuring of the economy
  - Structural bottlenecks due to
    - Decline in labour productivity, and
    - Restrictions on the entry of foreign labour
- Singapore's labour market is near full employment, and job creation remains healthy. However, given Singapore's land and population constraints, her future economic growth will depend on whether she succeeds in restructuring the economy to rely more on skills, innovation, and productivity. However, there has been a decline in labour productivity growth. These challenges have made the labour market very tight, impacting Singapore's actual and potential growth negatively. (Affecting SRAS and LRAS)

Body

1) Rapid pace of globalisation à Leading to the need to restructure the economy, bringing with it challenges for Singapore

- In the last decade, there has been rapid pace of globalisation and greater mobility of labour across borders à Rapidly changing use of technology à Greater demand for labour in a new knowledge based economy à Structural unemployment
- Singapore has been moving up the value chain in production at each new decade
  - 1970s : Low value manufacturing and assembling of electronics
  - 1980s : Heavy manufacturing e.g. ship building and repair + Manufacturing of electronics in computer related industries
  - 1990s : Manufacturing high value added disk drives, hard disks and wafers
  - 20th century : Knowledge based economy focused on high value added sectors e.g. Biomedical and chemical industries, Service industries

- With automation, many older workers were not skilled to operate the machines and needed new training and certification to be re-employed à Many remained unemployed due to the labour immobility across industries.
- Globalisation also led to some major MNCs shifting production to China, India and ASEAN economies with lower labour costs à Labour permanently structurally unemployed in Singapore
    - Outsourcing of some services (e.g. data processing, call centers) by the banking and finance sectors à Mergers of certain divisions in banks à Structural unemployment in service sector
- Singapore's rise in structural unemployment is also from our loss of comparative advantage in certain productions due to the emergence of cheaper and equally productive producers in other countries like China, India and Vietnam à Our new comparative advantage in the new tertiary sectors caused labour to face a mismatch in their old skills and new requirements in the new sunrise sectors
- Potential growth is also hindered as we are limited by our small economy and restraints in resources, so moving to a knowledge based economy is key to expanding our productive capacity

2) Structural bottlenecks leading to a tight labour market

<u>(a) Decline (or slow down in the growth) in labour productivity</u>

- Over the last few years, Singapore's rapid growth has been mostly driven by a massive increase in the workforce
- Between 2006 and 2009, the number of workers in Singapore jumped an average 6.5% a year, largely due to liberal immigration policies
- By 2009, foreigners accounted for a third of the three-million-strong labour force, up from only a quarter in 2004. Singapore's economy boomed correspondingly with average growth of 8.2% a year between 2004 and 2007
- But while sheer numbers have fuelled growth, the actual productivity of each individual worker has fallen.
- Singapore's labour productivity levels have been falling for six consecutive quarters starting in the fourth quarter of 2007. The decline has been worsening each quarter, with the first three months of 2009 seeing the largest drop so far at minus 14.7 percent
- In manufacturing and services, Singapore's productivity is only 55 per cent to 65 per cent of that in Japan and the United States.
- Productivity here has been falling in the sectors of manufacturing, construction, hotels and restaurants, business services and wholesale and retail trade — which, taken together, employ two-thirds of the workforce and make up 60% of the economy
- In manufacturing and hotels and restaurants in particular, productivity has been on the decline since 2006, said the report. This is about the same time foreign workers started entering Singapore in larger numbers.
- When there are many workers available, each worker does not have to work as hard. This was the problem faced by Singapore as foreign workers were easily available, providing no incentive to domestic workers to increase their productivity.
- Productive capacity growth through importation of foreign workers has led to a drop in labour productivity and will hinder potential growth in the long run.

(b) Restricting foreign worker entry

- Due to the above problem, the Singapore government has been trying to restrict the entry of foreign workers for the past few years, amidst social discontent, and pressures on infrastructure in the country
- Foreign worker levies increased, making each foreign worker more expensive to hire
- Foreign worker quotas have also been cut for various sectors, such as services sectors, marine sectors, manufacturing sectors, and construction sectors
- The qualifying salary for S pass holders have also been increased, making it more difficult for current S pass holders to get their permit renewed as they now require a higher salary
- A similar measure has been put in place for Employment Pass holders, with increases in the minimum salary required to qualify for the various employment passes
- This has decreased the SS of labour in Singapore, increasing the nominal wages of local workers.
- The intention of these policies was to force Singapore firms to come up with measures to increase their productivity, so as to become less reliant on foreign workers
- However, labour productivity has not increased thus far, hindering Singapore's sustained growth. This was elaborated in the earlier section.

Mark scheme

L1	For an answer which lists and describes a few challenges, showing some knowledge, but no explanation on them.	1-3
L2	Underdeveloped explanation on both globalisation and structural bottlenecks as challenges in the labour market, with a lack of elaboration on how the challenges affect Singapore's sustained growth. OR Developed explanation on only globalisation or structural bottlenecks as challenges in the labour market, with no reference to the other challenge.	4-6
L3	Well-developed explanation of three challenges (with at least 1 each from globalisation and structural bottlenecks) in the labour market, which are well explained and supported by economic concepts as well as real-life examples.	7-10

(b) Discuss the policies that the Singapore government can implement to tackle these challenges. [15]

Approach

- This question requires students to suggest appropriate policies that the Singapore government has done, or may do in the near future, to overcome the problems explained in part (a)
- This would involve explaining the policies, as well as discussing the advantages and disadvantages of these policies
- As part (a) has clearly spelled out that the challenges faced in the labour market affect sustained growth, the policies in this part should be focused on improving sustained growth
- Students must then make a stand on what policies are appropriate for the Singapore government to adopt, considering the nature of the economy, state of the economy, time period, cause of the problems in the labour market, and conflicting macroeconomic objectives

Suggested outline

Introduction

- The Singapore government has mainly used supply-side policies, trade policies and policies aimed at increasing productivity, to overcome the problems of slow actual and potential growth due to challenges faced in the labour market
    - Since the challenges presented in part (a) were affecting SRAS and LRAS, the policies suggested in this answer will be tackling AS specifically
- This essay will focus on the following policies to tackle the appropriate challenges :
    - Rapid globalisation leading to restructuring of the economy
        - SS-side policies focused on increasing competitiveness of exports
        - Trade policies to promote trade
    - Structural bottlenecks leading to a tight labour market
        - Policies to increase the productivity of workers
        - Policies to increase the supply of workers

Body

1) Measures to tackle rapid globalisation which has led to restructuring of the economy

<u>SS-side policies focused on increasing competitiveness of exports</u>

- SS-side policies focused on improving cost competitiveness & investing in new niche areas as long run measures
- E.g. Building infrastructure to increase competitiveness in high-end value added manufacturing and services
- E.g. Investing in new growth industries such as biomedical services, water technology, and interactive digital media

Benefits of policy:

- Lowers the cost of production and/or increases productivity in the LR à Increases SRAS & LRAS à Sustained growth

Challenges in implementing policy successfully:

- Success of these R&D measures may not be guaranteed as only a small percentage of any R&D usually succeeds, and most end up being wasted after years and millions spent.
- Even if the R&D were to work out, it would usually take years for it to be completed and contribute to the economy. Especially in new niche areas and technology à Takes long gestation periods

<u>Trade policies</u>

- Singapore could sign more FTAs, which will allow Singapore's exports to go into more countries without tariffs
- FTAs signed with a range of countries from high growth countries to emerging economies could diversify trade

Benefits of policy:

- No tariffs à Decrease price of exports, making it more competitive à Attracts FDI to Singapore à Increases productive capacity and could increase quality of goods as well à Potential growth increases

Challenges in implementing policy successfully:

- During the time taken for the policy to be successful, there may be greater import penetration à Falling X competitiveness of local firms instead
- Could increase the inflow of foreign labour, defeating the government's initial policy of limiting foreign labour

2) Measures to tackle tight labour market

<u>Policies to increase the productivity of workers</u>

- Companies which invest in productivity measures can get double the cash payout under the Productivity and Innovation Credit Scheme. This will encourage firms to engage in R&D, and increase their use of automation to reduce reliance on workers.
- Cap on Absentee Payroll – which helps companies defray manpower costs when they send employees for training during work hours – was raised from $4.50/hr to $7.50/hr
- Enhancements in the Skills Programme for Upgrading and Resilience (SPUR), and expansion of the Continuing Education and Training (CET) System. This is aimed at encouraging firms to send their workers for skills upgrading. For example, firms can defray manpower costs when they send employees for training during work hours.

Benefits of this policy:

- Firms experience an increase in COP à Choose to automate and re-organise in the long run + Send workers for more training to increase productivity à COP will decrease in Singapore in the LR + Increase in productive capacity à Increase in SRAS + LRAS à Increase in actual and potential growth
- Higher quality of exports + Lower COP à Increase in SRAS, leading to actual growth à If this then attracts FDI to Singapore à Further increase in potential growth in L, Increase in LRAS à Sustainable growth

Challenges faced in implementing this policy successfully in Singapore:

- Education and retraining policies take time and may be ineffective if attitude and aptitude of workers and lacking à Might lead to structural unemployment for those unable to pick up the necessary skills à If they are forced to take up jobs that they are not suitable for, their labour productivity will be even lower
- Due to Singapore being relatively scarce in land, rental costs are a very significant component of firms' total costs. Thus, even if unit wage costs are lower when labour productivity is higher, the impact on our export competitiveness would be limited
- Increasing labour productivity alone may not always ensure that workers are rewarded accordingly by employers, if they have weak bargaining strength.
- Increased labour productivity may also come at the expense of job losses when firms restructure their production process, or worse still, it may result in a lack of job creation for the aged and less educated workforce without the relevant skills.
- Other countries may improve their labour productivity more than Singapore, hence exports will still be the same in terms of international competitiveness

<u>Policies to increase the supply of workers</u>

- As the Singapore government has tightened the supply of foreign labour, these policies have been targeted at increasing the supply of local workers
- Workfare Income Supplement (WIS) scheme gives payouts to low-income workers to encourage them to stay employed
- The "Special Employment Credit" is another scheme which subsidises employers who hire workers above 50 years old
- In line with employing older workers, the statutory minimum retirement age is still 62, but employers are now required to offer re-employment to eligible employees who turn 62, up to the age of 65

Benefits of this policy:

- Increase SS of labour à Wage costs lowered à COP decrease à Increase in SRAS à Increase actual growth
- Lower COP à FDI attracted to Singapore à Increase LRAS due to increase in productive capacity in the long run à Sustainable growth

Challenges in implementing this policy successfully:

- Even though subsidies are given to employers, they may not want to hire older workers due to their lack of relevant skills
- May instead decrease actual growth
    - Decrease in SS of foreign labour à Domestic firms have to employ more expensive domestic labour à Ep for domestic labour is price inelastic à Increase COP for firms à Discourages FDI & Firms may cut down on production à Decrease in AS à Increase in unemployment / actual growth decreases
- Conflicting objectives
    - MNCs may be attracted to Singapore because they can access a pool of low cost workers. Thus, if Singapore switches away from foreign workers, they may change their minds to invest in Singapore, lowering FDI inflow

Conclusion

- Due to the lack of land and resources in Singapore, she would clearly benefit in the long run from improving labour productivity, although there may be difficulties in the transitional period in the short term, as firms will face higher costs of production in having to switch from more labour intensive production methods to more capital intensive production methods.
- The Singapore government will also face many challenges in implementing the other policies, but the effectiveness of the policies depends on how well they tackle the issues. This in turn depends on
    - The extent of trade-off between other objectives
    - The receptiveness of consumers and firms to government policies
    - The level of consumers' and investors' confidence in the economy
    - The combination of policies used by the government to overcome each one's challenges
- The government would hence implement short-term expansionary fiscal policies along with the other long-term policies to boost growth and employment in the short run.
- However, the long-term policies (SS-side) should still remain a key focus for the Singapore government given the challenges in recent years.

Mark scheme

L1	An answer which is merely listing or describing the policies, with little attempts to explain how they overcome the challenges in the labour market.	1-3
L2	A 2-sided answer on the advantages and disadvantages of at least 2 policies, along with explanations of the workings of the policies. There are gaps in the analysis or contain some errors. OR A thorough one-sided answer which explained the policies clearly, but only discussed the challenges or advantages of the policies, but not both.	4-7
L3	A balanced answer with precise and correct application of concepts, where 3 policies were explained and evaluated well. Answers have ample breadth and must be well illustrated with examples.	8-11
E1	For an unsubstantiated evaluative comment.	1-2
E2	For a substantiated evaluative comment that attempts to make an assessment which is supported by sound economic analysis.	3-4

Question 5
A central bank is an institution which manages a country's interest rates and exchange rates.

a. Explain how a central bank can manipulate the external value of their currency. [8]
b. Discuss the extent to which central bank interventions can impact an economy. [17]

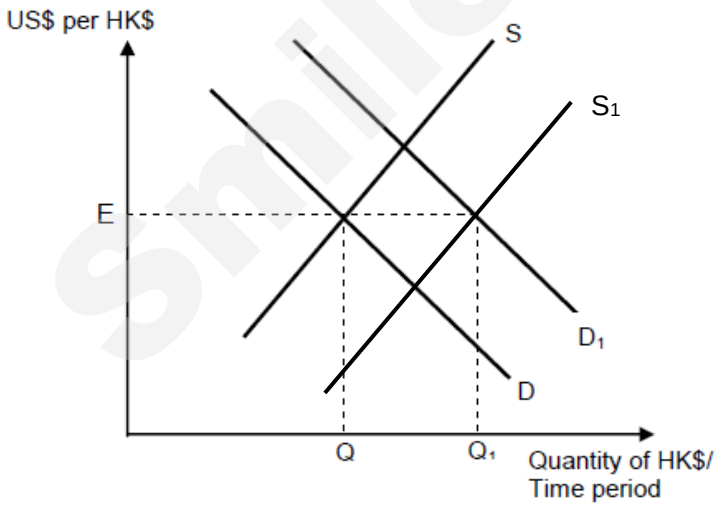
Part a

Suggested outline

Introduction
Under a fixed exchange rate or managed float exchange rate system, when trying to maintain a certain value of the currency, a central bank may buy or sell its currency in the foreign exchange (Forex) market. This intervention in the Forex market will affect the external value of the currency.

Body
Due to demand and supply conditions, the country's exchange rate may fluctuate outside the fixed exchange rate or outside the undisclosed band of the managed float exchange rate system. The central bank will then intervene to maintain the external value of the currency.

Maintaining an undervalued exchange rate

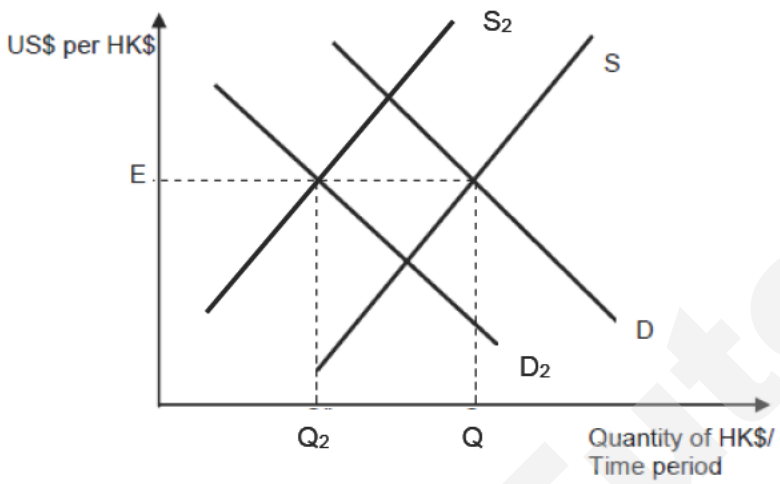


Assuming Hong Kong decides to peg its HK dollar (HK$) against the US dollar at the exchange rate E. If the demand for the HK$ were to increase from D to D_1, there will be a shortage equivalent to QQ_1 units of HK$ at the fixed exchange rate. This generates an upward pressure causing the HK$ to appreciate. In order to prevent the HK$ from appreciating, the Central Bank of Hong Kong i.e. Hong Kong Monetary Authority (HKMA) would have to meet this shortage of HK$ in the Forex market by increasing the supply of HK$ (in the Forex market). It does so by selling the HK$ in exchange for US$. Hence, the supply of HK$ in the Forex market will increase from

S to S_1. In the process, the HKMA will accumulate US$ as part of its foreign reserves (other countries' currencies).

The manipulation by the HKMA allows the HK$ to be pegged at a level below the free (true) market value, and the HK$ is said to be undervalued.

Maintaining an overvalued exchange rate



On the other hand, if the demand for the HK$ were to decrease from D to D_2 while it was pegged at an exchange rate of E, there will be a surplus equivalent to Q_2Q units of HK$. This generates a downward pressure causing the HK$ to depreciate. In order to prevent the HK$ from depreciating, the HKMA would have to buy up the surplus HK$ in the Forex market. This leads to an increase in the demand of HK$ in the Forex market causing the demand for HK$ to shift from D_2 back to D OR a fall in the supply of HK$ in the Forex market causing the supply of HK$ to shift from S to S_2). This is done by drawing on US$ from their foreign reserves.

The manipulation by the Central Bank allows the HK$ to be pegged at a level above the free market value, and the HK$ is said to be overvalued.

OR

Central Bank intervention in a fixed exchange rate system

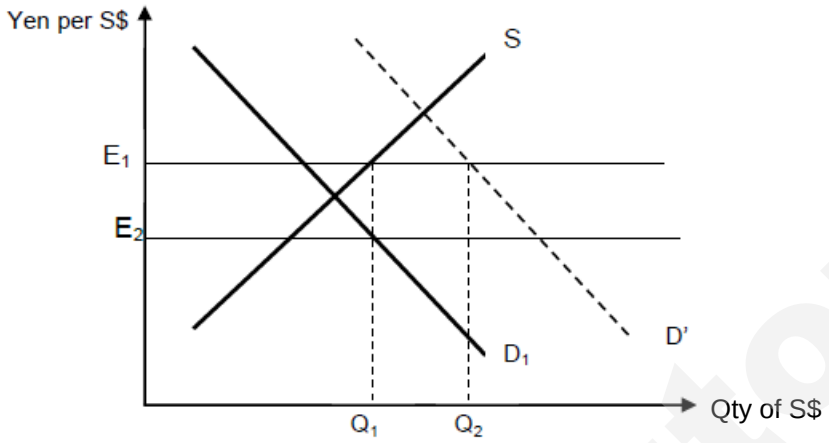
Sometimes, a country prefers to fix its exchange rate with respect to another country's currency so as to eliminate such fluctuations in order to facilitate decision-making in international trade and investments.

When demand and supply conditions change such that the fixed rate is higher or lower than the exchange rate that would have occurred under a freely floating system, active central bank intervention is necessary to maintain these fixed exchange rates.

Explain either how the Central Bank maintains an overvalued currency **or** an undervalued currency (see above explanation).

Central Bank intervention in a managed-float exchange rate system

A managed float exchange rate system is one where the exchange rate is allowed to fluctuate according to market forces within an undisclosed band. As long as the value of the currency is within that band, the Central Bank will not intervene in the Forex market.



However once the exchange rate reaches the upper limit E_1 or the lower limit E_2 of that band, the Central Bank will intervene to sell off (increasing supply of S$) or to buy back (increasing demand for S$/decreasing supply of S$) the currency to keep the exchange rate within the band.

Mark scheme

Level	Descriptors	Marks
L1	For an answer which describes how a central bank could manipulate the external value of a country's currency, with very minimal explanation.	1-2
L2	An underdeveloped explanation of how a central bank could manipulate the external value of a country's currency. Note: An answer which explains only one type of Central Bank manipulation – max 4. An answer which explains maintaining an undervalued exchange rate through how printing money affects money supply with minimal connection to how it affects the supply of the currency in the forex – max 3.	3-5
L3	A well-developed explanation of how a central bank could manipulate the external value of a country's currency. An answer which thoroughly explains two types of Central Bank manipulation – Maintaining an overvalued currency and maintaining an undervalued currency OR Fixed vs. managed-float exchange rate system.	6-8

	Note: To get full 8m, answer must include - thorough explanation of the adjustment mechanism (shortage/surplus leading to upward/downward pressure) OR - use of a diagram to illustrate explanation OR - country specific explanation	

b. Discuss the extent to which central bank interventions can impact an economy. [17]

Approach

Focus of the answer should be on the extent of impact of central bank interventions on the economy (i.e. how the macroeconomic goals/variables are affected). Explanation of the methods of Central Bank intervention in exchange rates may be drawn from Part a.

Introduction

- A central bank can intervene in the economy via monetary policy or exchange rate policy. Define monetary policy and exchange rate policy.
- Through the above policies, a central bank can impact the country's macroeconomic goals.

Body

<u>Monetary policy</u>

i) Expansionary monetary policy

- Briefly explain how expansionary monetary policy works
- Explain that it is employed typically to stimulate economic growth and lower unN during a recession
- Evaluation
  - State of the economy:
    - Will have a small extent of impact on the economy in the middle of a recession due to poor economic outlook as the fall in interest rates will not lead to/will lead to a minimal rise in C and I. E.g. in the middle of the 2009 global crisis in the US and UK.
    - However, as the recession is winding down and the economy is in recovery, expansionary monetary policy may have a more significant positive impact on the economy due to better economic outlook. This was seen in the US recently which saw strong consumption figures and a fall in unemployment figures which signal that the fall in interest rates are starting to boost the economy more significantly.
  - Nature of the economy:
    - Larger effects on the economy for countries with large domestic sector like the US and UK as the proportion of C and domestic I out of the country's GDP is larger. On the other hand, countries with small domestic sector will experience smaller effects on the economy.

        - Evaluate why a small country will not be able to influence interest rates and hence if expansionary monetary policy is implemented, there will be no impact on its economy.
    - Liquidity trap: Limited impact for countries with already very low interest rates e.g. Japan. Hence, even if interest rates fall, there will not be any increase/there will be minimal increase in C and I.

ii) Contractionary monetary policy

- Briefly explain how contractionary monetary policy works
- Explain that it is employed typically to reduce DD-pull inflation
- Evaluation
    - State of the economy: Will have significant impact for a country which is overheated and beyond the Y_f level. E.g. the Chinese government raised interest rates and tightened credit conditions which helped to cool China's overheated economy.
    - Nature of the economy: Larger effects on the economy for countries with large domestic sector as the proportion of C and domestic I out of the country's GDP is larger.

Exchange rate policy

i) Devaluation

- Briefly explain how devaluation works
- Explain that it is employed typically to boost economic growth, reduce unN and address a BOP deficit.
- Evaluation
    - Nature of the economy:
        - Larger impact for countries which have a large proportion of exports out of GDP e.g. Singapore and Hong Kong. On the other hand, countries with small proportion of exports out of GDP will experience a smaller effect on its economy.
        - But for a small country dependent on imports for consumption and production, devaluation of its currency may have significant impact on its economy as it may make imports relatively more expensive which leads to a rise in cost of living and cost of production.
    - State of global economies: May have less significant impact in times of global recession as world economies see falling income and may not buy their trading partners' goods even if they are relatively cheaper due to the devaluation of their trading partners' currency.
    - May lead to retaliation which may hurt the country's (X-M) and this may reduce the extent the positive impact of devaluation on its economy.

ii) Revaluation

- Briefly explain how revaluation works
- Explain that it is employed typically to combat inflation.
- Evaluation
    - Nature of the economy: Larger impact for a small country which is vulnerable to imported inflation. Revaluation of the currency will make imports relatively cheaper which will reduce imported inflation significantly.

- Conflicting objectives: May lead to exports becoming more expensive and hence a fall in (X-M) which may limit the positive effects of revaluation on its economy.

Conclusion
Overall, the central bank intervenes through monetary policy or exchange rate policy to help the country achieve its macroeconomic goals. However, the extent of the impact of such interventions depends on factors such as the state of the economy; the nature of the economy; and other possible unintended consequences.

Mark scheme

Level	Descriptors	Marks
L1	An answer which merely lists or describes the effects of central bank intervention. Brief explanation of the various methods of Central Bank intervention.	1 – 4
L2	An underdeveloped answer with limited discussion of the extent of impact of central bank interventions on at least 1 macro goal. An answer with gaps in explanation. An answer which includes few real-world examples.	5 – 9
L3	A balanced and well-developed answer which thoroughly discusses **the extent of impact** of central bank interventions on at least 3 macro goals. Discussion of the extent of impact on the economy must be explicit (e.g. large or small extent) and should not be a mere explanation of a limitation of any policy implemented by the central bank. An answer which considers several real-world examples.	10–13
E1	For unsubstantiated evaluative comments.	1-2
E2	For substantiated evaluative comments. Conclusive comments which pull together the criteria mentioned in the analysis. Conclusive comments with using real-world country/economy examples for illustration.	3-4

Question 6
Trade is the framework upon which a nation's prosperity rests.
To what extent do you agree with the above statement? [25]

Approach

To analyse the extent to which you agree, a thesis and anti-thesis is needed.

Based on the quote given, the thesis suggests that trade is the source of a nation's prosperity. "Prosperity" here is interpreted to mean economic growth or Standard of Living (SOL) of people in a country.

In the thesis, we will discuss the basis for trade and the underlying reasons such as the Theory of Comparative Advantage and Intra-industry should be discussed to show that free trade produces higher global output and welfare. The change in net trade promotes rise in Aggregate Demand (AD) and hence, national income growth via the multiplier effect. With the rise in AD, comes job creation and variety of goods that further promotes higher SOL.

However, trade alone may not be the only source of a nation's prosperity. This is the anti-thesis. Other components in the AD could be stimulated to promote growth in national income. In addition, government policies, improvement in technology and innovation could enhance economic development and growth.

Apart from other factors that affect the prosperity of a nation, the negative effects of trade could also be used to counter the arguments in the thesis. The nature of the economy (proportion of components in AD, factor endowments, state of technology), state of the economy (below or near full employment) and size of multiplier (level of leakages) could determine the differing impact of a rise in trade, and invariably the degree of prosperity between nations.

Suggested outline

1. **Introduction on prosperity of a nation**
   - Prosperity may be measured by rise in actual growth (AD or SRAS) & potential growth (LRAS) (real sustained growth)
   - Prosperity may also be defined as a rise in material and non-material SOL

2. **Explain the theoretical framework / theories on trade**
   a. Explain the Theory of Comparative advantage (which can explain both inter and intra industry trade)
      i. Supply-side assumptions (constant returns to scale, no transport cost, immobility of resource between nations but mobile within nations etc)
      ii. Differences in opportunity costs of producing same good
      iii. Given assumptions, global output rises and possible mutual benefit from favourable terms of trade
   b. Other reasons for Intra-industry trade
      i. Helps explain why nations produce similar goods and trade in these despite differences in opportunity costs
      ii. Differences in taste, cost and technology

3. Explain Thesis: Trade promotes prosperity of nations

a. Increased trade brings about higher income and employment
   - Rise in (X-M) è rise in AD ceteris paribus. è via k effect è rise in national income by multiple times à Households have a higher level of income, and hence are able to purchase more goods and services, so they have an increase in material SOL
   - May illustrate with diagram on rise in AD and hence, national income (Assume spare resources available)
   - Higher output è job creation è lower unemployment e.g. Less developed nations where labour is in relative abundance è More households are earning income now, and hence are able to purchase more goods and services, so they have an increase in material SOL

b. Market access (larger output) lowers price through EOS
   - Due to trade, firms are now able to produce in larger quantities and hence are able to reap EOS in production in the long run è average cost of production falls è firms' profit margins rise è attracts FDI è AD increases due to I increase, and LRAS increases in the long run due to the FDI bringing with it better technology and/or infrastructure which increases the productive capacity of Singapore è Actual and Potential growth increases è Multiple increase in income è Increase in SOL
   - E.g. Pharmaceutical industry in Singapore has grown greatly over the years, and now produces for global consumption
   - Lower average cost è may lower prices of goods and services è consumer welfare rises as households are able to purchase more goods and services with the same level of income (SOL)

c. Larger variety of goods and services (more supply sources) improves SOL
   - Due to trade, there is a rise in imports è Consumer welfare rises (SOL) as they have access to a variety of goods and services
   - E.g. Singaporeans would have a much lower SOL if not for trade because of our small size and lack of resources. But due to imports, they are able to consumer a large variety of goods and services, enabling them to have a higher material SOL.

d. Transfer of technology from trade / rise in efficiency of firms due to trade improves potential of economy
   - With trade, higher volume and access to imported capital goods and technology
   - This increases the actual and potential growth of a country, especially for less developed nations who have no access to new technologies
   - Due to a better technology, the efficiency of firms could also increase. This would attract FDI, which boosts sustained growth further
   - Increased technological improvements and innovation within nation è Increases quality of products è welfare of households rises (SOL)

e. Rise in income of relatively more abundant resources within nation
   - The factor that is relatively abundant would likely be the one that when used in production, gives the country a relatively lower opportunity cost of production of goods, and hence a comparative advantage in producing those goods.

- E.g. Countries with a large labour force are likely to have a comparative advantage in producing labour-intensive goods. This implies that the wages of these lower-skilled workers would increase, enabling them to consume more goods and services, and hence have an increase in SOL.

Hence, from the above points, we see that trade promotes job creation, increases income levels and material SOL, which contributes to the prosperity of a nation.

4. Anti-Thesis 1 : Evaluation of the extent of prosperity driven by trade

a. Depends on factor endowment
   - This can affect the comparative advantage of nations. E.g. Nations endowed with huge oil fields will naturally have a lower opportunity cost in the production of crude oil, thus is able export such commodities. However, if a country has the CA in a lower-order/value production, the extent of gains from trade will be significant smallers due to a less favourable terms of trade compared to the oil producing countries. This in turn affects the prosperity it may receive.
   - Despite this, trade still allows these nations to fulfill their needs in terms of imports, which increases the SOL of the people.

b. Rise in income inequality / disparity dilutes positive impact of trade
   - Over time, changes in composition and wages between skilled and unskilled workers in a nation è Income distribution could worsen
   - The extent of impact of this on the prosperity of the nation depends on government policies in place to mitigate such negative effects

c. Economic growth fluctuations depends on exposure to external demand
   - Overdependence on trade è economic growth fluctuations as a result of weaknesses in trade and growth in other nations è negative impact on actual growth and hence prosperity of the nation
   - Nations that depend on import of raw materials and for consumption are more susceptible to imported cost-push inflation à Consumer welfare may be more dependent on changes globally, which means that SOL may decrease more with an increase in price of imports

d. Inflationary effects depends on state of economy
   - Due to trade, an economy may experience a rapid rise in growth. This could be good for prosperity. However, as the economy tends towards the full employment level, this rapid rise in growth could lead to DD-pull inflation.
   - As trade increases, there will be an upward pressure on the limited resources available à Could increase business costs
   - In addition, with rapid changes in technology due to better capital imports from trade, there could be structural rigidity in the country. For e.g. workers may not have the skills needed to operate machinery in the new industries. This could lead to structural unemployment, as seen in less developed nations such as Indonesia and African nations.

e. Potential future growth affected
   - Trade may lead to better prosperity of nations currently, but it could cause worsening of growth in the future, making this prosperity not sustainable.

- E.g. Fossil fuel that drives exports for OPEC nations have been depleting over the years è SR wealth from sale of crude oil may be affected once the source of crude oil is affected è Affects the ability of these exporting nations to grow in the future, and hence prosperity will be affected
- E.g. Environmental degradation due to industrial air pollution in China or deforestation in South America, Malaysia and Indonesia è è Loss of sustainable growth which affects prosperity of the nation in the future

f. Size of leakage affects impact of rise in exports
   - Trade benefits income and employment as (X-M) increase will cause a multiplied increase in national income (as explained earlier)
   - However, if leakages in the nation are high è k size will be small è any rise in AD leads to a smaller multiplier effect è Trade will contribute to prosperity of the nation, but to a smaller extent
   - Leakages depend on MPM, MPT and MPS

Hence, the extent of positive impact from trade depends on the nature of the economy, the state of the economy and the size of the multiplier of the nation. If very severe, this could even lead to trade having negative effects on prosperity of the nation.

5. Anti-thesis 2: Other factors that promote prosperity

· Other components of AD
   - Rise in domestic consumption expenditure(C), Rise in investment (domestic I and FDI), Rise in G
   - These could lead to an increase in AD è Rise in national income via the k effect è Actual Growth è Increased output è increased demand for jobs è purchasing power rises over time è Increased SOL for households
   - If government spending is on capital goods è potential growth of economy increases as well. Eg. Spending on building more educational facilities è rise in quantity and quality of human capital over time
   - *Evaluation: Depends on size of k, opportunity costs (interest rate), state of government budget & mindset of government*

· Role of FDI / domestic investment (potential growth)
   - Apart from trade, FDI can also contribute to the prosperity of the nation *(Note : This section refers to FDI that is not due to trade)*
   - Attractiveness of the nation to FDI depends on business costs
   - With FDI è Rise in capacity and productivity è Reduction in costs in the SR, and increase in potential and capabilities of the economy in the LR. This could be in terms of use of technology, machinery or improved human capital via training
   - *Evaluation: Depends on opportunity cost of such LR expenditure (as businesses may need to give up on current consumption) Business climate and borrowing costs*

6. Conclusion

- Trade drives growth for economies that are more ‘open’ and possess spare resources to meet rising global demands (i.e. Reliance on external demand)
- It also depends on the comparative advantages that the nation possesses (i.e. Factor endowment)
    - Trade is definitely crucial to the growth of a country, but whether it is the **framework** upon which the nation’s prosperity rests depends on the country’s ability to meet the changing demands and dynamism of world trade in terms of dealing with structural rigidities (as this affects the sustainability of the growth)
    - The nature of the economy, state of the economy, and size of k, as these affect the extent of benefits a country reaps from trade
    - Government policies and other factors that may also drive prosperity of nations; and may offset the effects from trade (i.e. Mitigating policies and trade-offs)

Mark Scheme

L1a	Mere listing or description of factors that drive AD OR Mere listing of the different ways to measure a nation's prosperity	1 – 4
L1b	A very brief answer without clear definition of how a nation's prosperity may be measured OR Description of how AD rises with increased trade but little explanation and link to a nation's prosperity	5 – 8m
L2a	One-sided well-explained answer without any explanation on the basis for trade OR Balanced answer on trade and other factors, but under-developed in the explanation of the theories of trade	9 – 11m
L2b	One-sided answer that explains how a nation's prosperity is driven by trade and well-supported by trade theories OR Balanced answer on how trade and other factors drive prosperity of a nation but with gaps in the explanation	12 – 14m
L3a	Balanced answer on how a nation's prosperity is driven by trade OR other factors; backed by sound theoretical framework to explain the basis for trade.	15 – 17m
L3b	Balanced answer on how a nation's prosperity is driven by trade <u>AND</u> other factors; backed by sound theoretical framework to explain the basis for trade. Apart from higher world output and lower prices, there should be other positive & negative spill-over effects present in the discussion.	18 – 21m
E1	Some attempt to evaluate the different dimensions of benefits / costs from rising prosperity.	1 – 2m
E2	Well-substantiated answer with evaluations that shows clear understanding that benefits and costs differ based on nature, state and k size.	3 – 4m

VICTORIA JUNIOR COLLEGE, SINGAPORE

General Certificate of Education Advanced Level

ECONOMICS	9808/01
Higher 3	Preliminary Examination
Paper 1	3 hours 15 minutes
Monday September 30th	08.00 – 11.15
Additional materials:	Answer Paper

READ THESE INSTRUCTIONS FIRST

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 **two** questions

Section A carries 30 marks. Recommended time 1¼ hours.

Section B questions each carry 35 marks. Recommended time 1 hour each.

At the end of the examination fasten your work securely together.
Hand in your answers in three separate parts.
The number of marks is given in brackets [ ] at the end of each question or part question.

This document consists of **7** printed pages

Section A

Answer **all** questions in this section.

Chart 1: US government's 2008 Bailout vs other large governmental projects

Large Government Projects	billion US$ (adjusted for inflation)
Marshall Plan	115
Louisiana Purchase	217
Moonshot	237
S&L Crisis	256
Korean War	454
The New Deal	500
Iraq War	597
Vietnam War	698
NASA	851
Total	**3,925**
2008 Bailout	**4,616**

Source: *Global Research*

Extract 1: Tackling the root cause of the financial crisis

In August 2007, a shock to the global credit market sparked the most severe global financial crisis in a century. World trade contracted for the first time since the Second World War and 200 million people around the world lost their jobs. The bailout packages from governments meant millions of jobs were protected but at a heavy price and shrouded with controversy. Economic growth and jobs growth were subdued and governments had to consolidate public spending in the aftermath of the rescue. As bailed-out banks rebounded, there was public anger as the very institutions that caused the crisis were again paying million-dollar bonuses. The Occupy Wall Street Movement was born.

The failure is not failure of the market economy. It was failure of men and women who forgot that market discipline meant that they had to be disciplined in order to obtain results out of the market place. An unswerving confidence in the efficiency of markets became an excuse for many to simply rest on their laurels. Growing the bank's bonus pool necessitates risk taking. It also meant recognising the consequences of doing so.

Throwing a life line to the world's financial system was unquestionably the right thing to do. However, in the process of saving the too-big-to-fail-institutions, governments or rather the tax-payers protect those whose recklessness caused the crisis in the first place. Banks have not truly learned their lesson. Moral hazard could put us at risk again.

Adapted from *The Guardian*, 8 March 2010

Extract 2: Stiffer rules considering the size of the problem

There must be major reforms globally on how banks conduct their business. The most important reform is for the government to make sure financial markets can punish just as easily as they reward. Banks that were too big to fail were rescued. Their employees continued to walk away with fat bonuses. The banks' creditors and counterparties were

equally spared. If economic agents go unpunished, there is no hope in restoring true market discipline. One of the issues that failed to be put to rest in 2010 was how to tackle the banks that had been bailed out by the taxpayer but since returned to normal.

Banking regulators in Basle, as well as authorities in Brussels, are keen to demonstrate a determination to get tough on bonuses. Banks in the US are tackling the Volcker rule that require them to have clearer boundaries between their lending arms and riskier operations such as investment banking.

The financial system must also be safer and stronger with more stringent capital and liquidity requirements in a co-ordinated global process known as Basel III. Banks like Barclays should be ring-fenced to isolate its investment banking arm that is deemed risky from the consumer lending arm which is vital to economic growth. More importantly, it is vital for governments to act in unison – one country cannot unilaterally adopt significantly more demanding regulatory standards than competitor countries. Incentives for bank staff must also be aligned with the long-term health of their institutions.

Back in Britain, the business secretary, Vince Cable, is keen to get funds flowing through the system to stimulate economic growth. Osborne and the regulators, on the other hand, may be more inclined to ensure the banks are holding more capital to prevent another financial crisis and subsequent taxpayer bailout, Williams said. "The debate is about wanting banks to be safe and sound verses the people who want to see banks put the oil in the engine."

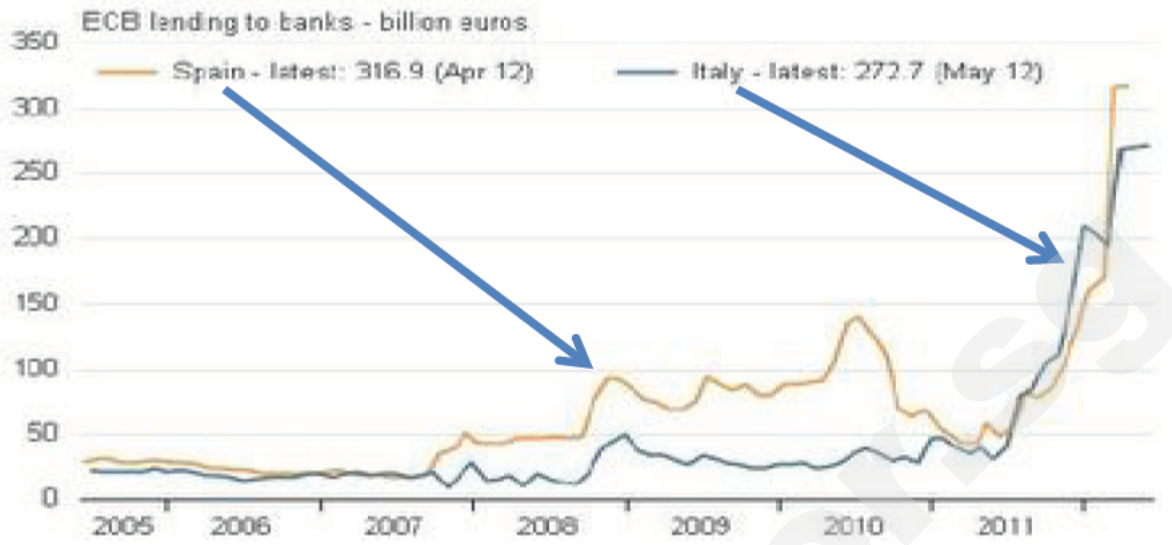
It's an issue that is troubling governments in the world's developed economies as banks remind authorities that the more capital they're required to hold, the less they will have to lend. Those campaigning against bonuses also weigh in on the matter, arguing that banks could hold more capital and keep lending to businesses if they cut their bonus pools.

Naturally with all the looming banking reforms, the Chief Executive Officer of Barclays Bank, a global investment bank, is mulling shifting headquarters from London to New York to circumvent the all those stifling rules. He said, "It's not a question of whether Barclays wants to stay in the UK, but whether the UK which relies on heavily on financial services to drive economic growth wants Barclays to be here."

According to Alistair Milne, reader in banking and finance at Cass Business School in London, the main issue for the banks in Britain next year is how they will survive without liquidity injections. The Bank of England's special liquidity scheme introduced during the dark days of the financial crisis is due to run out in January 2012 and Milne is concerned that without the assistance "banks will be in deep trouble". "The key issue for the banks is that they rely on wholesale money and so little on deposits," Milne said. The subject is also worrying the European Central Bank, which has been forced to reconsider its attempt to start weaning the markets off liquidity injections because of the difficulties that Spain, Italy, Irish, Greek and Portuguese banks face in funding themselves in the financial markets.

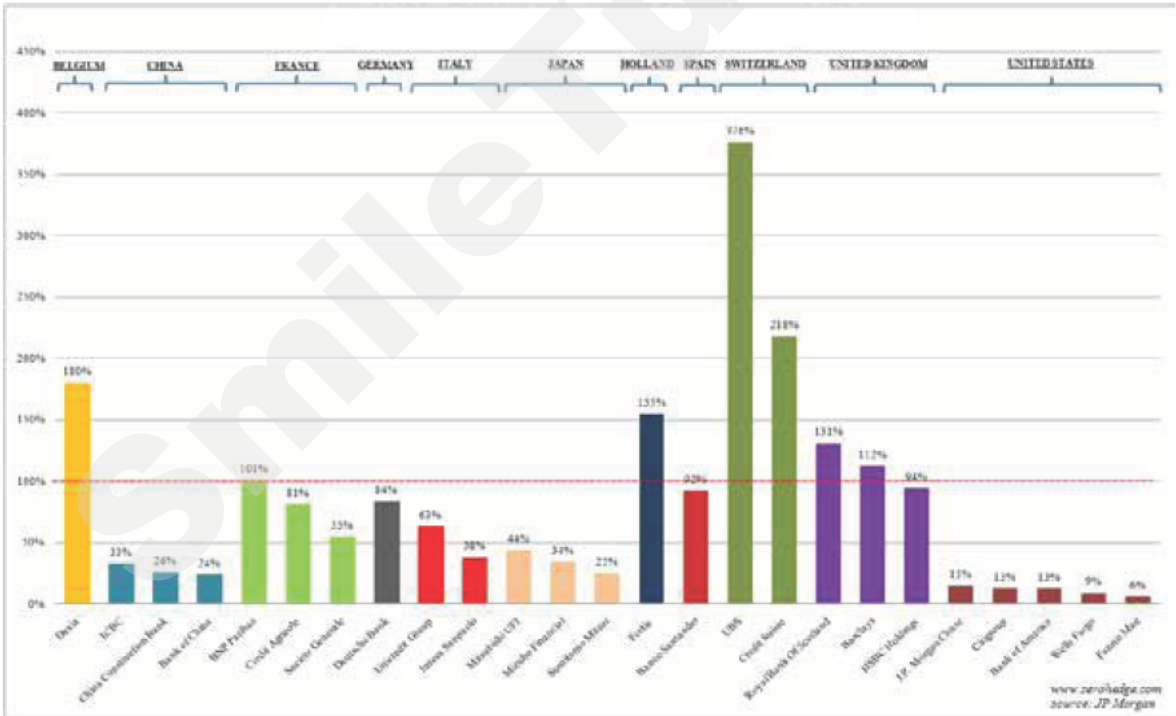
Adapted from *Guardian Weekly*, 14 December 2010

Chart 2: European Central Bank lending to Italian and Spanish banks



Source: Thomson Reuters

Chart 3: Top 25 Global Banks' Assets to Home Country's GDP



Source: *JPMorgan*

Extract 3: Singapore Exchange (SGX) takeover of Australian Exchange (ASX)

Australian authorities formally rejected Singapore Exchange's (SGX*) A$8.4bn bid for its Australian rival, ruling that the takeover could undermine Australia's position as a financial centre as well as jeopardise the stability of the country's financial system.

***Public listed companies like Singtel, Starhub and Quantas list their shares on SGX to raise capital. Investors buy and sell shares on the SGX and ASX platform.**

In a forthright repudiation of the deal's merits, Wayne Swan, the country's treasurer, told reporters it was a "no brainer" that SGX's bid was not in Australia's national interest. Mr Swan said that the opportunities offered under the proposal were "clearly not sufficient to justify this loss of sovereignty".

He also revealed that the Reserve Bank of Australia and the Australian Securities and Investments Commission had opposed the takeover because of national interest concerns. The sense from many observers was that the deal had fallen victim to politics, and that its rejection threatened Australia's reputation as a country that welcomed foreign investment.

"Not having full regulatory sovereignty over the ASX-SGX holding company would present material risks and supervisory issues impacting on the effective regulation of ASX's operations," he said. The ASX is the only operator of clearance and settlements in the country, which is "not the case with many other exchanges around the world," he noted.

He said many of the "claimed benefits" of the proposed deal had been overstated, and that the takeover could only be justified "if there were very substantial benefits", such as greater access to capital markets for Australian businesses and investors.

Adapted from *Reuters*, 27 April 2012

Extract 4: Roadblock in Indonesia

Indonesia's central bank said Singapore-based DBS would be allowed to buy only a $2.75 billion, or 40%, stake in Bank Danamon, following rule changes limiting investments by foreigners. For DBS to get full control, Indonesian regulators said Singapore would have to allow more Indonesian banks to open branches in the city-state, in what they called a "reciprocity" arrangement.

"Buying a smaller stake in the midsize Indonesian bank will require a review of the economics of the transaction… at 40%, the economics will be challenging as it will not allow us to integrate with our existing business in Indonesia," DBS Chairman, Mr Peter Seah said. Hence, DBS Group Holdings is still seeking to buy Singapore state-investment firm Temasek Holdings' entire 67.4% stake in Bank Danamon Indonesia.

Adapted from *The Business Times*, 12 June 2013

Extract 5: Singapore's burgeoning clout in financial services

The battle for domination of the Asia commodities markets has taken on a new urgency since Hong Kong Exchanges & Clearing's £1.388bn purchase of the London Metal Exchange two months ago. Singapore hopes low taxes and a supportive regulatory climate will help challenge bigger rivals in Hong Kong and Shanghai.

In the past 12 months, US trading giant Cargill and private Swiss trading group Mercuria have expanded their teams in Singapore. Mining houses BHP Billiton and Anglo American and commodity trading house Noble Group already have an established presence.

Richard Baker, chief executive officer at Singapore-based Cleartrade Exchange, said: "Singapore is becoming a trading centre by design and not by chance. There are government tax policies that offer incentives and there has been a maritime evolution."

Singapore has also ranked the third-largest foreign exchange (FX) centre in the world in 2013, after London and New York. This is a notch higher from its fourth place in the previous ranking in 2010.

In BIS' 9th triennial survey, Singapore's average daily FX turnover volume grew 44 per cent to US$383 billion in April 2013, compared with US$266 billion in April 2010. Global turnover growth in the same period was 35 per cent.

Adapted from *Financial Times* and *Channel News Asia*, 16 September 2013

Questions

a) Using relevant economic concepts, explain how decisions taken by employees in banks and financial firms have caused the most severe financial crisis in a century. [6]

b) Discuss the issues faced by the UK authorities in their decision to impose stricter regulation on the UK financial sector. [10]

c) Assess the argument that the monetary authorities in South East Asia and Australia should further liberalise their financial sector. [6]

d) Discuss if the Indonesian authorities was justified in capping DBS' stake in the takeover of Bank Danamon. [8]

[30 marks]

Section B

Attempt **two** questions from this section.

2 *"[We should not] assign any universality to economic dogmas. It is not a body of concrete truth, but an engine for the discovery of concrete truth."*

- Alfred Marshall

Comment on the validity of this statement. [35]

3 The arrival and increasing acceptance of behavioural economics improves the predictive ability of economic models.

Discuss. [35]

4 Transboundary air pollution is a global public bad.

Discuss how economic theories could be applied to explain and resolve this problem. [35]

5 The value of advertising expenditure is best understood as a *signal* to customers.

Discuss. [35]

6 Comparative advantage no longer forms the basis for trade in the world today.

Comment on the validity of the above statement. [35]

7 Globalisation is not advantageous to all.

Discuss. [35]

End of Paper

YISHUN JUNIOR COLLEGE

JC2 PRELIMINARY EXAMINATION 2013

H1 ECONOMICS **8819/01**
PAPER 1 **23 August 2013**

TIME: 3 hours

Additional Materials: Answer Paper

READ THESE INSTRUCTIONS FIRST

Write your name, CTG and SG 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 or correction fluid.

Section A
Answer **all** questions.

Section B
Answer **one** questions.

At the end of the examinations, fasten all your work securely together.
The number of marks is given in brackets [ ] at the end of each question or part question.

This paper consists of **9** printed pages

Section A

Answer **all** questions in this section.

Question 1 Rising Prevalence of Obesity

Extract 1: The Economics of Obesity

Obesity rates are continuing their relentless climb in developed and developing countries. It is more common among the poor and the less educated. A group of economists believes that the problem can be solved by making healthy eating a low-cost option.

There is a lot of evidence that economics plays a large part in the epidemic. Obesity rates among the poor, who are more likely to depend on high-fat, high-sugar foods for their meals, are substantially higher than the rates seen in higher income groups. Healthy diets are more expensive. There is a huge difference in cost per calorie between high-sugar, high-fat foods and fresh fruits and vegetables. To improve the diets of people on low income, fruits and vegetables should be subsidised.

Source: The Lancet 18 December 2004

Figure 1: Obesity rate and Health costs

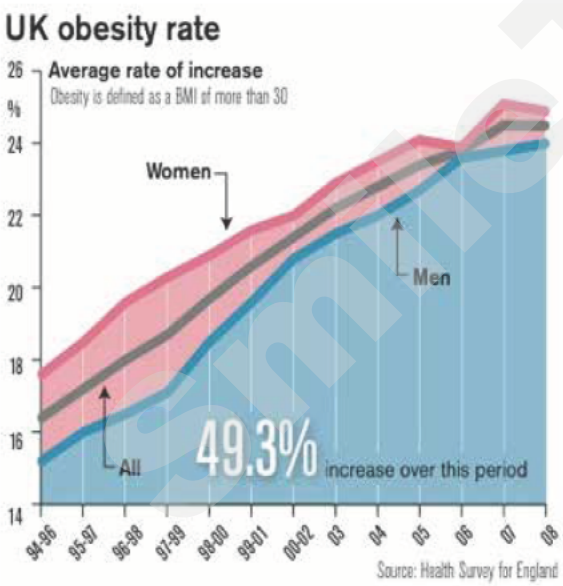
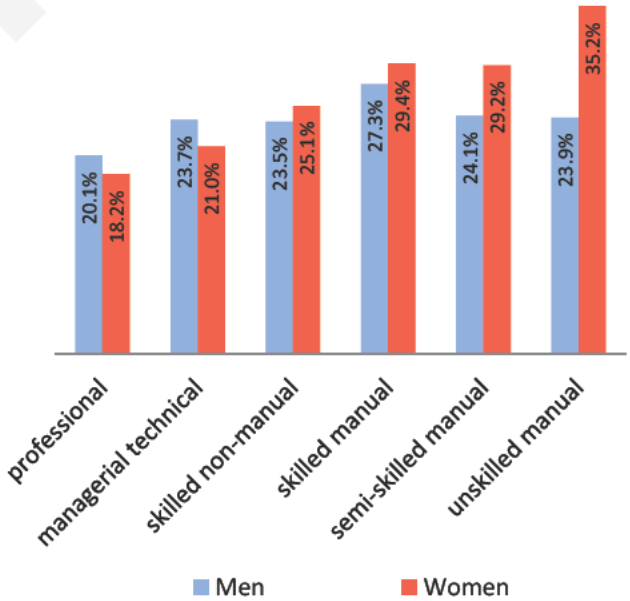


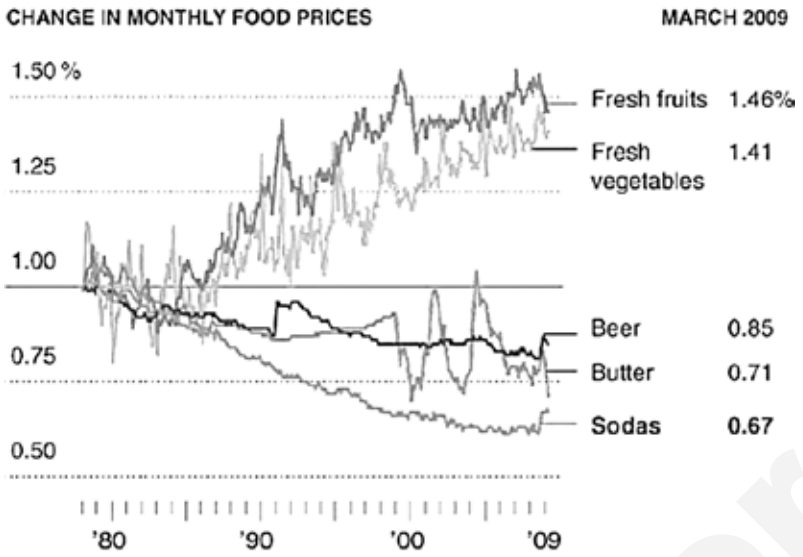
Figure 2: Prevalence of obesity in adults (aged 16 & over) by social class by occupations, 2005 – 2009



Source: National Obesity Observatory September 2012

Note: the percentage given in Figure 2 is an average figure over 2005-2009.

Figure 3: The Cost of Healthy Eating



Note: Lines show change in price of items since 1978, relative to overall inflation as measured by the Consumer Price Index.

Source : Bureau of Labour Statistics

Extract 2: Britain's obesity death rate

More people are dying in Britain due to being overweight or obese than anywhere else in Europe, a study revealed yesterday.

Experts also warned that the number of fatalities due to obesity may soon, for the first time, exceed those caused by smoking.

In around 70 per cent of overweight-linked cases, the final cause of death was heart disease and in 20 per cent, it was cancer. Overall, around 12 per cent of heart disease deaths in Britain were due to being overweight, and 5.7 per cent of total deaths from cancer were also directly caused by being overweight or obese.

Obesity costs £2.6billion a year in NHS bills and indirect losses to the economy. The consequences of obesity are not just for the individuals concerned but also for world food supplies, productivity and government finances. This demands action.

Source: www.dailymail.co.uk, *accessed on Aug 8 2013*

Extract 3: Containing Obesity

For those who believe that the state should generally keep its nose out of people's private affairs, obesity presents a quandary. If people get great pleasure from eating more than is good for them, should they not be allowed to indulge themselves? After all, individuals bear the bulk of the costs of obesity, quite literally. They suffer at work, too. Obese colleagues are perceived to 'lack self-discipline, be lazy, less conscientious, less competent, sloppy and emotionally unstable.' The existence of hiring prejudices, lower wages, and few promotional prospects relative to non-obese employees may be the result of these perceptions.

Yet in most countries the state covers some or most of the costs of health care, so fat people raise costs for everyone. In America, for instance, a recent paper estimated that obesity was responsible for a fifth of the total health-care bill, of which nearly half is paid by the federal government. And there are broader social costs. The Pentagon says that obesity is shrinking its pool of soldiers. Obesity lowers labour productivity. Hence, state intervention is justified. But how?

Drugs and surgery can help in the most extreme cases. They do not, however, offer a solution to the wider problem. Economists, faced with behaviour they don't like, tend to favour imposing "sin" taxes. But eating fatty and sugary foods is not a "sin", even in the fiscal sense, for unlike cigarettes, fatty foods are not uniformly unhealthy. Moreover, since poor people spend a higher proportion of their income on food than rich people do, such a tax would be regressive. It would also be an administrative nightmare, as the fat content of each item of food would have to be measured.

In the absence of a single big solution to obesity, the state must try many small measures. Governments should ensure that schools should serve nutritious lunches, teach children how to eat healthily and give them time to run around. Urban planners should make streets and pavements friendlier to cyclists and pedestrians. Much will depend on whether food companies will continue to push junk food or speed up the shift to healthier products. They have no incentive to stop making junk foods until consumers stop buying them, but consumers will not renounce such foods until companies make healthy ones more attractive.

Insurers and governments, for their part, will need to find new ways to nudge people into better behaviour. Policymakers now have a better understanding of why people make poor decisions about their health, and mobile technology can help them to make better ones. As such experiments continue, there will be more evidence of what works, and whether it can be made politically acceptable.

There is a limit, however, to what the state can or should do. In the end, the responsibility and power to change lie primarily with individuals. Whether people go on eating till they pop, or whether they opt for the healthier, slimmer life, will have a bigger effect on the future of the species than most of the weighty decisions that governments make.

Source : Adapted from The Economist, 15 September 2012

Questions

(a) **(i)** Summarise what happened to the obesity rate of women and men in the UK between 1994 and 2008. How do they compare with each other? [2]

(ii) Using data given, account for the difference in the obesity rates between men and women. [2]

(b) **(i)** In the light of Extract 1, using supply and demand analysis and diagrams, explain how you would expect subsidies for fruits and vegetables to change the diet of the people. [6]

(ii) Explain whether the data shown in figure 3 support the call for subsidies for healthy food. [3]

(c) **(i)** Suggest **one** negative externality claimed to arise from obesity. [2]

(ii) What are the implications of rising prevalence of obesity on the macroeconomic performance of an economy? [4]

(d) Extract 3 suggests that obese workers are being discriminated at work place. [3]

Comment on how the existence of obesity hinders the ability of labour markets to optimally allocate resources.

(e) As a consultant economist, what options would you present to the UK government as possible responses to the rising obesity, and what would you recommend? Justify your answer. [8]

[Total : 30 marks]

Question 2 Trade Imbalances: US and China

Extract 4: US – China trade deficit grows to record

The US trade deficit between China has hit a record high, fuelling tensions between the countries over currency imbalances.

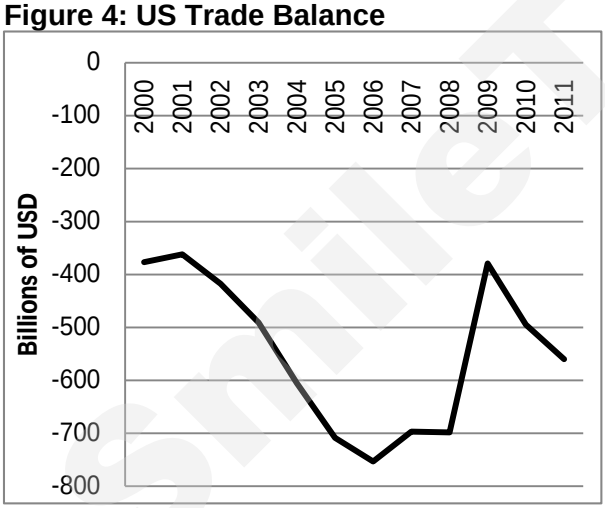
The gap between US imports from China and what it sold to the country rose to $273.1bn last year, the largest trade imbalances the US has ever recorded with a single country. While US exports to China grew by a third last year to an all-time high of $91.9bn, imports worth $364.9bn travelled in the other direction, an increase of 23.1%.

Some US politicians blame Beijing for the size of the trade gap between the nations, claiming it unfairly keeping the yuan's value too low. A bill was proposed to allow the US to impose emergency tariffs against China if its currency was found to be undervalued.

China has long denied that it is responsible for American exports lagging so far behind its imports.

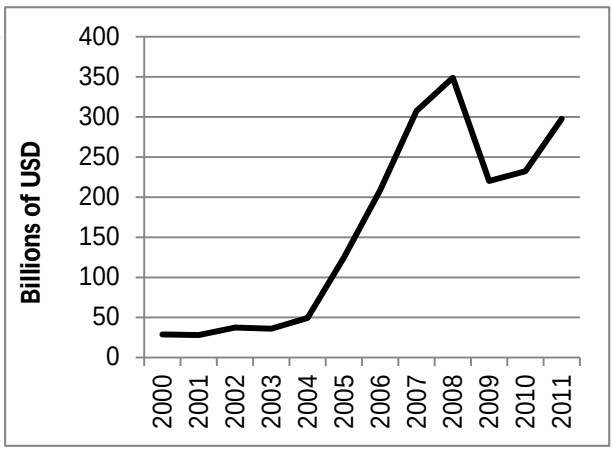
Source: The Guardian, 11 February 2011

Figure 4: US Trade Balance



Source: United States Census Bureau, US Department of Commerce

Figure 5: China's Trade Balance



Source: The World Bank

Extract 5: Don't Blame China's Currency for US Trade Deficit

To focus on China's currency is to miss the real story behind the country's trade surplus. The truth is that China's surpluses are not driving America's deficits.

Three phenomena largely explain the emergence of China's trade surpluses: surging American consumption and fiscal deficits that fuelled import demand; a maturing East Asian production network centered on China; and the ratcheting-up of China's savings rates.

Indeed, rather than complaining about China's exports of relatively labour-intensive products, Americans should ask themselves why their country isn't able to produce the high-tech, capital-intensive components coming to the US from the North Asian trio via China. These activities command the skills and salaries more appropriate for American workers.

Source: Bloomberg, www.bloomberg.com, 19 April 2012

Extract 6: Two cheers for a big US trade deficit

There's nothing to fear about trade imbalances. They only mean more investment in US industries and businesses.

While a "deficit" in trade sounds bad, no real deficit exists. Most trade statistics simply fail to account for foreign investment. Foreign investors do not sit on their dollars. They invest in dollar-denominated assets like stocks and bonds, real estate, or even government debt.

The trade deficit has helped the US maintain the highest level of foreign direct investment in the world by far. In 2010, foreigners invested almost $2.6 trillion in US banks, businesses, real estate and, to a lesser extent, the government — more than 4.5 times the level of foreign investment in China last year. Companies invest this foreign capital in research and development, factories, and workers, which creates new wealth and jobs.

Phony fears over trade deficits lead to phony "solutions" that end up doing harm. Protectionists who harp on trade deficit fears often propose to subsidize exports, restrict imports, or both. Tariffs and quotas keep inexpensive foreign goods out, driving up prices for consumers and costs for businesses. In response to the US import restrictions, for example, candy makers like Hershey and Lifesavers were forced to move their operations outside the US.

Trade quotas raised steel prices by almost 30% in the United States, which forced the US container industry to close factories. As the container industry bought less steel from abroad, overseas firms had fewer dollars to buy US products or to invest in the US economy. This damages all aspects of the economy.

While export subsidies help American car manufacturers like General Motors and Chrysler, American consumers who incur the costs through taxes have less money for other products.

Furthermore, export subsidies prevent labour and capital from relocating to other industries where they could better serve consumers. Subsidies for GM and Chrysler keep consumers from buying as many foreign cars, so Koreans, Germans, and Japanese have fewer dollars to buy US products and invest in U.S. companies.

Such protectionist voices are wrong. Imports, as much as exports, are good for American jobs and prosperity.

Source: Adapted from www.forbes.com, 18 August 2011

Extract 7: China is working towards rebalancing its trade

Ways to rebalance China's trade:

- China plans to cut tariffs on imports.
- Structural reforms have been taken to strengthen the social safety nets and boost wages to encourage domestic consumption. The problem is China's high saving rates, which might be dynamically welfare-optimising for its citizens.
- A cut in income tax is introduced to give more disposable income to Chinese consumers and workers.

Source: BBC News, www.bbc.co.uk, 3 March 2011

Extract 8: China's economic white elephant

Funds wasted by local governments in China are a drain on the economy and badly hamper urgently-needed reforms.

Massive investment projects led by local governments are going from one city to another to reclaim land, flatten hills, redirect rivers, and remove entire villages and townships.

All the investments have a doubly dampening effect by channeling society's money away from consumers and by supporting often excessively large projects that offer little use to small private companies.

As for the government, officials need to realize that some things are more important than just big money and big numbers. They also have to create jobs without building new factories, generate prosperity (and tax revenue) without spending a lot of public funds and, perhaps, sell some of their useless projects to turnaround managers from the private sector.

Source: My Paper, 30 July 2013

Questions

(a) Compare the change in the US's and China's trade balances between 2000 and 2011. [2]

(b) Explain how the revaluation of the yuan can reduce the trade imbalance between US and China? [4]

(c) "There's nothing to fear about trade imbalances. They only mean more investment in US industries and businesses."

(i) Explain this statement. [4]

(ii) Using AD-AS analysis, explain the possible impacts of FDI on the US economy. [6]

(d) Comment on the view that "phony 'solutions' by the US to solve its trade deficits could end up doing harm". [6]

(e) Discuss the extent to which China's attempt to rebalance its economy could reduce its trade imbalance with US. [8]

[Total : 30 marks]

Section B

Answer **one** question from this section.

3 'Relative scarcity is the basic economic problem. The nature of this problem that is faced by all societies is the same. The seriousness of this basic problem, however, can be reduced by countries trading with each other.'

a) Explain the nature of the basic economic problem faced by all societies. [10]

b) Discuss the extent to which trade between countries can reduce the seriousness of the basic economic problem. [15]

4 Singapore is facing significant challenges in the new era of slow growth, quantitative easing and rock-bottom interest rates in the US and UK that will have knock-on effects on the general price level.

a) Explain the effects of 'quantitative easing and rock-bottom interest rates in the US and UK' on the general price level in Singapore. [10]

b) Discuss the effectiveness of the exchange-rate centred monetary policy in Singapore to overcome the twin challenges of slow growth and inflation. [15]

H1 Case Study Question 1

Marking Scheme

(a) (i) Obesity rate for both men and women increased over the period. (1)
The rate of increase for women is faster than for the men. (1)

(ii) Figure 2 shows a strong relationship between obesity prevalence and occupation-based social class for women. Obesity prevails among the poor and less-educated mentioned in extract 1. Since it is likely that a higher proportion of women fall in the lower social class status, it may account for a higher obesity rate compared to men. (2)

Marks should be awarded for using data to support reason.

(b) (i)

- Explain how subsidies leads to an increase in supply and affects equilibrium price and quantity in the fruits and vegetables market, with the use of a diagram
- As demand for fruits and vegetables is likely to be price elastic (justify), total expenditure on fruits and vegetables will increase
- Explain how this increase in expenditure on fruits and vegetable will impact the market for unhealthy food, using a diagram to illustrate.
- The subsidies will cause consumers to change their diet towards consuming more fruits and vegetables and away from unhealthy foods.

Full credits to be awarded for clear use of diagrams to show the relationship between healthy and unhealthy foods and the impact of subsidies on the 2 goods. (Implicit assumption is that they are substitutes). – 6 marks
Marks are to be deducted for not using diagrams as required by the question.

(b) (ii) Prices of healthy foods such as fresh fruits and vegetables increase at an increasing rate over the years while prices of unhealthy food such as soda, beer increases at a falling rate. Hence, based on economic theory, quantity demanded for healthy foods will increase if relative prices are brought down through subsidies.

(c) (i) Higher healthcare costs for the government/ Higher food prices in the global market/ Lower productivity which increase firms' unit costs. (Any one of these factors found in the extract.)

*Student must demonstrate understanding that the impact is on third parties.

(ii) Rising obesity raises healthcare costs for the government. Governments will have to allocate resources away from other productive uses towards financing rising health care costs, which could adversely impact on long term economic growth.

Moreover, for governments in the UK and US who already facing the problem of a budget deficit and rising public debt, the increased expenditure on healthcare will worsen the fiscal deficit. Taxes would be raised which could discourage investment and savings, which in turn could have an adverse impact on long term economic growth.

Rising prevalence of obesity could also lead to lower labour productivity. This could also have a negative impact on long term economic growth.

d) Explain the efficiency of the working of the price mechanism
Explain that if a perceived bias against obese individual exists, there is a greater chance that obese population would be working in areas where their talents are not optimally suited for and hence distort the working of the price mechanism in the labour markets.
Comment that this is just a perception and may not hold true. (3 marks)

e) Explain the various options that the UK government can adopt to reduce rising obesity:

- Taxes on consumption of fatty foods
- Public campaigns and health education in schools
- Legislation on food labelling
- Ban advertising of unhealthy foods

Analyse the pros and cons of the options.
Make a recommendation and justify choice of option(s).

E2	A reasoned conclusion is reached about the choice of option(s) with justification.	3 - 4
E1	Merely making a recommendation	1 - 2
L2	Options are analysed in relation to the problem of rising obesity, with attempt at comparing the relative merits/demerits of the options	3 - 4
L1	Weak explanation of the options to reduce rising obesity	1 - 2

YISHUN JUNIOR COLLEGE

JC2 PRELIMINARY EXAMINATION 2013

(a)(i) What economic relationship exists between investment and economic growth? [2]

- The higher the level of investment spending, the higher the rate of economic growth
- With higher investment, it stimulates increases in both actual growth in the short run and potential growth in the long run, enabling sustained increases in real national output over time.

(ii) How far is the relationship supported by data shown in table 1? [3]

- Table 1 show that economies generally with larger shares of investment in terms of GDP growth contributions experienced higher average annual GDP growth rates, and vice-versa. For example China and India. However, India's high growth could not be attributed to investment alone. Its relatively high domestic consumption was also a contributing factor to its high growth. Similarly, although Korea and Thailand had low investment, they experienced relatively high GDP high growth.
- This could be attributed to the growth model adopted by the various countries. Growth of a country could be driven by any components of aggregate demand. Korea's GDP growth was led by exports and domestic consumption while growth in Thailand and US were driven more by domestic consumption.

(b) Explain how the revaluation of the yuan would reduce the trade imbalances between the US and China. [2]

- With the revaluation, Chinese exports will be more expensive in USD while imports from US will be cheaper in yuan
- Quantity demanded for Chinese exports will fall while quantity demanded for imports from US will increase
- If the Marshall-Lerner's condition is met, where the sum of price elasticities of demand for exports and imports is greater than 1, size of China's trade surplus with US will fall.

(c)(i) State **one possible** factor that determine the impact on national income of an increase in domestic consumption in China [1]

- Size of multiplier, or
- Size of increase in C, or
- Share of domestic consumption in GDP

(ii) Explain why the growth model of countries like China, which is dependent on investment and exports, is 'unsustainable'. [4]

- Dependence on exports means that these countries' economic performance is inevitably tied to the performance of their major trading partners. With a persistent trade deficit and slow growth in US and Europe, it is unlikely the growth model powered by exporting to these countries is sustainable. The trade imbalance between developed and emerging countries will be a threat to global growth and hence it is not possible for countries like China to continue depending on export-led growth.

- Government-led investment spending may be on wasteful and inefficient projects which do not contribute much towards long-term economic growth and employment growth (table 1). It could also have crowded out private investment spending in more efficient projects that may generate higher rates of economic growth and employment growth.

(d) 'The central banks and finance ministries in the US and Europe have already used up large amounts of their available ammunition. '

With reference to the above statement, assess the policies adopted by the US and European governments in reviving their economies. [8]

- Explain the use of expansionary fiscal policy in the US and UK to stimulate economic growth in the short run
- Evaluate the effectiveness of the policy and the problems that will arise
  - Crowding out effect
  - Consumers are unwilling to spend even as national incomes increase due to poor business confidence (size of MPC is reduced)
  - Worsens budget deficit resulting in an increasing public debt problem (chart 2 and extract 1)

- Explain the use of expansionary monetary policy in US and UK to stimulate spending in the domestic economies
- Evaluate the effectiveness of the policy
  - Poor business confidence à firms will be less responsive to the fall in interest rate
  - Liquidity trap

- Explain and evaluate the effectiveness of the use of quantitative easing in US/asset purchasing in UK to stimulate economic growth
  - Explain that the use of this policy was in response to the central banks' inability to further lower interest rate as it had already approached the zero bound
  - Increased liquidity may not stimulate greater borrowing and spending if business confidence remained low in the US and UK economies
  - Outflow of excess liquidity to Asian countries will reduce the effectiveness of the QE policy

- Evaluation
  - The success of these policies will depend on how the governments of the 2 countries manage it especially in the context of rising fiscal deficit which put them in a dilemma.

L2	Well explanation of the policies adopted by US and UK and the limitations of the policies and problems that arise from the use of these policies	3-4
L1	Mere explanation of the policies adopted by US and UK without examining the problems that could arise from the implementation of these policies	1-2
E2	A reasoned conclusion about the effectiveness of the policies with reference to the context of the US and UK economies	3-4
E1	Some evaluative comments are made regarding the effectiveness of/problems of the policies in the context of the US and UK economies	1-2

(e) With reference to the data and using your own knowledge, discuss whether rebalancing of Chinese economy would reduce dependence of Asian economies on the US and Europe for their growth. [10]

- Explain how the rebalancing of the Chinese economy from a dependence on exports and government-led investment towards domestic consumption will reduce dependence of Asian economies on US and Europe
  - Extract 3: Opportunities for economies in the Asian region as China "becomes a source of regional final demand and of foreign direct investment". Explain.
  - Extract 3: Developing economies in the Asian region can also gain larger market share in low value-added manufacturing and export these goods to the Chinese market as they move away from this sector.

- However, according to extract 2, China's demand for final goods is largely met by domestic producers. This means that opportunities for regional export firms to meet the higher import demand in China for consumption may still be limited in the short term. The result is that Asian economies may still remain dependent on the US and EU markets for its exports, directly and indirectly through supply chain links (Asian firms mainly serve the Chinese export industry rather than the domestic sector).

- Furthermore, there is uncertainty regarding China's ability to shift towards domestic consumption.
  - Figure 1: Share of consumption as a contribution to GDP growth actually fell between 2000 and 2008, while share of investment increased. The higher investment was at the expense of lower current consumption as more savings have to be channeled to finance investment spending. This implies that as long as China continues to depend on government-led investment to drive economic growth, then it is unlikely that consumption will increase sufficiently to drive import demand from Asia.
  - It depends on whether wages are able to increase sufficiently to stimulate consumption spending. This is currently hindered by the slow growth in the advanced economies, which China is still currently dependent on for exports and economic growth.
  - It depends on the success of income-tax reform and the security that the new social welfare schemes could provide to the Chinese. As long as the Chinese feel the need to make provision for their old age, they will save rather than spend.
  - It is also dependent on China's ability to move up the value chain into higher productivity sectors. According to extract 3, it seems that this shift is likely to take a long time.

- Need to acknowledge that US and European countries are large economies with high per capita income and could not be easily substituted by China whose per capita income is still relatively low.

- In the short term, therefore, it may be unlikely that Asian economies will be able to look towards the China economy and reduce their dependence on the US and EU economies.

L3	A coherent explanation of the opposing views presented with close reference to the extracts. Well use of evidences to show that no concrete conclusion could be made. At best, could only make some deductions in the short term. A questioning approach is taken.	8-10
L2	Explanation of the opposing views presented in the extracts. However, answer lacks critical evaluation of the evidences.	4 - 7
L1	Identification of some views presented in the extracts but are mainly paraphrased instead of explained	1 - 3

‘Relative scarcity is the basic economic problem. The nature of this problem that is faced by all societies is the same. The seriousness of this basic problem, however, can be reduced by countries trading with each other.’

(a) Explain the nature of the basic economic problem faced by all societies. [10]
(b) Discuss the extent to which trade between countries can reduce the seriousness of the basic economic problem. [15]

Part a:

- Explain the meaning of the ‘nature’ of basic economic problem.
  - The basic problem faced by all societies is the same – regardless of their level of development or material living standards à more wants relative to the amount of resources available à relative scarcity.

- Explain the concept of ‘relative scarcity’ and that the problem of scarcity is faced by all societies and will always exist.
  - Focus on why resources are said to be scarce relative to wants.

- Explain that the problem of relative scarcity leads to the need to make choices.

à Choices made must lead to the best possible use of the scarce resources in order to best satisfy unlimited human needs and wants
à Choices involve opportunity cost

- Use the PPC to illustrate the problem of scarcity and then conclude why all economies need to decide what to produce, how much to produce and for whom to produce.

Mark Scheme		
L3	A thorough explanation that scarcity is a relative concept and how the problem affects all societies. Shows clear understanding of the links of concepts of scarcity, choice and opportunity cost with good illustration. Answer addresses the ‘nature’ of the basic economic problem.	8 - 10
L2	An adequate explanation of how the problem of relative scarcity arises. Some attempts were made to link the concepts of scarcity, choice and opportunity cost. However, candidates do not clearly explain the meaning of ‘nature’ of the basic economic problem.	4 - 7
L1	For an answer that demonstrates some knowledge about limited resources and unlimited wants. However answer is largely unclear or lacks elaboration.	1 - 4

Part b:

- Explain, using the theory of comparative advantage, how trade leads to a more efficient use of resources and improve economic welfare of countries participating in trade.
  - Trade enables participating countries to consume beyond their PPC à previously unattainable combinations of goods and services can now be produced to meet needs and wants à improve economic welfare à reduce the seriousness of the problem of scarcity.

- To what 'extent' trade reduces the seriousness of the basic economic problem depends on a number of factors:

1. Cost

è Transport cost can offset the gains from trade. Hence, if oil prices were to rise causing a rise in transport cost, it will offset some of the gains from trade and hence may not reduce the problem of scarcity much. On the other hand, improvement in technology will facilitate transport of goods and services across countries and reduce cost which leads to greater gains from trade. This will reduce the seriousness of the basic economic problem.
Sub-conclusion: A judgement to be made

è Opportunity cost: For international trade to be mutually beneficial for each country, the terms of trade must lie within the domestic opportunity cost ratios for both countries. However, the opportunity costs are calculated in physical terms whereas costs in international trade are measured in monetary terms with different currencies adding to the complexity.
As exchange rates can be influenced by non-trade issues e.g. speculation, politics, relative international prices might not reflect differences in domestic opportunity costs and hence it limits the gains from trade. Hence, seriousness of the basic economic problem is not much reduced.

2. Distributive issues

è Countries trading in primary products tend to face more volatility. This is because average prices of primary commodities are often more volatile in the short term than the average price of manufactured goods. A slump in world prices may force these countries to trade at below production costs and this may even accelerate the seriousness of the basic economic problem.

è Also if the country can distribute its gains from trade throughout the population within a country, it will improve overall economic welfare and hence reduce the seriousness of the basic economic problem.

Sub Conclusion : Weigh if there is a net gain

3. Explain how the seriousness of the basic economic problem can be affected through domestic policies to promote growth and development other than through trade.

- Conclusion:
  - è To what ‘extent’ the gains from trade can be translated towards reducing the seriousness of the basic economic problem of scarcity would be dependent on the government policies to promote growth and how much the countries are able to leverage on the gains from trade.

Mark Scheme		
L3	For an answer that provides a clear explanation of how trade is able to reduce the seriousness of the problem of relative scarcity. There is also a thorough discussion of the extent to which the gains from trade is able to reduce the seriousness of the problem.	9 - 11
L2	For an answer that provides an adequate explanation of how trade can reduce the problem of relative scarcity and some attempts were made to discuss the extent to which the gains from trade are able to reduce the seriousness of the problem.	5- 8
L1	For an answer that provides some idea about how trade reduces the problem of relative scarcity but there is minimal or no attempt made to discuss the extent to which the gains from trade are able to reduce the seriousness of the problem.	1 - 4
E2	Weigh trade and other factors affecting the seriousness of the basic economic problem and give a reasoned conclusion.	3 - 4
E1	Evaluate the likely benefits of trade affecting the seriousness of the basic economic problem	1 - 2

4 Singapore is facing significant challenges in the new era of slow growth, quantitative easing and rock-bottom interest rates in the US and UK that will have knock-on effects on the general price level.

a) Explain the effects of “quantitative easing and rock-bottom interest rates in the US and UK” on the general price level in Singapore. [10]
b) Discuss the effectiveness of exchange-rate centred monetary policy in Singapore to overcome the twin challenges of slow growth and inflation. [15]

Part (a)

Suggested outline

Introduction

- Introduce Singapore as a small and open economy which allows capital flows into and out of the country
- Because of this openness, any changes in monetary policy decisions abroad will have an impact on Singapore’s economy.
- Introduce US and UK’s monetary policy decisions in the context of slow growth performance

Development

Explain how quantitative easing in US and UK led to rising general price level in Singapore

- Explain how rock-bottom interest rates and the increased liquidity abroad due to quantitative easing in the US and UK led to inflow of hot money into the Singapore’s property market, driving up property prices.
- Explain that housing has a high weighting in the computation of CPI and hence led to asset inflation.
- Explain how rising property prices led to increased consumption spending because of the wealth effect
- Explain that the large inflow of hot money due also placed a downward pressure on domestic interest rates, causing a “property bubble”.
- Explain how the increased consumption and investment spending resulted in demand-pull inflation using AD-AS analysis

L3	A clear and well-explained answer of the effects of the policies on the general price level in Singapore, with an understanding that inflation has shifted from imported inflation to a domestic one.	8-10
L2	An undeveloped explanation of the effects of the policies on the general price level in Singapore An attempt is made at explaining the effects of the events on the general price level in Singapore	6-7 4-5
L1	Explanation of the causes of inflation in Singapore without reference to the context	1-3

Part (b)

Suggested outline

Introduction

- Singapore uses an exchange-rate centred monetary policy which is adjusted according to the MAS' assessments of the risks to inflation vs. growth
- Exchange-rate policy alone cannot tackle the twin challenges of slow growth and inflation at the same time due to the conflict in macroeconomic goals, and also because it is a blunt tool in dealing with the main causes of inflation facing Singapore currently.

Development

- Explain that the use of exchange rate policy will lead to a conflict between economic growth and low inflation, making it ineffective in tackling the twin challenges of slow growth and inflation in Singapore.
  - Appreciation of the exchange rate lowers inflation but results in a fall in net exports, leading to a further fall in GDP which is undesirable given the context of already slow global growth.
  - On the other hand, depreciation leads to higher rates of inflation, yet is not very effective in stimulating net exports given the climate of slow global growth

- Moreover, explain that exchange rate policy is not effective in targeting the main causes of inflation that Singapore currently faces.

- Explain, however, the reasons why it is still relevant and important to maintain a gradual appreciation of the exchange rate in Singapore

- Explain how the use of other policies – supply-side policies and macroprudential policies – are more effective in overcoming both the challenges of slow growth and inflation

Conclusion

Singapore's exchange-rate centred monetary policy is unable to overcome the twin challenges of slow growth and inflation. This is because the use of exchange rate policy will lead to a conflict between the macroeconomic goals of low inflation and economic growth. Furthermore, given the main causes of inflation that Singapore faces, exchange rate is a blunt tool in targeting the root of the problem. The use of supply-side and macroprudential policies, on the other hand, are more effective in tackling both the challenges of slow growth and inflation.

L3	A coherent discussion of the effectiveness of the exchange rate policy, with a clear explanation of the conflict between the macroeconomic goals of economic growth and low inflation.	9-11
L2	A clear explanation of how exchange rate policy is able to tackle the twin challenges, with some idea of the trade-off between the macroeconomic goals. Explanation of how exchange rate policy works and its limitations	6-8 4-5
L1	A sketchy answer that attempts to explain how exchange rate policy works.	1-3

E2	A well-reasoned conclusion about the effectiveness of exchange rate policy in tackling the twin challenges of slow growth and inflation	3-4
E1	A judgement is provided but without supporting reasons	1-2